Public attitudes form an important driving force that shapes the situation of animals in society. Therefore, it is important to understand these attitudes and the factors that influence their development. Drawing on sociological animal studies, this thesis examines Finnish attitudes and perceptions regarding animals used in food production. It also explores the meanings consumers associate with the use of animals for food in their everyday food practices.
A SOCIOLOGICAL STUDY OF FINNISH ATTITUDES, PERCEPTIONS AND MEANINGS REGARDING ANIMALS IN FOOD PRODUCTION
A SOCIOLOGICAL STUDY OF FINNISH ATTITUDES, PERCEPTIONS AND MEANINGS REGARDING ANIMALS IN FOOD PRODUCTION
ABSTRACT

Public attitudes toward the mind and status of animals are interrelated with the ways in which they are treated in society. Therefore, it is important to understand these attitudes, how they vary in society and what factors influence their development. Additionally, how people make connections between meat and animals influences their moral stance regarding the eating of animals. Thus, it is useful to examine how cultural meanings of meat and its connection to animals are constructed in everyday contexts. This thesis examines attitudes, perceptions and meanings regarding farmed animals in Finnish society from the perspectives of sociological animal studies. With this analysis, the thesis makes a contribution to three key areas of discussion in sociological animal studies and in animal studies generally: first, discussion on social determinants of attitudes toward animals; second, people’s perceptions of animal mind and the ways in which these perceptions vary in society and according to the categorisation of animals; and finally, the cultural meanings associated with meat and with the meat–animal link. The thesis is based on a mail survey with Finns (n = 1,824/1,890) and on five focus groups with different consumer groups, comprising gastronomes, hunters, organic consumers, rural women and supermarket customers (n = 39).

The first and second articles of the thesis examine the factors that associate with Finnish attitudes to farmed animals and perceptions of their mental capacities based on the survey of Finns. The first article suggests that there are important social group differences in attitudes to farmed animals. Of social groups, gender has the most robust link with these attitudes; on average, women express consistently higher concern for farm animal wellbeing than men do. Additionally, the article suggests that younger people and urban residents are more likely to express greater concern for farmed animals than older people and rural residents. The articles also show linkages between animal-related experiences and attitudes.
Those who live or grew up on a farm with agricultural animals tend to express less concern for farm animal wellbeing than those without a farming background. Additionally, people who share their households with companion animals tend to express greater concern for farmed animals and greater belief in their mental capacities. The articles also provide evidence for positive association between valuing social equality, concern for farmed animals and belief in their mental capacities. In this way, the thesis provides empirical support for the suggestion that attitudes to animal wellbeing and to human equality are linked.

The second article examines how Finns perceive the mind of different species. It shows that phylogenetic and cultural categorisation of animals are linked to people's perceptions of their mind. Of mammals, people ascribe most mental capacities to companion animals (dogs), followed by farmed animals (cows and pigs) and wild animals categorised as threats or pests (wolves) and game (elk). Apart from basic sentience, belief in the mental capacities of chickens is relatively low. Additionally, Finns tend to ascribe minimal mind to salmons and shrimps.

Based on the focus groups, the third article examines the meanings Finnish consumers associate with the use of animals for food. The article suggests that consumers negotiate the meat–animal link in varying ways: some prefer to dissociate meat from animals, while others appreciate products that visibly reflect their animal origin. The article also highlights the ambiguities involved in placing animals in the categories of companion and food. Earlier literature has suggested that disconnecting meat from its animal origin is an important cultural process that helps to maintain the meat-eating practice. However, this thesis demonstrates that omnivores’ relationship to the meat–animal link is more complex as they may make various kinds of connections between meat and animals. In the meat-eating logic where the animal-origin of meat is less concealed, objectification of animals as potential food is a central process that helps to uphold the meat-eating practice.

Overall, the thesis has contributed to developing a sociological approach to studying animal-related attitudes and human–animal relations. It has generated new insights into the social variation in attitudes to farmed animals and the multifaceted ways in which consumers negotiate connections between meat and animals. As a further development of the research field, the thesis highlights the importance of incorporating into attitudinal research multispecies perspectives that facilitate including animals more visibly as actors in research processes. There are various avenues available to make attitudinal research less human-centric and take it in more animal-inclusive directions.

Keywords: Animal Categorization, Animal Mind, Animal Welfare, Consumers, Cultural Meanings, Farm Animals, Human–Animal Relationships, Meat, Public Attitudes, Sociological Animal Studies
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TIIVISTELMÄ

Väitöskirjan kaksi ensimmäistä artikkelia tarkastelevat kyselyn avulla, mitkä tekijät ovat yhteydessä tuotantoeläinten hyvinvointia koskeviin asenteisiin ja käsityksiin niiden mielestä. Ensimmäinen artikkeli osoittaa, että sukupuolella on sosiodemografisista muuttujista vahvin yhteytys tuotantoeläimiin suuntautuviin asenteisiin: naiset ovat keskimäärin enemmän huolissaan tuotantoeläinten hyvinvonnista kuin miehet. Myös nuoremmissa ikäryhmissä ja kaupunkien asukkailla on taipumus ilmaista suurempaa huolta tuotantoeläinten hyvinvoinnista kuin vanhemmilla ikäryhmillä ja maaseudun asukkailla. Artikkelit osoittavat, että eläimiin liittyvät kokemukset ja tuotantoeläimiin suuntautuvat asenteet ovat yhteydessä toisiinsa. Maatilalla kasvanee tai siellä asuvat ovat todennäköisemmin vähemmän huolissaan tuotantoeläinten hyvinvonnista kuin ne, joilla ei ole maatilataustaa. Sitä vastoin ne, joiden kotitaloudessa on lemmikkieläimiä, ovat
keskimäärin enemmän huolissaan tuotantoeläinten hyvinvoinnista ja liittävät niihin enemmän mielen kykyjä verrattuna niihin, joilla ei ole lemmikkieläimiä. Artikkelit myös osoittavat, että huoli tuotantoeläinten hyvinvoinnista ja usko niiden mielen kykyihin ovat positiivisesti yhteydessä sosiaalisen tasa-arvon kannatuksen. Näin väitöskirja antaa empiristä tukea sille, että eläinten hyvinvointia ja ihmisten välistä tasa-arvoa koskevat asenteet ovat yhteydessä toisiinsa.

Väitöskirjan toinen artikkelii tarkastelee sitä, miten suomalaiset liittävät mielen kykyjä eri eläinlajeihin. Artikkelin tulosten mukaan eläinten biologinen ja kulttuurinen luokittelun on yhteydessä ihmisten käsityksiin niiden mielestä. Nisäkkäiden ryhmässä suomalaiset antavat eniten mielen kykyjä lemmikkieläimille (koira) ja seuraavaksi tuotantoeläimille (lehmä ja sika) sekä luonnonvaraisille eläimille, joko luokitellaan haittaeläimeksi (sus) tai riistaeläimeksi (hirvi). Lukuun ottamatta kipuun ja mielihyvään liittyviä perustunemukseja suomalaiset antavat kanoille verrattain vähän mielen kykyjä. Enemmistö suomalaisista uskoo, että kalat (lohi) tuntevat kipua, mutta muuten he liittävät kaloihin ja ruokana käytettäviin selkärangattomiin (katkarapu) vain vähän mielen kykyjä.


Analysoinnilla kyselyn ja fokusryhmien avulla suomalaisia ja kulttuurista tutkimusta tuotantoeläimiä väitöskirja on osaltaan kehittänyt ihmisten ja eläinten välisen suhteiden sosio -logistia tutkimusta. Väitöskirja on tuottanut uutta tietoa eläinasenteisiin yhteydessä olevista tekijöistä sekä lihan kulttuuristen merkitysten rakentumisesta. Eläinasenteita koskevan tutkimuksen kehittämiseksi monilajisen tutkimusotteluun suuntaan väitöskirja esittää eläinten mukaan ottamista tutkimusprosesseihin näkyvämmin toimijoina. Näin asennetutkimusta voidaan kehittää vahemmän ihmiskeskeiseen ja eläinten näkökulmia paremmin huomioivaan suuntaan.
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Saara Kupsala
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1 INTRODUCTION

1.1 BACKGROUND AND SIGNIFICANCE OF THE STUDY

Research suggests that citizens are concerned about the use of animals in industrial agriculture. Surveys indicate that the general public has negative views about many common practices in contemporary industrialised farming, including year-round indoor housing, cages for hens, sow crates, early separation of the cow and her calf, the killing of newly born male chicks in egg production and disbudding calves and castrating piglets without pain control (Bergstra, Hogeveen, and Stassen 2017, Busch et al. 2017, Cardoso, von Keyserlingk, and Hötzel 2017, Hötzel et al. 2017, Leenstra et al. 2011, Ryan, Fraser, and Weary 2015). A large majority of European citizens demand that the protection of the welfare of farmed animals should be improved (EC 2016, 12). Focus groups, interviews and citizen juries with non-farming publics converge with the quantitative evidence. According to these studies, citizens and consumers express unfavourable views about industrial animal farming, describing negatively, for instance, confined and monotonous living conditions, limited possibilities for species-typical living and routine mutilations (Lassen, Sandøe, and Forkman 2006, Miele et al. 2011, Spooner, Schuppli, and Fraser 2014, Te Velde, Aarts, and Van Woerkum 2002, Weible et al. 2016). When given the opportunity to visit large-scale dairy and pig farms in a research context, citizens express concerns, among other things, about lack of outdoor access, early cow–calf separation, cramped pens for pigs, sow crates and the absence of environmental enrichment in pig production (Boogaard et al. 2010, Boogaard et al. 2011, Ventura et al. 2016). There is also some indication that when given access to various kinds of information, such as scientific papers, YouTube videos and Google images, public opposition to restrictive methods of keeping animals, in this case gestation stalls for pregnant pigs, increases (Ryan, Fraser, and Weary 2015).

These studies, which have been carried out in American and European societies, give an indication that public awareness and concern of the abject status of animals

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1 The term “farmed animals” refers to those animals who are reared, maintained and slaughtered for food and other agricultural products, such as wool and fur (O’Sullivan 2011, 29). This thesis focuses on those farmed animals who are utilised in food production. I use the term “farmed” rather than “farm” animals because the term emphasises that these animals are farmed by humans, bred and raised for agricultural purposes. The term “farmed” emphasises the doer, while the concept of “farm animal” tends to essentialise the human-given purpose to animals (comp. Masson 2004, 3, Stewart and Cole 2009, 475).
in contemporary industrialised farming has increased (see Taylor 2013, 132–135). Global animal farming has changed rapidly in recent decades as rearing of animals has been concentrated in increasingly large production units where most animals are kept year-round indoors with limited opportunities for species-typical living (Cudworth 2011b, 109–119, Franklin 1999, 126–144, Swabe 1999, 118–135). At the same time, the number of farmed animals has grown considerably, and in 2016 as many as 75 billion agricultural animals were slaughtered throughout the world.\(^2\) The considerable expansion of global animal agriculture has led to a situation where agricultural animals have a dominating presence on Earth; farmed mammals and birds comprise most of the biomass of all mammals and birds on the planet (Bar-On, Phillips, and Milo 2018). Additionally, the environmental impact of industrial animal agriculture has become increasingly acknowledged as detrimental in that it is an important contributor to climate change, water pollution and biodiversity loss (e.g. Godfray et al. 2018, Machovina, Feeley, and Ripple 2015).

Scientific understanding of the mental world of animals has been transformed as evidence on the minds of animals has accumulated, indicating that the complexity of cognitive and emotional capacities of species other than humans was previously underestimated in sciences (de Waal 2016, Telkänranta 2015). Changing scientific views and increasing research-based knowledge of the inner experiences of animals shape societal views of other species. In different national contexts, exposés of animal suffering via undercover footage has gained widespread exposure in mainstream media, having a negative impact on the public image of the animal industries (e.g. Chen 2016b, 183–185, Shields, Shapiro, and Rowan 2017, 5–7). Growing public demand for the better protection of farmed animals has been an important driving force behind legal reforms intended to end the close confinement of animals in intensive agriculture (Shields, Shapiro, and Rowan 2017, Smithson et al. 2015).

However, there are also evident inconsistencies in the ways that members of the public relate with farmed animals (Chen 2016b, 59, 65). While people express increasing concerns for them, meat consumption has remained high in Western societies (Godfray et al. 2018). Thus, ambivalence in people’s relations with farmed animals has increased; while people show empathy and concern for animals, they simultaneously participate in their most severe instrumental use (cf. Macnaghten 2004, 538). This suggests that concern for animals does not reach everyday practices where meat and other edible animal-derived products are framed as ‘food’, incorporating notions such as taste, price and methods of cooking but excluding other framings of meat such as moral questions related to the exploitation of

animals in industrial agriculture (Graça, Oliveira, and Calheiros 2015, Miele and Evans 2010, Skarstad, Terragni, and Torjusen 2007).

In Finland, similar trends can be identified as those in other Western societies described above. Finnish animal farms have tended to be small by international standards, but a structural change toward large units has been rapid in recent years (Lehtonen et al. 2017, 14–22). The exploitation of animals in industrialised agriculture has attracted growing public scrutiny (e.g. Aaltola and Keto 2015, Lappalainen 2012, Lundqvist 2014). The poor legal status of farmed animals has also been noted (Koskela 2017, Wahlberg 2011). Since 2007, animal rights activists have disseminated undercover footage from Finnish farms that contains graphic images such as cramped and dirty pens and injured animals with visible abscesses (Lundbom 2009, Vinnari and Laine 2017). This footage has gained wide exposure in mainstream media, having a detrimental impact on the public image of Finland’s animal agriculture (ibid.).

Eurobarometer surveys suggest that Finns’ demands for improved protection of farmed animals has increased in the past decade. Whereas in 2006, 67 percent of surveyed Finns thought that the protection of the welfare of farmed animals should be improved, the figure had risen to 90 percent in 2015 (EC 2007, 24, EC 2016, 13). Finns also express an increasing interest in receiving more information about the conditions of farmed animals (EC 2016, 23–25). A survey of Finns suggests that the large majority of them value species-typical behaviour and summer-time outdoor access for agricultural animals (Kupsala et al. 2011, 26–27). Most also agree that sows should not be kept in cages that prevent them from turning around and calves should not be separated from their mothers at birth (ibid.). Although Finns express interest in the wellbeing of farmed animals in the survey contexts, there has been an upward trend in per capita meat consumption for decades. For instance, in 2010, Finns ate 69.5 kg meat per person, while in 2017 the figure was 81 kg. This increase results mostly from a growth in poultry consumption. Finns show interest in reducing their beef and pork consumption, driven mainly by health concerns (Latvala et al. 2012). At the same time, there has been growing media interest in plant-based eating, and the sales of vegan foods have increased (Jallinoja, Vinnari, and Niva 2018). Thus far, only around 2–4 percent of the population are vegan or

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3 The wordings of the questions in the consecutive Eurobarometer surveys are not fully equivalent. In the survey carried out in 2006, it was asked, “Do you believe that in general the welfare-protection of farm animals in (OUR COUNTRY) needs to be improved?” (EC 2007, 23). In 2015, it was asked, “Do you believe that in general the welfare of farmed animals in (OUR COUNTRY) should be better protected than it is now?” (EC 2016, 12).

4 The figures are derived from the statistics database of the Natural Resource Institute Finland (Luke), Balance Sheet for Food Commodities – Consumption of food commodities per capita 1950- (kg/year). http://statdb.luke.fi/PXWeb/pxweb/en/LUKE/LUKE__02%20Maatalous__08%20Muut__02%20Ravintotase 03_Elintarvikkeiden_kulutus_50.px/?rxid=dba4df4ae9d4802-8909-d4428e348511 (Accessed 3 May 2019).
vegetarian, and a relatively small segment of society has replaced consumption of animal-based proteins with plant-based proteins (Jallinoja, Niva, and Latvala 2016).

These broad trends provide a background for my interest in studying attitudes, perceptions and meanings related to farmed animals in Finnish society. In this thesis, I examine Finnish views about animals in food production from the perspectives of sociological animal studies. Studying human attitudes to and perceptions of animals and the meanings people attribute to them have been key themes in sociological animal studies and in animal studies generally (e.g. Arluke and Sanders 1996, DeMello 2012, Franklin 1999, Peggs 2012, Serpell 2004). By working with specific Finnish samples, I aim to contribute to these scholarly fields both empirically and theoretically. Animal studies is a burgeoning interdisciplinary field that examines the complex and multifaceted relationships and interactions between humans and other animals (DeMello 2012, 4–5, Taylor 2013, 1–4). Sociological animal studies, in particular, examine social processes and mechanisms that shape human–animal interactions and relationships (e.g. Arluke and Sanders 1996, Peggs 2012).

Studying the general public’s views and beliefs about animals and how they are shaped by socio-cultural factors is important for several reasons. Attitudes toward animals and perceptions of their mental capacities affect how people interact with them and the extent of public demand for improved legal norms for animals (Serpell 2004, S145, Wilkins, McCrae, and McBride 2015, 357). In democratic societies, public opinion is an important factor that needs to be considered in policy-making regarding animals (McCulloch and Reiss 2017, 486–487). Surveying citizens’ attitudes to farmed animals provides information on how well legal regulations and governmental action regarding animals reflect the widely shared normative views of the general public (Goodfellow 2016, 202). Additionally, attitudinal research forms a basis for educational endeavours to promote more appreciative views of animals, their capabilities and interests (Paul and Serpell 1993). In sum, studying attitudes toward animals has much practical relevance for efforts to improve the situation of animals in society.

Research on human–animal relations has been growing in social sciences, arts and humanities in Finland (e.g. Aaltola and Keto 2015, Ratamäki 2010, Schuurman

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5 The concepts of human–animal studies and anthrozoology have also been used to describe the field. In this thesis, I refer to those animal species that are not human by the terms ‘animals’ or ‘other animals’ to maintain the readability of the text. Often, I do not need to refer to the generic category of animals, as I focus on animals categorised as farmed animals as well as particular species exploited in food production. The concept of animal is problematic as it reduces a highly diverse range of species to a single category. The human/animal binary is deeply rooted in Western thinking and it classifies a single species, humans, as separate from a multitude of other species. Scholars have used the concepts of ‘other animals’ and ‘nonhuman animals’ to signify that humans are animals too (Peggs 2012, 14, Twine 2010, 177). However, these concepts are problematic as animals are still grouped into one homogeneous category and they are linguistically constructed as other to humans (ibid.). Developing new concepts that do not reinforce the human/animal binary is still work in progress in animal studies (Twine 2010, 177).
This scholarship has included the status of farmed animals, exploring topics such as animal genomics (Lonkila 2017, Lonkila and Kaljonen 2018), legal regulation of farm animal welfare (Wahlberg 2011), cultural relationships with cows in written narratives (Kaarlenkaski 2012) and farmers’ attitudes to farm animal welfare (Kauppinen 2013). Despite these trends, there is still limited social science research on human–animal relations in Finnish society, a situation reflecting the human-centric focus of mainstream social sciences. In particular, there has been little survey research on public attitudes toward animals, including farmed animals. I have found no published research on Finnish attitudes to farm animal wellbeing and perceptions of the animal mind that is based on a large population sample and examines determinants of these attitudes by employing multivariate analyses. Likewise, attitudes and values regarding animals have not been incorporated in large surveys that measure Finnish attitudes to a range of social issues. Therefore, there has been a lack of research and even basic information about Finnish attitudes and perceptions regarding animals in agriculture. Measuring of a given societal phenomenon is usually an indicator that some value and importance is attributed to the phenomenon, and the lack of indicators for attitudes to animals and limited empirical analysis on the topic suggests that the status of agricultural animals has not thus far been considered an important issue in mainstream social sciences in Finland.

In sociological exploration of attitudes toward the mind and status of animals, a central task is to examine how these attitudes vary in society and which social mechanisms and processes shape them (e.g. Deemer and Lobao 2011, Kendall, Lobao, and Sharp 2006). By subjecting these attitudes to empirical examination in survey studies, it is possible to identify whether there are social group differences in attitudes toward animals and if so, how large these differences are. It is also possible to test possible reasons for these differences. Empirical analysis of variation in attitudes not only supports theory building on how social forces shape attitudes to other species, but also has practical relevance for endeavours to improve the situation of animals in society. For instance, understanding social differences in attitudes to animals can reveal which social groups are most likely to support policy reforms for farmed animals, and it can indicate how demographic changes and other trends in society can affect the base of supporters for legal reforms for animals in future (Deemer and Lobao 2011, Smithson et al. 2015). In this thesis, based on a population-survey of Finns, I examine social group differences in attitudes and beliefs regarding farmed animals in Finnish society, aiming to

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6 Three Eurobarometer surveys have examined Finnish attitudes to farm animal welfare, but these surveys have been informed by practical policy concerns rather than scholarly interest (EC 2005, EC 2007, EC 2016, see a critique of Eurobarometer surveys, Law 2009). Additionally, in Eurobarometer reports multivariate analyses have not been employed to explore factors that are potentially connected with attitudes to farm animal welfare.
contribute to scholarly discussion on a range of social differences in animal-related attitudes, including gender, age-group and rural/urban differences.

In addition to social group positions, the role of animal-related experiences in shaping attitudes to animals has received much attention in animal studies. In particular, there has been an interest in examining the role of companion animals in attitude formation and whether close relations with companion animals generate greater support for animal rights and greater belief in varied emotional and cognitive capabilities of other animals (e.g. Paul and Serpell 1993, Walker, McGrath, Handel, et al. 2014). The context of human–animal interaction shapes, of course, ways of relating with animals. Especially when attitudes toward farmed animals are an object of research, it is relevant to examine how interacting with animals in farming contexts shapes attitudes toward them. In this thesis, I examine how animal-related experiences are linked to attitudes toward farmed animals, contributing to the scholarly discussion on the topic with Finnish survey data.

A particular interest in sociological animal studies concerns the inequality that characterises people’s social relations with other animals (Carter and Charles 2018, Cudworth 2011b, Deemer and Lobao 2011, Peggs 2012, 33–46). This interest derives from sociology’s rich tradition of analysing unequal distribution of life opportunities and how durable inequalities are socially created and sustained (ibid.). While sociology has traditionally examined the production of human privileges and disadvantages, sociological animal studies extends this analysis to species relations by researching the social production of the disadvantaged social status of animals (ibid.). This interest in examining the disadvantaged status of animals and their subjugation and oppression by humans in sociological analysis is part of the wider critical scholarship in animal studies, described as critical animal studies (Cudworth 2016, Taylor and Twine 2014, Twine 2010, 3–9). Recognising farmed animals as a disadvantaged and oppressed social group generates an interest in examining whether there are similarities in attitudes toward farmed animals and toward oppressed, disadvantaged or marginalised human groups and whether these attitudes are linked (Deemer and Lobao 2011). People who are concerned for the rights of devalued human groups may also be concerned for animals who are oppressed and exploited in society (Deemer and Lobao 2011, Park and Valentino 2019). Examining intersections between the subjugation of animals and different human groups has been a long-term interest in critical animal studies (e.g. Cudworth 2011b, Peggs 2012, Twine 2010), and the analysis of interlinkages between attitudes toward human and animal disadvantage is connected to this broader scholarly work. In this thesis, I contribute to this discussion by analysing linkages between views about farmed animals and attitudes toward human equality, using empirical data from Finland.

The categorisation of animals has been a key interest in sociological animal studies because it is a central cultural process that produces highly unequal status
of animals in society and facilitates their inconsistent treatment (Arluke and Sanders 1996, 167–189, DeMello 2012, 44–60, Peggs 2012, 74–83, Stewart and Cole 2009). In this thesis, I examine how perceptions of the animal mind vary according to the categorical placing of animals, drawing on sociological literature on animal categorisation. I look at the roles of both phylogenetic categorisation of animals – classifying animals based on their evolutionary relations – and cultural categorisation of animals in the perception of the mind of other species. Additionally, I examine how the placing of animals in the categories of companion and food is negotiated in everyday contexts. With this analysis, I aim to contribute to sociological analysis on animal categorisation and scholarly discussion on people’s perceptions of animal mind.

Alongside attitudes and perceptions regarding farmed animals and how they vary in the population, I am interested in how people construct meanings related to the use of animals for food in their everyday lives. This interest is driven by the pattern identified at the beginning of the introduction; while people express concerns about other species in surveys, these concerns tend not to emerge in people’s everyday food practices. Therefore, I am interested in how omnivores construct the meanings of meat and its connection to animals. This analysis is based on focus groups with different groups of omnivores. It is common in the literature to suggest that meat eaters routinely dissociate meat from the once living animal and this dissociation de-moralises animal eating practice (e.g. Adams 1990, Kunst and Hohle 2016). This disassociation is enhanced by the fact that in contemporary urbanised societies people have little contact with animals destined to become food and only rarely have first-hand experience of industrial rearing and slaughtering of animals (O’Sullivan 2011, 64–76, Pachirat 2011, Stewart and Cole 2009, 461). Despite these general trends, people’s relationship to the meat–animal link can be assumed to be more complex, as in certain contexts people do make connections between meat and an animal (Evans and Miele 2012).

In this thesis, based on the analysis of how different groups of omnivores negotiate the link between meat and an animal, I aim to contribute to the scholarly discussion on the cultural meanings of meat and its connections to the animal. There is growing research on the place of meat in Finnish food culture, informed by the perspectives of food, consumer and sustainability studies (e.g. Jallinoja, Niva, and Latvala 2016, Latvala et al. 2012, Mäkelä and Niva 2016, Pohjolainen et al. 2016). However, there has been less research on this topic from the animal studies

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7 My analysis focuses on the dominant food practice of omnivorous eating. It can be argued that analysing vegan and vegetarian food practices would add something to the analysis of cultural meanings of the meat–animal link, as those practices challenge the dominant ideology of meat eating (comp. Twigg 1983, 18–19). However, as meat and other animal-derived products constitute an integral part of everyday eating habits of omnivores, it is they who need to deal with the question of the animal origin of meat when purchasing, preparing and eating it in their daily lives. It is worth giving detailed attention to how omnivores negotiate the animal origin of meat in different contexts of meat consumption.
point of view, only a few empirical studies exploring the meanings consumers ascribe to farm animal welfare and the meat–animal link (Autio et al. 2018, Jokinen, Kupsala, and Vinnari 2012).

1.2 RESEARCH CONTEXT AND POSITION

This thesis is based on a survey and focus groups which were carried out in a research project, Politicized animals: the consumer and farm animals (Academy of Finland, 2009–2012), in which I participated as a doctoral researcher. I had developed a long-term interest in the situation of farmed animals and sociological perspectives on human–animal relations some years before the project, exploring these topics, for instance, in my master’s thesis. My interest stems from having grown up on a farm where I was able to learn about the varied personalities and capabilities of animals our society categorises as farmed animals. As I became increasingly aware of animal rights and the situation of animals in intensive agriculture, I developed a deep concern for farmed animals and wanted to participate in improving their status. I have been vegan for many years and I have assisted in promoting animal rights in different organisations.8

Sociological animal studies has been my longstanding interest, as it can improve our understanding of the social and cultural forces that shape our relations with other species and can reveal a great deal about the social processes that maintain the oppressed status of many animals. It also generates useful insights and knowledge that can assist in endeavours to promote more just relations with other species. These perspectives of sociological animal studies have informed my approach when I have examined Finnish attitudes toward farmed animals in this thesis. In critical animal studies, there has been an interest in developing language in ways that it does not reinforce the human/animal binary and the status of nonhuman animals as objects. In this thesis I participate in this endeavour. Therefore, I refer to nonhuman animals with personal pronouns and avoid terms that objectify animals, such as ‘livestock’.

1.3 RESEARCH OBJECTIVES

This thesis examines Finnish attitudes to farmed animals and perceptions of their mental capacities as well as specific meanings a selection of omnivore groups construct about the use of animals for food. It is founded on a survey with Finns and five focus groups with a range of omnivore participants. Quantitative and

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8 I was omnivore until my late adolescence when I switched to a vegan diet. I followed a vegetarian diet for a few years when I worked in the research project, but switched back to vegan eating when writing the thesis.
Qualitative research materials provide two angles from which the thesis explores popular views about animals used in food production, how these views are shaped by social factors and how they are negotiated in everyday life. Together these different sets of data enable examining both broad patterns in people’s attitudes and perceptions about farmed animals as well as the multifaceted meanings people ascribe to animals in their everyday lives.

The specific research questions are:

1. How do attitudes to farmed animals and perceptions of their mental capacities associate with people’s social group positions, animal-related experiences and social equality attitudes?
2. How do Finns perceive the mental capacities of different types of farmed animals and how do perceptions of animal mind vary according to the phylogenetic and cultural categorisation of animals?
3. What kinds of meanings do different groups of Finnish omnivores ascribe to the use of animals for food? In particular, how do they construct connections and disconnections between meat and animals and how do they negotiate the position of animals in the categories of companion and food?

There are three articles within the thesis. The first article examines Finnish attitudes to farmed animals and how these attitudes associate with social group positions, animal-related experiences and social equality attitudes (Kupsala et al. 2015). The second article investigates to what extent Finns attribute cognitive and emotional abilities to animals positioned differently in phylogenetic and cultural categories (Kupsala et al. 2016). The article also explores how perceptions of animal mind associate with people’s social group positions, animal-related experiences, social equality attitudes as well as animal welfare and animal use attitudes. Articles I and II utilise the population survey with Finns. The third article examines the meanings Finnish omnivores construct regarding the use of animals as food, especially how they negotiate the meat–animal link and categorising animals as food and companions (Kupsala 2018). The article is based on five focus groups with participants who have diverging orientations to meat consumption, including gastronomes, hunters, organic consumers, rural women and supermarket customers.

Overall, based on large-scale survey with Finns, the thesis produces new knowledge and insights on social variation in Finnish attitudes toward the status and mind of farmed animals. Based on focus groups, it provides new information on meanings people ascribe to the use of animals for food in everyday contexts. The thesis makes a contribution to three key areas of discussion in sociological animal studies and in animal studies generally: first, discussion on social differences in animal-related attitudes and on the social processes that shape these attitudes; second, people’s perceptions of the mind of other species, how these perceptions
vary in society, and how they are linked to the categorisation of animals; and finally, the cultural meanings of meat and their connections to animals.

1.4 THE STRUCTURE OF THE THESIS

This thesis consists of three research articles and an introductory section. The introductory section comprises six chapters. Chapter 2 introduces the theoretical background of the thesis. The first section presents the field of sociological animal studies, which provides a general framework for the thesis. The second section discusses the category of farmed animals and how it is placed in the wider cultural categorisation of animals. The third section presents the literature on attitudes to animals and perceptions of animal mind as well as the social formation of these attitudes and perceptions. The fourth section reviews literature on the cultural meanings associated with meat and the meat–animal link. Chapter 3 presents the materials and methods of the thesis. Chapter 4 summarises the empirical findings of the three research articles, and Chapter 5 discusses these findings as well as the methodological issues of the studies. The concluding chapter discusses the contributions of the thesis and makes suggestions for further research. The introductory section is followed by the three research articles.
2 THEORETICAL BACKGROUND

In this section, I introduce the theoretical background and key concepts of the thesis. I also survey empirical literature on public attitudes to farmed animals and perceptions of the animal mind as well as literature on the ways in which omnivores construct connections and disconnections between meat and animals.

2.1 SOCIOLOGICAL ANIMAL STUDIES AND FARMED ANIMALS

Sociological interest in the social status of animals and humans’ relations with them has increased in the past two decades. Before the recent expansion of sociological literature on animals, nonhuman animals were virtually invisible in sociological inquiry, reflecting the human-centric focus of the discipline: the task of sociology was to study human societies and sociality without acknowledging the role of other animals in their constitution (Arluke 2003, 26–29, Peggs 2012, 1–11, Taylor 2013, 7–12, Tovey 2003, Tuomivaara 2018, 20–48, Wilkie 2015, 324). Excluding animals from the analysis of social lives reflects the strong human/animal divide, human-centrism and speciesism that has characterised sociological scholarship (Carter and Charles 2018, Peggs 2012, Taylor 2013, 7–12, Wilkie 2015). From the time that sociological writing on animals began it has been emphasised that leaving other species out from sociological inquiry generates an impoverished understanding of human societies and social lives as animals are an integral part and active participants in people’s social worlds (Arluke 2003, 26–27, Arluke and Sanders 1996, 3–4).

Although the emphasis in early writing was on how studying animals and their symbolic use could reveal a great deal about humans themselves (Arluke 2003, 26–27, Arluke and Sanders 1996, 3–4), more recently studying animals has been considered important in its own right, with a recognition of animals as social actors who contribute to constructing social worlds with humans. The human-centrism that has so far characterised sociology’s fundamental concepts has been subjected to increasingly forceful criticism in sociological animal studies in recent years (Carter and Charles 2018, Cudworth 2011b, Peggs 2013, Taylor 2012, Wilkie 2015). This scholarship has noted that concepts such as society, social, social action, agency, the self and intersubjectivity may apply not only to humans, but also to many nonhuman species (Carter and Charles 2018, Cudworth 2011b, Irvine 2007). In this way, scholars in the field have refashioned many concepts that were previously confined to study of humans in mainstream sociology to accommodate other species as well (ibid.).
In sociological animal studies, the social placing of farmed animals has been an important concern because they are the most numerous animals used for human purposes. As Erika Cudworth (2011b, 106) writes, “[t]he farming of animals has long been, and continues to be, the most significant social formation of human–animal relations”. Animal agriculture is the most common form of animal exploitation, and eating animals is the most common relationship people have with them (Cudworth 2011b, 106). Farmed animals are entangled in relations with humans, “embedded within and shaped by human social institutions and relationships” (Tovey 2003, 208). As Maneesha Deckha (2012, 534) summarises, “animals . . . especially when domesticated/enslaved by humans and brought or born into relations with us, live lives mediated by our ideas about them and their embodiment”.

Farmed animals occupy a disadvantaged social position in societies where resources are distributed in unequal ways, benefiting humans as a species (Carter and Charles 2011, Carter and Charles 2018). The position animals occupy in societies largely conditions the choices available to them, their life opportunities and interests as well as their capacity to have an impact and bring about change (Carter and Charles 2013, 337). Many animals utilised in farming are social actors, capable of exercising choice and communicating with others (Cudworth 2011b, 54). As “fellow agentic beings” (Cudworth 2011b, 54) farmed animals participate in negotiating and shaping their relations with humans (Carter and Charles 2013, 323). They are not just passive objects of human attitudes and meaning making, but they affect with their own actions how people form interpretations of them. However, in contemporary industrial agriculture, the agency of farmed animals in terms of capacity to affect and change their circumstances is severely limited and the possibility of escape from their position is miniscule (Carter and Charles 2013, Cudworth 2011b, 78).

Sociological animal studies provide a general framework for my approach to farmed animals and human attitudes to them in this thesis. Human relationships with farmed animals are importantly shaped by social processes and institutions. Farmed animals are social actors who can co-construct social worlds with humans, although in current industrial farming their power to shape their relations with humans is very limited. In sociological animal studies, farmed animals are not seen as external to human society, but part of a society that is fundamentally multispecies. When I study human attitudes to animals, I recognise that among the animals subject to these attitudes most are highly disadvantaged in society, oppressed and exploited by humans. It can be assumed that attitudes to farmed animals may involve similar patterns as attitudes to disadvantaged or marginalised human groups concerning their rights, life quality and opportunities, as I will discuss in section 2.3.
2.2 THE CATEGORISATION OF ANIMALS

The categorisation of animals has been a key interest in sociological animal studies because the way in which animals are categorised importantly defines how people relate with them, how they are treated in society and their legal protection. Animal categories and the placing of animals in them are socially constructed, so there is much cultural and historical variation in how animals are classified (Stewart and Cole 2009, 458). Categorisation involves humans’ social power to define and order animals into groups on the basis of certain criteria (Arluke and Sanders 1996, 168–169, Cudworth 2011b, 6–7). Biological classifications of animals into phylogenetic groups influence popular perceptions of animals, which I will discuss at the end of this section. Alongside scientific classification, animals are also typically classified according to their form of relation with humans, characterised by the purpose, function or utility those animals are made to serve for humans (Stewart and Cole 2009, 458). As animals are categorised according to their use value for humans (DeMello 2012, 49), these categories are highly human-centric and arbitrary in terms of the needs and capabilities of animals. For instance, individuals of the same species, such as rabbits, can be categorised as pets, food, laboratory animals, vermin and wild animals, and their treatment and legal protection varies substantially depending on the category they are placed in (DeMello 2012, 45–46, Stewart and Cole 2009, 462).

In Western societies, a major distinction is made between animals categorised as food and as companions (DeMello 2012, 49). This distinction is also a key concern in this thesis. Those animals who are eaten are differentiated from those animals with whom people form close emotional bonds (Stewart and Cole 2009, 459–461). The pet/food distinction is institutionalised in society, exemplified by different laws and governmental action directed at companion and agricultural animals (O’Sullivan 2011, 111–140).

Stewart and Cole (2009, 458–462) describe the categorisation of animals along axes of subjectivity and objectivity and cultural visibility and invisibility. Their model is an ideal type that describes how animals are categorised according to the dominant Western perspective on them. Article III draws from their theoretical work on animal categorisation. Companion animals and farmed animals are positioned at the opposite ends of the axes of this categorical mapping; while companion animals have high cultural visibility and are treated as subjects, farmed animals have low cultural visibility and are treated as objects (Stewart and Cole 2009, 460–461). Companion animals live in close spatial proximity with humans, sharing homes with them, while farmed animals are spatially segregated from most people in urbanised societies (O’Sullivan 2011, 60–110, Stewart and Cole 2009, 461). Despite their vast numbers, farmed animals have remarkably low visibility in people’s social and cultural lives (O’Sullivan 2011, 64–76). Most farmed animals are
enclosed in industrial facilities, invisible to non-farming publics (ibid.). In Stewart and Cole’s (2009, 461) categorical mapping, vermin are placed in the bottom corner; they are even more objectified and invisible than farmed animals. Wild carnivores are ascribed high subjectivity, but medium-level or low cultural visibility. Wild non-carnivores are ascribed some level of subjectivity, but, like farmed animals, they have a low cultural visibility.

Alongside the degrees of subjectivity and visibility, the extent to which animals comply with their assigned position in society is important when people define their social status. According to Arluke and Sanders (1996, 169–186), animals can be categorised on the sociozoological scale where they are ranked on a ladder of moral worth according to how well they are considered to fit into the social order. The sociozoological scale is a central concept in article II. According to Arluke and Sanders’ categorical mapping, animals who have a valued place in society and who comply with their subordinate status are classified as “good animals” (“pets” and “tools”) on the scale, while animals who stray from or resist their human-assigned status are classified as “bad animals” (“vermin” and “demons”). Companion animals are located high in the sociozoological scale, and they are valued for their affective importance. Farmed animals are categorized as tools on the scale, and their status is lower than that of companion animals. The tool status of farmed animals reflects their instrumental value for humans as a source of food and income. Vermin and demons are perceived as threats to the social order because they cross human-drawn boundaries and stray from or reject the place assigned to them. These animals are ranked on the bottom level of the moral hierarchy established by the sociozoological scale, and their low moral status is reflected in their poor protection.

Stewart and Cole’s and Arluke and Sander’s conceptualisations on cultural categorisation of animals emphasise different logics on how animals are categorised – the former logic is based on the subjectivity and visibility granted to animals and the latter on the extent of which animals comply with the human-defined social order. Both logics bring about the unequal positioning of animals categorised as ‘pet’, ‘food’ or ‘pest’. Stewart and Cole discuss the positioning of wild animals more extensively than Arluke and Sanders, differentiating wild carnivores from non-carnivores. According to them, wild carnivores, and here they seem to refer to large predators, are typically ascribed with high levels of subjectivity and autonomy. Wild herbivores, in contrast, are often treated as an undifferentiated mass, lacking subjectivity and individuality. However, Stewart and Cole do not consider the placing of game animals (wild animals hunted for meat) in their categorical mapping. Although they refer to the ascribing of subjectivity to wild carnivores, their conceptualisation does not cover animals who are demonised in cultural discourses, in contrast to the socio-zoological scale developed by Arluke and Sanders.
Neither model has the notion of phylogeny integrated into its categorical mapping. Biological systems of classification affect cultural perceptions of animals (DeMello 2012, 46). In phylogenetic classification, organisms are assigned to groups based on their evolutionary history (DeMello 2012, 46, Herzog 2010, 48). Animals with shared characteristics that can be traced to a common ancestor belong to the same phylogenetic class (ibid.). Animal studies literature suggests that people are more likely to attribute emotions and cognitive capacities to animals who are evolutionarily closer to humans than to animals who are evolutionarily distant (see section 2.3.2.). Hence, it can be assumed that the level of objectification and invisibility in the category of farmed animals is contingent on whether the animal in question is a mammal, bird, fish or invertebrate.

It is important to note that the placing of individual animals in these categories is not fixed, but is negotiated in specific contexts. For instance, the positioning of individual animals in the categories of food and companion is contingent and can change in certain situations (Stewart and Cole 2009, 460). As Rhoda Wilkie (2010, 3) writes, the “clear-cut dichotomy” between companion and farmed animals “is messier in practice”. For instance, those who are in contact with farmed animals in commercial or hobby farming contexts form diverse kinds of relations with them, including de-individualised, emotionally reserved and individualised, emotionally close relations (Wilkie 2010). The length and frequency of interaction with animals influence the kinds of relations people form with them (ibid.). Individual animals can also change categorical place, for example, from farmed animals to companions (DeMello 2012, 50, Wilkie 2010, 180–181). Hence, the status of animals as food and companion animals is under negotiation in those situations where people come into contact and engage with animals categorised as food (Wilkie 2010).

Sociological theories on categorisation of animals are central when I examine Finnish perceptions of the animal mind. I will compare the extent to which perceptions of the mental capacities of farmed animals differ from perceptions of animals categorised as companion, vermin/demon and game. I will also examine the extent to which phylogenetic categorisation of animals is linked to perceptions of their mental capacities. In the qualitative part of the thesis, I will focus on the placing of animals in the categories of food and companion and examine ambivalences involved in negotiating the place of animals in these categories in everyday contexts.

2.3 PUBLIC ATTITUDES TO FARMED ANIMALS AND PERCEPTIONS OF ANIMAL MIND

Studying human attitudes to animals and to different forms of human–animal interactions has been a central endeavour in animal studies (e.g. Serpell 2004). Additionally, there has been increasing interest in exploring how the general public
views the inner experiences and mental lives of nonhuman species (e.g. Walker, McGrath, Nilsson, et al. 2014, Wilkins, McCrae, and McBride 2015). These endeavours are closely linked; beliefs regarding the emotional and cognitive capacities of animals associate with attitudes regarding how they should be treated (Herzog and Galvin 1997, 238, Knight et al. 2004). Attitudes to animals and perceptions of animal mind as theoretical constructs can be operationalised into quantifiable indicators and measured numerically. Gauging them by means of a survey provides quantitative information on how people relate to animals. Large, representative samples of population enable estimating views about animals in the whole population by means of statistical generalisation. This provides information on how people relate to animals in the population at large and generates an understanding of normative views about animals shared widely in society. When views about animals are included in longitudinal research or when comparable cross-sectional studies are carried out at different points of time, it is possible to examine the extent and nature of changes in these views over time. Measurement of people’s evaluative tendencies related to animals is unavoidably imperfect, and only approximate understanding of attitudes can be generated by means of survey (cf. Eagly and Chaiken 2007, Groves 2009).

In this section I first define the concept of attitude and how it has been applied to farmed animals. I also discuss how members of the general public have been approached as citizens or as consumers in survey studies and the implications of this different positioning of people for attitudinal research. Following this subsection, in the second I discuss the literature on public perceptions of animal mind, the role of these perceptions in defining the moral status of animals and how the categorisation of animals is linked to them. In the final subsection, I discuss the social formation of attitudes and perceptions about animals. In this section I draw on Kendall, Lobao and Sharp’s (2006) and Deemer and Lobao’s (2011) theorisation on how attitudes toward animals are developed on the basis of people’s positions in the stratified social structure. Additionally, I draw on their notion of farmed animals as a disadvantaged social group and how attitudes toward farmed animals may be linked to attitudes toward disadvantaged or marginalised human groups. The subsection reviews the roles of gender, place of living, age, education and animal-related experiences in shaping attitudes and perceptions regarding animals. It also examines the extent to which human equality attitudes relate to attitudes to animal wellbeing.

### 2.3.1 Attitudes to farmed animals

There are different definitions of the concept of attitude, but a broad, umbrella definition conceptualises it as people’s tendency to evaluate a particular object in favourable or unfavourable ways (Eagly and Chaiken 2007, 582–588, see also Bohner and Dickel 2011, 392–394). Attitudes are not directly observable, and they
are inferred from the way people respond to survey questions (Eagly and Chaiken 2007). An attitude may be either explicit or implicit. When attitudes are explicit, people are largely aware of their evaluative tendencies, whereas when they are implicit, people do not consciously recognise them (Eagly and Chaiken 2007, 592–595). Attitudes are different from values. They are directed at particular objects, while values are more abstract conceptions of the desirable (Hitlin and Piliavin 2004, 360–363). While attitudes include both negative and positive evaluations, values are usually positive (ibid.). Attitudes vary in durability and can change with new experiences and information, whereas values are relatively durable (Bohner and Dickel 2011, Eagly and Chaiken 2007, Hitlin and Piliavin 2004, 360–363).

In studies of attitudes related to farmed animals, the attitude object can comprise, for instance, animal welfare or wellbeing or some aspects of it (e.g. Kendall, Lobao, and Sharp 2006), killing of animals (e.g. Leenstra et al. 2011), specific ways of keeping animals (e.g. Ryan, Fraser, and Weary 2015) and specific industry practices (e.g. Hötzel et al. 2017). Attitudes can comprise various evaluative views, such as a tendency to evaluate animal welfare as good or poor in different farming contexts, or to judge specific housing systems or industry practices as desirable or undesirable or acceptable or unacceptable, or to consider particular ways of relating with animals right or wrong (comp. de Vaus 2014).

Attitudes to animals are developed early on in the human life course, and childhood experiences with animals often have an important impact on attitudes to animals in adulthood (Kendall, Lobao, and Sharp 2006, Paul and Serpell 1993). Mass media attention to ethical issues in industrial farming is a relatively recent phenomenon, and animal welfare and animal rights are still evolving social concerns in comparison to various established social issues, such as gender equality and labour rights (Deemer and Lobao 2011, 175). Because of the emergent public nature of animal rights and because attitudes to animals can reflect early stages of attitude development, these attitudes can be nebulous and they are not always verbalised and formulated in a structured manner (Chen 2016a, 65, 68, Kendall, Lobao, and Sharp 2006, 401). While people may hold explicit attitudes to farmed animals, consciously reflecting their views about the use of animals in agriculture, some of their attitudes can remain unconscious and unarticulated (Chen 2016a, 40, Kendall, Lobao, and Sharp 2006, 401). Additionally, people may not have formed clear opinions about the conditions of animals in agriculture because they lack knowledge of them. This poses challenges when carrying out surveys on views about animal farming with non-farming publics.

Research on public attitudes to farmed animals has increased in recent years (e.g. Cornish, Raubenheimer, and McGreevy 2016). Whereas in some studies members of the general public are approached without positioning them in any specific roles (e.g. Kendall, Lobao, and Sharp 2006, María 2006), in other studies they are positioned as citizens (e.g. Bergstra, Hogeveen, and Stassen 2017, Busch et
al. 2017, Weible et al. 2016) or as consumers (e.g. Prickett, Norwood, and Lusk 2010, Vanhonacker et al. 2007). In the quantitative part of this thesis, I approach Finns as the members of the general public, and I do not define them specifically as citizens or as consumers. The concept of public generally refers to “every member of a given society” (Chen 2016a, 39). When survey studies approach people as citizens or as consumers, diverging perspectives are applied to them and to their agency. Defined as consumers, the attention is focused on how people operate in markets and how they select, purchase, store, prepare and eat foods in their everyday lives. In sociology, consumption is understood as a multifaceted phenomenon, and consumers are seen as participants in a consumer culture where they construct their identities, statuses and lifestyles through commodities and consumption practices (Gabriel and Lang 2015, Sassatelli 2007). Additionally, political and ethical viewpoints may be integrated into consumption practices; for instance, consumers may boycott certain foods and companies and favour others as a form of political action (Gabriel and Lang 2015, 170–192). In the context of studying attitudes to farmed animals, when people are approached as consumers, it is possible to examine, for instance, the importance of rights and welfare of animals to them when they select foods and their willingness to pay higher prices for better welfare (e.g. Prickett, Norwood, and Lusk 2010, Vanhonacker et al. 2007). The extent to which people choose plant-based foods instead of animal-derived foods and their motivations for doing so can also be observed.

In contrast, when people are approached as citizens, they are approached as members of a political community who have the right and responsibility to shape the laws of their community (Donaldson and Kymlicka 2011, 51–59). In the context of attitudes toward farmed animals, the citizenship approach emphasises people’s participation in defining common standards concerning the status of animals in society. Public deliberation is an important element in the concept of citizenship and its associated ideas of democratic political participation; people engage in collective dialogue concerning the laws and public policies that regulate the social status of animals, and they are expected to reflect on and argue their views and engage with the views of others (Donaldson and Kymlicka 2011, 56–57, Gabriel and Lang 2015, 195–198). Taking this citizen approach facilitates, for example, examination of how people perceive the current standards of animal welfare and what kinds of policy measures, such as legislation and taxation, they might demand for the protection of the rights of animals.

Promoting justice for animals demands the involvement of the state (e.g. Donaldson and Kymlicka 2011, Garner 2013). If the protection of animals is considered as a consumer issue, it is given a weak moral position because the welfare of animals is dependent on consumers’ voluntary action rather than the

9 In article I, we described Finns as ‘citizens’ although the word ‘public’ might have better reflected the way in which we used the concept in the article.
binding legal norms of the society (see e.g., Pircher 2016). Welfare of animals is also defined as a commodity that can be exchanged in the markets (Törsson 2015). Therefore, when people’s attitudes toward farmed animals are examined in their roles as citizens, the status of animals is defined essentially as a public policy issue and it has a stronger political weighting than when defined as a consumer issue. Although the positioning of people as citizens or as consumers brings up different perspectives on the status of animals and how people may participate in shaping it, both citizen and consumer surveys usually utilise community samples and employ comparable attitudinal indicators. Hence I refer to both citizen and consumer surveys when I explore social group differences in attitudes to farmed animals.

The studies that have explored public, including both citizen and consumer, attitudes toward farmed animals, have tended to focus on attitudes toward animal welfare. Animal welfare is a broad and multidimensional concept that describes the physical and mental health and the quality of life of animals (Fraser 2008, 61–78, Keeling, Rushen, and Duncan 2011, 13–14). As a scientific concept it has been given specific technical definitions, but as a societal concept it includes diverse understandings regarding what a good life constitutes for different animals (Fraser 2008, 61–78). The focus on animal welfare in surveys has overshadowed other moral questions surrounding the use of animals in agriculture, such as questions related to the dignity, integrity and moral worth of animals, the killing of animals and the keeping of animals in captivity. This reflects the fact that the animal welfare perspective – a mainstream concern related to so-called humane treatment and use of animals – has tended to dominate the research field, while animal rights and justice perspectives, which take a critical stance toward the exploitation, ownership, imprisoning and killing of animals, have been marginal (see Donaldson and Kymlicka 2011, 3–4). The result of the dominant welfare perspective has been that the incidence of critical perspectives in survey studies on public attitudes toward farmed animals has been relatively weak.

Many studies on attitudes to farmed animals have been carried out from the perspectives of agricultural economics, consumer research, marketing and animal welfare science and they have not been informed by social science perspectives (e.g., Busch et al. 2017, Hötzel et al. 2017, McKendree, Croney, and Widmar 2014, Prickett, Norwood, and Lusk 2010, Vanhonacker et al. 2010). Sociology has taken relatively little part in this field of study. Many studies tend to be highly empirical, lacking substantial theoretical framing and social science conceptualisation of their research. Despite some progress in recent years, sociological research on public attitudes to farmed animals is still limited in both theoretical and empirical development (Deemer and Lobao 2011, Franklin 2007, Kendall, Lobao, and Sharp 2006).

There are no established and standardised measures of attitudes to farmed animals, and a wide range of attitudinal measures have been employed in different
Attitudes regarding farmed animals are complex and multifarious, so it is useful to utilise various kinds of indicators for these attitudes to tap different facets of them and to avoid simplifying the phenomenon. At the same time, the use of well-tested and standardised indicators would improve the comparability of findings across different studies. The Animal Attitude Scale (AAS) is an established measure that assesses attitudes to the treatment and use of animals, but it covers various areas of animal use and does not focus specifically on the use of animals in the farming context (Herzog, Grayson, and McCord 2015). Therefore, there is a need to develop established attitudinal measures applicable to agricultural animals.

2.3.2 Perceptions of animal mind

Mental capacities are an essential basis on which people give moral concern to nonhuman animals (Bastian et al. 2011, 248). When animals are considered thinking and feeling beings capable of various subjective experiences, such as pain, distress, grief, fear, joy and affection, it is recognised that they can experience different forms of suffering and that they can be harmed in diverse ways (e.g. Knight et al. 2004, 54). In contrast, if animals are perceived as mechanical objects that lack internal psychological processes and are not capable of mental states, their exploitation appears less bothersome (Bastian et al. 2011, 248, Knight et al. 2004, 54). In animal ethics literature, phenomenal consciousness – the capacity for subjective experience – is a core quality when defining the moral standing of an animal (Aaltola 2012, 5–10). In particular, sentience, the capacity to experience pleasure and pain, is central for the possession of interests regarding an animal’s welfare (Francione 2008, 10–11). Sentient beings can experience aversive situations, and therefore what happens to them has moral significance (Donaldson and Kymlicka 2011, 24–32). The capacity for other inner experiences, such as fear, grief, joy and love, define the specific harm that the animal can suffer (Nussbaum 2006, 397–398). Like humans, non-human animals can be dementalized to justify the harm done to them (Bastian et al. 2011).

The animals’ phylogenetic class, perceived similarity to humans, cultural categorisation, familiarity and their behaviour in context are linked to people’s perception of their mental capacities (Mitchell and Hamm 1997). Regarding phylogenetic class, animals who are evolutionarily close to humans are assigned more mental capacities than animals who are evolutionary more distant (Herzog and Galvin 1997, 248–251). Mammals are typically ascribed the highest mental capacities, followed by birds, reptiles or amphibians, fish and then a range of invertebrates (Herzog and Galvin 1997, Knight et al. 2009, McGrath et al. 2013, Phillips and McCulloch 2005, Phillips et al. 2010, Wilkins, McCrae, and McBride 2015). Mammals are regarded as resembling people physically, behaviourally, emotionally and cognitively more closely than non-mammals (Wilkins, McCrae, and McBride 2015, 365).
The tendency to ascribe mental capacities to animals hierarchically based on their evolutionary closeness to humans suggests a construction of evolution as a linear progression of life where behavioural and brain complexity increases at each evolutionary stage (Arluke and Sanders 1996, 169, Brown 2015, 3). In this construction of evolutionary mental development, humans appear at the top, while ‘primitive’ and ‘less evolved’ species, such as fishes, are on the bottom rungs of the evolutionary ladder (ibid.). This is a strong and persistent cultural construct, albeit one not supported by the contemporary scientific understanding of the evolution of mind in different phylogenetic groups (Arluke and Sanders 1996, 169, Brown 2015, 3, Wilkins, McCrae, and McBride 2015, 358). Different species have developed highly diverse cognitive and emotional capacities and behavioural patterns as they have adapted to their varying environments (Brown 2015, de Waal 2016). As people tend to attribute more mental capacities to species that are evolutionary closer to humans, this can indicate that people express less concern for non-mammalian species utilised in farming, including birds, fishes and various invertebrates.

Farmed animals are typically given fewer mental capacities than companion animals (Herzog and Galvin 1997, Knight et al. 2009, McGrath et al. 2013, Phillips and McCulloch 2005, Phillips et al. 2010, Wilkins, McCrae, and McBride 2015). In fact, psychological studies indicate that people tend to ascribe lesser minds to farmed animals to make meat eating less morally bothersome (Bastian et al. 2011). Companion animals are not used as food so people are not motivated to dehumanize them to the same extent as farmed animals. People frequently interact with companion animals and witness their complex behaviour in their everyday lives, encouraging attribution of a mind to them (Morris, Knight, and Lesley 2012).

To my knowledge, apart from those on great apes, elephants and dolphins, which are frequently included (Herzog and Galvin 1997, McGrath et al. 2013, Phillips et al. 2010), survey studies of how people perceive the mind of wild animals have been limited. I have not found any systematic comparisons of the perceptions of mind of different categories of wild animals (such as animals categorised as large predators, ‘game’ or ‘pests’). Some studies indicate that people attribute a similar level of sentience to foxes and pigs (Phillips and McCulloch 2005), but they tend to attribute lesser mind to small wild mammals (bats) than to large farmed mammals (cattle and pigs) (Herzog and Galvin 1997, McGrath et al. 2013). As regards birds, according to one study, chickens are ascribed less capacity to grieve than magpies (McGrath et al. 2013). A corollary of the lack of research on perceptions of the wild animal mind has been that there is a limited understanding of how people perceive the mind of farmed animals as compared to that of wild animals.

Although survey research on laypeople’s perceptions of animal mind has increased, there have been few studies that include large and representative samples of population. Additionally, multivariate analyses exploring determinants
of these perceptions have been rare. Consequently, our knowledge of the public perceptions of animal mind and how they associate with people’s social group positions and other factors is still limited.

2.3.3 Social formation of attitudes and perceptions regarding farmed animals

The formation of attitudes to animals and perceptions of animal mind is a highly complex process, influenced by numerous cultural and social factors. Kendall, Lobao and Sharp (2006) have drawn on sociology’s stratification tradition (e.g. Bourdieu 1984/1979, Tilly 1999) to theorise about the development of people’s attitudes and beliefs about animals on the basis of their positions in the stratified social structure. According to them, people who share a similar position in society tend to have similar life experiences, which in turn affect their beliefs and attitudes about a range of issues, including animals. Socialisation mechanisms, day-to-day experiences and conditions of life tend to be collectively shared by people positioned similarly in the social stratification, creating a shared basis for attitude development and reproduction. People’s social positions can also affect their experiences with animals and the cultural representations of them. People occupy multiple social positions, so they form attitudes in the intersection of various structural factors. Likewise, unique life course experiences shape attitudes and beliefs, creating variation in attitudes within a social group. In addition to social group positions, personal experiences with specific animals tend to influence attitudes to animals as a broader group (Kendall, Lobao, and Sharp 2006, Paul and Serpell 1993). For instance, close relationships with companion animals in childhood seem to instil caring attitudes toward both companion animals and other types of animals in adulthood (Paul and Serpell 1993).

Deemer and Lobao (2011) and Kendall, Lobao and Sharp (2006) point out that the stratification literature is particularly concerned about the formation and maintenance of durable group inequalities and how these inequalities become embedded in people’s beliefs and attitudes. They suggest that the stratification theories on attitudes and beliefs regarding human equality, wellbeing and disadvantage appear suitable to be extended to examining attitudes and beliefs regarding animal equality, wellbeing and disadvantage. Beliefs and attitudes regarding group hierarchies and disadvantaged groups, including animals, are developed through everyday practices and socialising experiences and are often internalised without conscious reflection and deliberation (Deemer and Lobao 2011, Kendall, Lobao, and Sharp 2006). The stratification theory suggests that attitudes to different disadvantaged groups tend to converge, which would entail a link between attitudes toward human equality and species equality (Deemer and Lobao 2011). Likewise, the theory suggests that those having a less privileged position in society are more likely to have sympathetic attitudes to other disadvantaged
groups, including animals, because experiences of disadvantage should instil sympathy for other groups sharing similar experiences (Kendall, Lobao, and Sharp 2006, 402, 408–409). Conversely, those who do not share experiences of subordination and marginalisation are less likely to identify with human and animal disadvantage (ibid.). Additionally, Deemer and Lobao (2011) suggest that attitudes to animals converge with attitudes to different human outgroups. Different groups of animals can be defined as outgroups, seen as ‘other’ to humans as a collective. People who show more positive and accepting attitudes to human outgroups can also express more positive attitudes to animals.

This theorising on the linkages between attitudes to humans and animals derives from long-term scholarly work in animal studies that has examined how the subjugation of animals is linked to and interacts with the subjugation of different human groups (e.g. Adams 1990, Nibert 2003, Peggs 2012, 44–45). Arising from early feminist and ecofeminist writings that examined the link between the subordination of women and animals, this analysis has been extended to other categories of difference, informed by the intersectionality theory (Cudworth 2011b, 43–46, Deckha 2012, Peggs 2013, 602–603, Taylor and Twine 2014, 4–5, Twine 2010, 11). This theory is concerned with how multiple inequalities interact and shape each other and examines the intersection of various categories of difference (Walby, Armstrong, and Strid 2012). Animal studies scholarship has brought species into this analysis, examining the complex and dynamic ways in which inequalities between species intersect with other sets of inequalities (Cudworth 2011b, 43–46, Deckha 2012).

In this thesis, I examine how social group positions and animal-related experiences associate with attitudes to farmed animals. Additionally, deriving from the interest in examining the interlinkages between attitudes to humans and animals in sociological animal studies, I investigate whether attitudes to farm animal welfare are linked with attitudes to social equality between human groups. Regarding social group positions, the thesis focuses on the role of gender, age, educational level and place of living in shaping attitudes to farmed animals. Gender differences in human–animal relations have been a central theme in animal studies. Many animal-related practices are highly gendered. The gender difference

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10 In this thesis, only educational level functions as an indicator of socioeconomic class because the survey did not contain adequate measures for income, wealth, experience of economic hardship and occupation. Additionally, while race and ethnicity are key structural positions in the stratification theory, this thesis does not examine how they associate with attitudes to farmed animals. The survey focused on examining attitudes of those adult Finns who speak Finnish as their first language because more resources would have been needed to translate the questionnaire into other languages. In 2010, when the survey was administered, 90.8 percent of population in mainland Finland spoke Finnish as their first language, followed by Swedish-speaking people (five percent) and people from other language groups (4.2 percent) (Statistics Finland 2019). The percentage of Finland’s population of foreign origin was 4.8 (Statistics Finland 2012).
is marked, for instance, in participation in animal advocacy movements, where women predominate, and in hunting, where men vastly outnumber women (Herzog 2007, 12–13). Also animal-related labour in agriculture is gendered, with historical shifts in its gendered character; while looking after domestic animals was a feminised form of labour in agrarian societies, male participation in animal-related labour increased as animal production shifted from subsistence to industrial production (Kaarlenkaski 2014, 9–18, Wilkie 2010, 46–49). Men also predominate in slaughter work (Cudworth 2011a, 166–167, Pachirat 2011, 63, Vialles 1994, 101–110, Wilkie 2010, 43). Gender identities can be shaped by animal-based practices (Deckha 2012, 539). In particular, in Western cultural beliefs, meat, particularly red meat, is associated with masculinity (Adams 1990, Cudworth 2011b, 88, Twigg 1983). Red meat carries ideas of strength, power and virility, and male consumption of meat is encouraged to promote these qualities in men (Twigg 1983). In many countries, men report eating more meat than women (Rothgerber 2013, 364). In Finland, gender differences in meat consumption are large; men eat on average 1.7 times more meat than women (Ovaskainen 2016, 44). Vegetarianism is also more popular among women in different countries (Rothgerber 2013, 364), including Finland where 4.7 percent of women and three percent of men declare themselves vegetarian (Helldän and Helakorpi 2015, 153). The gender of animals affects their use in agriculture. Animal agriculture relies on utilising and controlling the fertility and reproduction of female animals (Cudworth 2011a, 163–165). Female animals are used to produce milk, eggs and offspring which are raised for meat (ibid.). Farmed animals are also frequently gendered; for instance, cows may be constructed according to stereotypic female attributes as motherly, docile and caring (Cudworth 2011a, 163–165, Kaarlenkaski 2012, 20–22, Wilkie 2010, 62).

Considerable gender differences in many areas of human–animal interaction can be expected to be reflected in attitudes to animals at the population level. Indeed, across national contexts, gender differences in animal-related attitudes have been established; surveys show that women are more likely to express favourable attitudes to animal protection and less support for animal use than men (see reviews Amiot and Bastian 2015, 26, Herzog 2007, 10–11). Regarding farmed animals, surveys suggest that women on average are more concerned for them, a trend which has been identified in American, Australian and European samples (Deemer and Lobao 2011, Kendall, Lobao, and Sharp 2006, María 2006, McKendree, Croney, and Widmar 2014, Musto, Faraone, and Cellini 2014, Pritchett, Norwood, and Lusk 2010, Signal, Taylor, and Maclean 2018, Vanhonacker et al. 2007, Vanhonacker et al. 2009). However, gender differences in attitudes to animal use tend to be moderate (Herzog 2007, 10–11). In other words, there is much overlap between the genders in animal-related attitudes, and within-gender variation is much larger than between-gender variation (ibid.).
In contrast to attitudes to animal use, previous research has not identified any consistent association between gender and perceptions of animal mind. Some studies indicate that women are more likely than men to ascribe mental capacities to animals (Herzog and Galvin 1997, McGrath et al. 2013), while other studies have not identified any connection between gender and perceptions of animal mind (Knight et al. 2004, Morris, Knight, and Lesley 2012, Wilkins, McCrae, and McBride 2015). One study found that gender differences in attributing emotions to animals vary depending on the animal emotion in question; men were less likely than women to ascribe capacity to experience depression, love, grief and anxiety to animals, but there were no gender differences in attributing other emotions to animals, including fear, happiness, distress, anger and sadness (Walker, McGrath, Nilsson, et al. 2014).

Location of domicile, urban or rural, structures people’s experiences with animals and relations they form with them, and these in turn affect people’s attitudes to them (Kendall, Lobao, and Sharp 2006, 405–407). While urban people are distanced from industrial animal farming and slaughter, people from rural areas live in communities that are economically more reliant on animal farming (ibid.). Studies indicate that urban residents are more concerned for farm animal welfare than rural residents (Boogaard, Oosting, and Bock 2006, Deemer and Lobao 2011, Erian and Phillips 2017, Musto, Faraone, and Cellini 2014, Signal, Taylor, and Maclean 2018, Vanhonacker et al. 2010). One study suggests that childhood residence has an enduring effect on animal-related attitudes; those who grew up on a farm or in country and other nonurban settings are less concerned for farmed animals than those who grew up in the city (Kendall, Lobao, and Sharp 2006). Although the link between place of residence and attitudes to farm animal welfare is well-established, I have not found any published research on how place of residence associates with perceptions of animal mind.

Age can associate with attitudes to animals as there are generation-based differences in people’s experiences with them. In late-urbanised societies, such as in Finland, older people are more likely to have experiences with animal farming than younger people. Animal production has industrialised rapidly, and because it has attracted critical public scrutiny only relatively recently, it may have had a stronger impact on younger people’s attitudes to animal farming. Studies suggest that younger people tend to be more concerned for farm animal welfare than older people (Deemer and Lobao 2011, Kendall, Lobao, and Sharp 2006, María 2006, McKendree, Croney, and Widmar 2014, Vanhonacker et al. 2007). Regarding perceptions of animal mind, findings are less consistent; some studies suggest that older people are more likely to believe that animals are capable of a range of mental capacities (Knight et al. 2004, Walker, McGrath, Handel, et al. 2014), while one study suggests the reverse (McGrath et al. 2013).
Education can shape people’s knowledge and values regarding animals, which can impact their attitudes to farmed animals and beliefs about animal mind. Education can also influence the ways in which scientific findings on animal mind and on animal welfare reach members of the public. Moreover, educational level is an indicator of socioeconomic position. However, previous research has not identified any consistent association between educational level and attitudes to farmed animals. Some studies suggest that less educated people are more concerned about farm animal welfare than those with a higher level of education (Kendall, Lobao, and Sharp 2006, Prickett, Norwood, and Lusk 2010), while other studies suggest the reverse (Musto, Faraone, and Cellini 2014, Vecchio and Annunziata 2012). To my knowledge, the link between educational level and perceptions of animal mind has not been studied empirically.

Alongside social group positions, this thesis examines how personal experiences with animals are associated with attitudes to farmed animals. In animal studies, there has been an interest in researching how relations with companion animals may influence attitudes toward animals as a broader group. Previous research suggests that having a companion animal associates positively with pro-animal attitudes and with greater concern for farm animal welfare (Boogaard, Oosting, and Bock 2006, Daly and Morton 2009, Kendall, Lobao, and Sharp 2006, McKendree, Croney, and Widmar 2014, Paul 2000, Signal, Taylor, and Maclean 2018). Keepers of companion animals are also more likely to attribute mental capacities to animals than non-keepers (Maust-Mohl, Fraser, and Morrison 2012, Walker, McGrath, Handel, et al. 2014). In contrast, living or having grown up on a farm is associated with a weakened concern for farm animal welfare (Boogaard, Oosting, and Bock 2006, Kendall, Lobao, and Sharp 2006, Vanhonacker et al. 2007). In farm settings, animals are used as a means to gain income, and this appears to generate more instrumental attitudes toward them (Kendall, Lobao, and Sharp 2006, Richards, Signal, and Taylor 2013).

Finally, alongside social group positions and experiences with animals, this thesis examines linkages between attitudes to farmed animals and to human equality. Previous research suggests that there is a link between attitudes toward human wellbeing and equality and attitudes toward animal wellbeing and species equality. People who support economic equality and express greater out-group tolerance are more concerned about farm animal welfare (Deemer and Lobao 2011). Furthermore, concern for farm animal welfare associates positively with concern for human welfare, as indicated by the valuing of fair wages and non-abusive labour conditions for agricultural workers and by willingness to pay more for fair-trade products (ibid.). Negative attitudes toward ethnic outgroups links with speciesist attitudes toward animals (Dhont et al. 2014, Dhont, Hodson, and Leite 2016). People who support greater rights for disadvantaged and marginalised human groups, including homosexuals, non-citizens, racial minorities and the poor, tend to

2.4 MEANINGS ATTRIBUTED TO THE MEAT–ANIMAL LINK

Survey research on public views about farmed animals and their mental capacities can provide information about broad trends and general patterns in people’s attitudes and perceptions about farmed animals, but it cannot capture the highly diverse and multifaceted ways in which people relate to animals in their lived worlds. Qualitative research is better equipped to study the complex and multifarious meanings people ascribe to animals and their use as food in their everyday lives. Cultural meanings associated with meat eating has been a long-studied topic in animal studies (e.g. Adams 1990, Fiddes 1991, Potts 2016). People’s tendency to avoid connections between meat and an animal has been a central theme in this scholarship. Stemming from Carol J. Adams’ (1990, 40–42) influential notion of animals as “absent referents” in the concept of meat where ‘meat’ as food and culinary substance is separated from the idea of flesh of a dead animal, it is frequently noted that the animal origin of meat is well disguised both discursively and materially in contemporary Western meat culture. For instance, meat is typically sold and served in processed forms, with little reminder of the animal it came from. Those parts of animals that are associated with living creature and personality, such as entrails, face and eyes, are avoided (Amiot and Bastian 2015, 33).

According to Richard Twine (2014, 628), omnivorous eating practice forms a certain kind of affective order where pleasure can be taken from eating other animals. Framing and perceiving meat as a food substance that is not directly connected to animals and animal slaughter helps to maintain this affective order (Twine 2014, 626). As Twine writes (ibid.), “[I]n the omnivorously normative happiness order it is precisely the point that animal products and the violence that is inherent to their journey there do not constitute an overt presence at the dinner table.” In contemporary societies, dissociating meat from once living animals is facilitated by the low visibility of industrial animal rearing and killing, which are located outside urban centres, as discussed in section 2.2. Distance and low visibility of farmed animals help to uphold the omnivore practice that relies on routine dissociation (Joy 2011, 20–21, Kunst and Hohle 2016). Qualitative studies

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11 The level of disguise varies according to species. While mammals and birds are typically served in de-animalised forms, fish and crustaceans can be served whole, with head attached (Cudworth 2011b, 91). Because of the phylogenetic distance of these animals from humans, people may be less concerned about making a link between them and the food on their plates.
indicate that consumers tend to avoid connecting meat directly to an animal. Shopping in a hurry, selecting processed foods and everyday food vocabularies (for instance use of the words “pork” and “beef” instead of “pig” and “cow”) tend to construct meat as a food commodity that is thoroughly disconnected from its animal origin (Evans and Miele 2012, 303–306). Consumers report not thinking about meat production as they do their everyday routine food shopping and they also prefer not to be reminded of the animal origin of meat (Macnaghten 2004, 539, Te Velde, Aarts, and Van Woerkum 2002, 214–215). In a focus group study with Finnish consumers, participants discussed how they tended not to associate meat with its animal origin when purchasing and cooking meat (Autio et al. 2018, 127–128).

Although dissociating meat from its animal origin appears prevalent in contemporary Western societies, there is variation across national contexts and social groups in the extent that people prepare and eat foods whose animal origin is less concealed, such as offal, tails, feet and bones, and in the extent of people’s exposure to visible parts of animals while shopping for food (Amiot and Bastian 2015, 33, Buller and Cesar 2007, Kunst and Palacios Haugestad 2018, Tucker 2014). Noëlie Vialles (1988) has described different orientations to the meat–animal link with the concepts of sarcophagan and zoophagan logic of meat eating. I used these concepts in article III.12 The sarcophagan logic describes the dissociation strategy prevalent in the dominant meat culture in Western societies, as described above. The logic involves a general distaste of eating any meat that is too reminiscent of the animal and its killing (Vialles 1988).

Despite the predominance of the sarcophagan logic, there are also meat eaters who are not concerned about linking meat to an animal. Vialles (1988) calls this meat-eating approach zoophagan logic.13 Zoophages like to recognize the animal in meat. Those food ingredients that remind them clearly of the animal, such as offal, are not despised but valued gastronomically. In the zoophagan logic animals are objectified as potential food; they are seen as existing to be eaten, so that the need to slaughter animals before they are consumed does not appear an issue that needs to be concealed. According to Vialles, those who have a professional involvement in raising animals for food or possess a gastronomic interest in food tend to share the zoophagan orientation to meat. In qualitative studies with omnivores, little attention has been given to the possible ways in which meat eaters make connections between meat and an animal. Based on focus groups in seven European countries, Evans and Miele (2012, 306–309) note that omnivores can make

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12 In this summary article, I use the words sarcophagan and zoophagan logic (instead of sarcophage and zoophage logic as in article III), following the English translation of these concepts in Vialles’ book Animal to Edible (1994, 127–128).

sensual-material connections between meat and animals in their ways of observing, cooking and eating meat. Meat eaters may interpret the kind of life the animal has lived based on the taste, colour and texture of its meat and their observations when preparing meat (ibid.). Because qualitative studies have given limited attention to how omnivores make connections between meat and an animal, this is also a theoretically little-understood question. This thesis makes a contribution by developing this understanding.

Gender appears to play a role in how omnivores express sarcophagan and zoophagan orientations to meat. In questionnaire settings women are more likely than men to avoid thinking about farming and slaughtering of animals and connecting meat with an animal (Rothgerber 2013, Piazza et al. 2015). Qualitative research points in the same direction. In an interview study with Danish and predominantly female omnivores, participants expressed unease about the thought of eating dead animals and preferred meat products whose animal origin is well disguised (Holm and Møhl 2000). According to an interview study with female meat eaters in Scotland, participants avoided thoughts about animal production and slaughter while purchasing and cooking meat because of worries that these thoughts would put them off eating meat (Schröder and McEachern 2004). Norwegian female omnivore adolescents report feeling troubled by the slaughtering of animals and avoiding connecting meat to an animal (Kubberød et al. 2002). Appearance of blood in meat also evoked disgust among them (ibid.).

In recent years, the industrialised food system, in which consumers are disconnected from animal production and routinely employ the dissociation strategy, has been increasingly challenged. The so-called ethical omnivore, conscientious omnivore and local meat movements have promoted consumer proximity to animal farming and slaughtering as a means to more ethical eating (Gillespie 2011, Stanescu 2013). Buying meat directly from farmers and visiting farms to witness the living conditions, and in some cases the slaughter of animals, is assumed to give more guarantee that animals are looked after well (Stanescu 2013). Raising and slaughter of animals by the consumers themselves is also seen as generating more responsible ways of consuming meat (Gillespie 2011, Blecha and Davis 2014). In animal studies, growing critical attention has been given to the ethical omnivore movements and the ways in which the notions of proximity, visibility and connection are constructed in these movements (Gillespie 2011, Pedersen and Stanescu 2014, 268–271, Tiengo and Caffo 2012, Stanescu 2013). In this thesis, I contribute to this critical scholarship when I examine how omnivores negotiate the meat–animal link.
3 DATA AND METHODS

3.1 MIXED METHODS RESEARCH

In this thesis, two sets of research materials are used; a survey of Finnish people (articles I and II) and focus groups, each comprised of different omnivore groups (article III). These materials were collected in the project *Politicized animals: the consumer and farm animals* (Academy of Finland, 2009–2012). This thesis comprises mixed methods research as it combines quantitative and qualitative methods (e.g. Creswell 2015). According to Neil Spicer (2012), there are various approaches on how to combine these methods, including the triangulation of methods, the use of multiple methods and the facilitative combination of methods. I utilise a multiple methods approach to combine the methods. Taking this approach, a variety of methods are employed to examine different aspects of a broad research problem (Spicer 2012, 480, 485–487). The survey and focus groups provide two angles from which the study explores popular views about animals used in food production in Finland. By using multiple methods, it is possible to address a wider range of issues and to gain a more comprehensive understanding of the research problem than would be feasible with use of a single method (ibid.).

A survey was selected to study Finns’ attitudes to farmed animals and perceptions of the animal mind at the population level. This data allows examination of the general patterns in attitudes and perceptions about animals and how they vary according to sociodemographic background and animal-related experiences, and how they associate with social equality attitudes. A well-collected sample enables statistical generalisation to the whole population. Focus groups were selected to examine everyday meanings people ascribe to farmed animals. Formal questionnaires are based on researchers’ constructs and categories, while qualitative methods allow a better access to participants’ experiences, understandings and interpretations as described by their own vocabulary (Byrne

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14 The survey and focus groups were designed and carried out by the project leader and researchers, with three expert advisors participating in the design process and four project trainees or students participating in administering the survey and focus groups.

15 In this thesis, I have not combined qualitative and quantitative data with the aim of triangulation; these datasets did not answer specifically the same question so the results of one study could not be used to cross-check the results gained in the other study (Spicer 2012, 484–485). Likewise, the methods were not combined in a facilitative way where the qualitative part of the research is designed and carried out before the quantitative research to support and inform it, or the other way around (Spicer 2012, 489). The survey research was designed at the same time as the focus groups, and the intention was that with these different research methods, different aspects of the research problem could be addressed.
The qualitative focus groups enabled study of the multifaceted and complex everyday meanings people attribute to farmed animals, whereas this complexity could not be accessed with a structured questionnaire. Hence, altogether this thesis illuminates both the multifaceted meanings Finnish omnivores ascribe to the use of animals for food and the broader social patterns that characterise Finns’ views about farmed animals.

3.2 SURVEY

3.2.1 Data collection

A mail survey of Finnish people was administered between April and July 2010. The address data (n = 4,000) was obtained as a simple random sample from a national population register maintained by the Population Register Centre of Finland. The sampling frame was the adult population aged 18–75, living in mainland Finland and speaking Finnish as their first language. Participants received a cover letter that informed them about the research (see section 3.4 for more details) and a questionnaire form with a postage-paid return envelope. A reminder letter including the questionnaire form and a postage-paid return envelope was sent twice to people who had not responded. A raffle with a prize of a 200-Euro gift voucher to a department store provided a small incentive for people to respond.

The final questionnaire was 10 pages long with a feedback form and included 24 questions or question batteries (the questionnaire is available in Finnish in Appendix 2). The questionnaire included questions about sociodemographic background, general values, views about farmed animals and the food sector and perceptions of animal mind. The questionnaire was planned by the research group with advice from experts in animal welfare science, animal ethics and survey design. Expert reviews are often utilised in evaluating draft survey questions.
(Groves 2009, 260–261). In this study, the contribution of experts in animal welfare science and animal ethics was important to determine whether key issues in the subject area were being addressed and to determine the suitability of the terms and concepts used (comp. Groves 2009, 260–261). The contribution by the experienced survey researcher was also important in planning the length and structure of the questionnaire, the wording of questions, the response alternatives and instructions for respondents (ibid.).

The questionnaire was tested with around 30 people of varying ages and educational backgrounds. Feedback from the pilot testing resulted in removing some questions to shorten the survey and to improve clarity, changing the wording of some questions to improve comprehension and changing the layout to enhance the clarity of the form. Thus, the expert review and pilot testing enhanced the quality of the survey questions in terms of relevance, clarity and comprehension.

The final sample was 3,985 Finns, as 15 people were not reached, for instance because of changed address. We received 1,932 forms, but 39 of them were rejected because they had not been filled in sufficiently. Additionally, three forms went missing in postal transport. Hence, altogether we received 1,890 adequately completed forms and the final response rate was 47.4 percent in article I. In article II, 66 forms were excluded from the analysis because they included no responses to the question on animal mind. Consequently, in article II, the remaining number of respondents was 1,824 and the final response rate was 45.8 percent. The pilot testing, survey planning and survey administration is also described in Pohjolainen (2012).

The answers in the paper forms were transferred into electronic format by research trainees who manually keyed the answers into SPSS. The population register data (gender, year of birth and municipality) of the respondents was available in electronic format, which was transferred to the SPSS file. In 44 forms, the respondents had not reported either their year of birth or their gender, or both. In these forms, gender and year of birth were added by making use of the information provided in the population register data. In the remaining questions utilised in this study, non-response ranged from 0.2 to 4.2 percent per question in article I and from 0.6 to 3.4 percent in article II. Non-response was treated as parts of the survey. The survey planning involved extensive discussion within the research group and generating several drafts of the questionnaire form before the final form was agreed. My responsibility was to design survey questions on farm animal welfare and the value of animal life (question batteries 18 and 22). I formulated these questions and revised them based on the feedback from the other project members and expert advisors. In addition, I participated in designing other parts of the survey, including the questions on socio-demographic background and experiences of animals and the questions on animal mind.

18 In the form, the respondents had only two options for gender, male or female, so the questionnaire did not consider the diversity of gender identifications. A better practice would have been to include a third gender option in the form.
missing values, so that respondents who had not answered the question were excluded from the analysis. In the question on animal mind, it was not possible to distinguish non-responses from ‘don’t know’ answers, so they were grouped as ‘no answer’ responses (see section 3.2.3). Dependent variables in article I and some of the independent variables (farm animal welfare evaluation scale in article II and the social equality scale in articles I and II) were scaled variables, so that the mean score was calculated for items that had valid codes. In this way, the scaled variables were adjusted for the number of questions the participants had answered. As a result, the scaled variables had missing values only in those situations when the respondent had answered to none of the items that formed the scale. In the multivariate analyses utilised in article I, the final number of respondents was 1,777–1,793 per dependent variable, and in article II the figure was 1,691 in all the dependent variables. This means that 42.4–45 percent of the people reached with the survey have been included in the final multivariate analyses.

Response rates have been declining in Europe and USA (Groves 2009, 186–188). In Finland nowadays, a response rate of around 50 percent or under is common in postal surveys (Räsänen and Sarpila 2013), and the response rates achieved in this study reflect this trend. The representativeness of the survey sample was assessed by comparing the sample with population statistics. Specific figures are reported in articles I and II. Compared to the population statistics, women are over-represented by six percent in the data. This may reflect the fact that women tend to respond more actively to surveys than men (Groves 2009, 201). Perhaps also the topic concerning food and animal welfare attracted more female respondents. In addition, older people are over-represented in the sample; the mean age is 3.4 (article II) and 3.8 (article I) years higher than the mean age of Finland’s Finnish-speaking population aged 18–75. Time constraints affect people’s tendency to respond (Groves 2009, 198), and older people may have had more time to participate in the survey. Regarding education, place of residence and region of living, the sample accords relatively well with the population statistics. All in all, the biases in the sample cannot be considered particularly large, with age showing the largest deviation from the population data.

3.2.2 Study variables

Dependent variables

*Attitudes to farm animal welfare and to value of animal life (article I)*

Because public views on farmed animals is a relatively new research field, there are no standardised measures for assessing attitudes to farmed animals, as discussed in section 2.3.1. In article I, attitudes to farm animal welfare were measured with three variables, which assessed different aspects of attitudes to animal welfare, and attitudes to value of animal life was measured with one variable. These variables
were formed as scaled variables from 22 attitudinal questions. The reliability scores, mean values and standard deviations of the attitudinal indicators are described in article I.

The first attitudinal indicator includes a measure concerning the evaluation of the current state of farm animal welfare in Finland, titled farm animal welfare evaluation. The scale is based on eight items where people were asked to evaluate the state of animal welfare in eight animal production lines in Finland (including hens kept for egg production, broiler chickens, turkeys, pigs, farmed fish, beef cattle, dairy cows and sheep). Items were measured on a five-point scale ranging from “very good” to “very poor”. Three remaining attitudinal measures were created using 5-point Likert-type questions, with poles ranging from strongly agree to strongly disagree. Trust in prevalent animal production is based on six items and covers attitudes to prevalent animal production and the level of trust in the knowledge of animal producers, technological development and customary farming practices in terms of animal welfare. The items include the following six items: “Animal producers are well informed of the welfare needs of animals”, “Animals can be looked after well on large farms because of technological developments”, “When an animal eats and produces well, it also fares well”, “Nowadays farm animals have sufficient space to move around”, “Nowadays the longevity of animals is sufficient at farms”, and “When the housing conditions of pigs and poultry are adequate, it is not necessary to provide them with outdoor access”. The behavioural freedom scale includes five items measuring views on behavioural restriction and species-specific behaviour of animals. The items include the following statements: “All farm animals should be given the opportunity to carry out species-specific behaviour”, “Farm animals can become depressed in inadequately enriched living conditions”, “Calves should have enough space to run and play with each other”, “Calves should not be separated from their mothers right after their birth”, and “Keeping laying hens in cages should be banned for animal welfare reasons”. The valuing animal life scale is based on three items and measures attitudes toward the life expectancy of animals and animal killing. The scale is based on the following statements: “Young animals (e.g. calves, fattening pigs and pullets) should not be killed for food production reasons”, “Dairy cows and sows should not be killed solely for reasons of low productivity”, and “Meat products should be consumed in low quantities because their production requires animals to be slaughtered”.

Belief in animal mind scales (article II)
Article II includes belief in animal mind scales for eight species – chicken, cow, dog, elk, pig, salmon, shrimp and wolf. Five of these species comprise animals who are farmed for food (cow, pig, chicken, salmon and shrimp). Salmon and shrimp also commonly live in the wild. The species also include one companion animal (dog)
and two other species of wild animal, one of which is hunted for food in Finland (elk). The animal species cover four broad phylogenetic categories (mammals, birds, fish and invertebrates). The question on the animal mind reads, “To which of the following animals do the statements below apply?” The statements were as follows: the animal feels pain/pleasure/sadness/affection/anger, the animal remembers its conspecific, the animal has a capacity to think, and the animal can understand its own death and the death of its conspecific. Respondents were instructed to circle either “yes” or “no” or to leave the space blank if they felt they did not know the answer. The difficulty with this question format was that it was not possible to distinguish “don’t know” answers from non-responses. Because of this, blank responses, comprising both “don’t know” and non-responses, were grouped as “no answer” responses.

When forming the belief in animal mind scales, “yes” answers in the eight mental capacities of each species were summated (“yes” = 1, “no” or no answer = 0). The maximum score was eight, indicating that all mental capacities were attributed to the animal, and the minimum score was zero, indicating that none of the mental capacities were assigned to the animal. Thus, the belief in animal mind scales measure how many mental capacities people confidently attribute to each animal species. However, they do not distinguish between “no” and no answer responses. Since non-responses could not be distinguished from blank responses, there are no missing values in the belief in animal mind scales. However, because the variables were based on the “yes” answers and because the non-response was otherwise in the questionnaire around 0.2–4.2 percent per item (as noted in the previous section), inability to identify non-responses in answers to the question on animal mind is unlikely to have compromised the general findings derived from the multivariate analyses. The reliability scores, mean values and standard deviation of the scales are described in article I.

**Independent variables**

The independent variables of article I consist of socio-demographic background (gender, age, place of residence and education), animal-related experiences (having a companion animal and farming background) and the social equality scale. The social equality scale is a scaled variable based on three items and measures on a 5-point scale how much the respondents value gender equality, social justice and the rights of sexual minorities. In article II, the independent variables comprise socio-demographic background (gender, age, place of residence and education), having a companion animal and attitudinal variables (social equality, farm animal welfare evaluation and animal instrumentalization). In article II, farm animal welfare

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19 Elk refers to the species of Alces alces (moose in American English). Elk is a relatively common wild animal species in Finland and lives throughout the country (Finnish Wildlife Agency 2019).
evaluation is the same as the dependent variable in article I, but in reversed order. The social equality scale is the same as in article I. The animal instrumentalization scale is a single-item measure based on the statement “An animal should be seen primarily as a means of production”. The item is a 5-point Likert-type question, with poles ranging from strongly agree to strongly disagree. The variables are described in more detail in articles I and II.

The place of residence variables in the two articles differ. In article I, the place of residence was determined by utilising the municipality data provided by the Population Register Centre. In article II, the place of residence is based on the respondents’ self-reporting of the rural or urban character of their residency. The shortcoming of the self-reporting variable was that the largest option in the form contained towns with over 50,000 inhabitants, so the variable did not differentiate people who live in large cities from those living in smaller towns. Additionally, people may not remember or know the size of their place of living. The municipality variable had the advantages of reaching those who live in large cities and not being reliant on the respondents’ memory or knowledge. I took note of this issue only in the later phases of analysis and decided to use the municipality data in article I. However, because article II was already accepted for publication, I could no longer change the variable in the article. Despite this, the analysis in article II generates general information whether there are differences between people who live in the countryside and those living in towns or cities. In addition, it is important to note that categorising the rural or urban character of place of residence based on the municipality has become increasingly difficult because of the recent merging of municipalities in Finland and their consequent growth in size (Helminen et al. 2014). Because of this phenomenon, there can be both relatively urban and rural settlement within the same municipality (ibid.). Consequently, the municipality measurement could not fully capture those people who live in a relatively rural settlement in a large municipality. In sum, the different place of residence variables employed in this thesis had their own strengths and weaknesses.20

The reliability of the variables

Reliability concerns the extent to which respondents are consistent in their answers (Groves 2009, 281–282). In multi-item attitudinal indicators, reliability refers to the consistency of measurement across items that assess the same attitudinal construct (ibid.). Single-item measures tend to increase the possibility of response errors, whereas multiple questions that assess the same attitude improve reliability (de

20 Cross-tabulating the self-reported place of residence and the size of municipality suggests that they accord relatively well. For instance, 82 percent of those who, according to the municipality data, live in towns or cities with over 50,000 inhabitants self-report living in towns of this size.
Vaus 2014, 179–180). In this research, all the attitudinal indicators except the animal instrumentalization scale were multi-item indicators. Cronbach’s alpha is commonly used to measure the reliability of multi-item indicators (Groves 2009, 284). The attitudinal indicators and belief in animal mind scales employed in this study had good internal reliability; the range of Cronbach alphas was 0.642–0.923.

3.2.3 Data analysis

Statistical analyses include descriptive statistics and multivariate analyses by utilising linear regression models. The data analyses were conducted using SPSS. Descriptive analyses are used to describe the data and they include percentage distributions and comparison of means. The associations between different variables are examined by using Multiple Ordinary Least Squares (OLS) regression. Linear OLS regression assumes the absence of multicollinearity and singularity of independent variables as well as the normality, linearity and homoscedasticity of residuals (Tabachnick and Fidell 2007, 117–128). There was no singularity between independent variables because none of them were a combination of two or more other variables. The independent variables did not correlate strongly with each other either, as indicated, for instance, by collinearity statistics showing that tolerance levels were above 0.5 in all variables. Examination of graphical data (histogram, normal p-p plot and scatterplot) suggested normality, linearity and homoscedasticity of residuals in all the dependent variables in article I, with a small skewness in the behavioural freedom scale. Graphical analysis suggested that residuals in the animal mind scales (article II) deviated from normality, linearity and homoscedasticity. Most of the beliefs in the animal mind scales were skewed, which may have affected the distribution of residuals. Nonlinearity of residuals suggests that there can be a curvilinear relationship between the dependent and independent variable, and that the linear correlation coefficient cannot fully capture it (Tabachnick and Fidell 2007, 127). Nonlinearity and heteroscedasticity of residuals do not invalidate the analysis, but can weaken it (ibid.). Although the linear regression could not fully map the relationship between the dependent and independent variables in article II, in this data, where there were a large number of cases, it was considered a satisfactory analysis technique to bring up basic information about an association between the dependent and independent variables when the effect of other variables was controlled.

When reporting the linear regression analyses in articles I and II, all the independent variables are included in the same model. However, it would have been useful to report the regression analyses in blocks, separating socio-demographic background variables from animal-related experiences and attitudinal variables. This is because some of the relationships between the socio-demographic background and the dependent variables disappeared when the attitudinal
variables were included in the model. In the discussion section of this summary article I have added some complementary information to the data analyses presented in the articles regarding the relationships between the sociodemographic background and dependent variables.

### 3.3 FOCUS GROUPS

#### 3.3.1 Designing and conducting the focus groups

The purpose of the focus groups was to provide in-depth qualitative data on the meanings consumers ascribe to farm animal wellbeing and to the use of animals for food. A focus group is a small group discussion dealing with a specific topic and facilitated by researchers (Tonkiss 2012, 228). Although a focus group provides opportunities for participants to pursue certain themes and support or challenge viewpoints or arguments put forward by others, it is still a structured meeting with discussion guided by the theme list and steered by researchers (Belzile and Öberg 2012, 464). The focus group method was suited to the explorative character of the research project. Because there was a lack of research and even basic information on how consumers view farmed animal topics in Finland, it was considered useful to gather a breadth of information on the perceptions of various groups of consumers, instead of limiting our research to a specific group or only a few groups.\(^{21}\)

In order to obtain a range of viewpoints on how consumers relate to farmed animal topics, we wanted to carry out focus groups with participants who were expected to have a special standpoint on the topic from different, possibly also conflicting perspectives. Previous focus group studies on consumer perceptions of farm animal welfare in other countries had formed groups both on the basis of participants’ socio-demographic background and on the basis of participants’ specific standpoints on the topic (such as politically active consumers, hunters and gourmets) (Evans and Miele 2007). We followed the latter path and considered that key groups in this regard are hunters (consumers who have a special perspective on meat consumption since they personally kill animals and prepare meals from them), gastronomes (consumers who are interested in the art of cooking and eating and can be expected to emphasise quality and taste in their food selection), rural residents (consumers who are expected to have a close contact to animal farming because of their rural location),\(^{22}\) organic consumers (consumers who are expected to consider animal welfare in their food purchases) and ethical vegans/vegetarians.

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\(^{21}\) Since this research, there has been more focus group research on Finnish consumers’ perceptions of farm animal welfare (Autio et al. 2018).

\(^{22}\) The Martha Organization turned out to be a suitable channel to reach rural people because it has established local societies in rural areas across the country. The members of the organisation consist of mostly women, and consequently, the rural group included only women.
consumers who do not eat meat for moral reasons and question the rearing and killing animals for food). Eventually, I did not include the vegan/vegetarian group in article III, which focuses on analysing how omnivores negotiate the meat–animal link. The groups selected are by no means representative of all views, and many other groups could have been included in the study. In particular, the cultural diversity of Finnish society could have been better incorporated in the study design; when planning the focus groups, more could have been done to include participants who come from cultural backgrounds different than the majority ethnic group of Finns. All in all, the thesis analyses some sample groups of omnivores, but many omnivore categories are not covered in the focus groups employed in it.

In addition to the ‘special interest’ groups, we wanted to carry out a general group discussion with consumers who have no acknowledged specific standpoint on animal welfare as a kind of control to reflect broadly on the cultural argumentation concerning food consumption and to provide a comparison to the findings of the ‘interest groups’. Accordingly, we conducted a focus group with supermarket customers. This group included consumers of varied age and occupational backgrounds who were randomly recruited in front of two supermarkets in Helsinki.

In focus groups, data is generated through group interaction (Morgan 1996). While in individual interviews, participants can explain their views and describe their experiences to the researcher, in the focus groups participants describe their experiences and explain their views to others: they can ask questions of each other and they can respond, either agreeing or disagreeing, to others’ points (Morgan 1996, Peek and Fothergill 2009, Smithson 2000, Warr 2005). The group can further develop a theme raised in discussion when others add their experiences and views to that theme and also bring up their own contrasting views and experiences (ibid.). The dynamism of social interaction can elicit talk and viewpoints that may not arise in individual interviews, and it can bring up issues researchers have not thought of (Farnsworth and Boon 2010).

The focus groups were conducted in 2009 and 2010. To widen the geographic reach of the study, two groups (hunters and rural women) were administered in Eastern Finland, while the remaining groups (gastronomes, organic consumers and supermarket customers) were run in Helsinki. However, the thesis does not make any regional comparisons regarding attitudes to meat because only one group type

23 In the project, we also assembled two combination groups, which included participants from the above-mentioned interest groups. Because the discussion dynamics of the combination groups differed importantly from the focus groups and they involved limited discussion of the meat–animal link, I restricted my analysis to the focus groups in article III. The group discussions have also been reported in three other publications. Two articles explored how the focus group participants negotiate the notion of trust in relation to animal farming (Jokinen, Kupsala, and Vinnari 2012, Jokinen, Vinnari, and Kupsala 2012). Taru Anttonen (2010) wrote a master’s thesis based on the vegan/vegetarian and organic groups, examining how ethically oriented consumers construct animal welfare and animal farming.
was recruited in each region. I was mostly responsible for recruiting all the groups in the study. Gastronomes were mainly recruited through the gastronomic organisation Chaîne des Rôtisseurs Finlande. Hunters were mainly recruited through local game management associations and the local societies of the Finland’s Hunters’ Association. Organic consumers were recruited through internet discussion forums, e-mail lists and bulletin boards. Only female organic consumers participated in this research because no males responded to the focus group call. Rural women were recruited through the Martha Organization, which is a popular home economics organisation in Finland. The recruitment of focus groups is described in more detail in article III.

The theme list for discussion was planned by the research group with advice from experts in animal welfare science and animal ethics. The discussion guide included six broad themes, covering issues such as information and experiences concerning animal farming, consumption practices and understandings of farm animal welfare (the discussion guide is available in Finnish in Appendix 3). The focus groups lasted for 108–129 minutes and were recorded. I moderated the group discussions together with the postdoctoral researcher and leader of the project.24 Snacks, coffee and tea were provided during the discussion. After the discussion, participants filled in a form about their socio-demographic background. All participants were given movie tickets as a small compensation for their participation.

Altogether, the focus group participants included 26 women and 13 men aged 19–78 years. The age of participants in groups varied; while the rural women’s and gastronome groups included the oldest participants of any of the groups, with an average age of over 60, hunters and organic consumers were mostly in their thirties to fifties, while the supermarket customers were the youngest, aged 19–44 years. The gender composition of the groups also varied; the rural and organic consumer groups consisted only of women and most participants in the supermarket customer group were women, whereas the hunter and gastronome groups consisted mostly of men. When I analyse group discussions, I note that age and gender may play a role in participants’ different orientation to the meat–animal link, alongside their different standpoints on food and farm animal welfare topics. The sociodemographic profile of focus groups is described in more detail in article III.

The groups differed in terms of group dynamics. Discussion in the gastronome group was very lively and active. Some of the participants appeared to know each other through the gastronome organisation and this may have influenced the convivial atmosphere in the group. The participants brought up actively their experiences and viewpoints. The discussion could run quickly into different topics.

24 There were two moderators present in each group, except I moderated the rural women’s group alone. Also research interns were present in the groups, taking notes on discussion.
Discussion was also dynamic and active in the rural women’s group. The participants tended to build on others’ remarks, expressing agreement and sharing similar experiences and viewpoints. There was little disagreement in the group. The hunters’ group contained fewer participants (6) than the other groups (8–9). This may explain why the participants tended to talk at greater length in this group than in the other groups. This group was also rather consensual; participants tended to express agreement with each other’s points, share similar experiences and build on the topic. The organic consumers also discussed actively. While the other groups were relatively consensual, in this group there were sometimes disagreements that were more strongly expressed. This may be related to the fact that the dominant members of the group put their opinions relatively strongly. Because the supermarket customers were less familiar with farm animal welfare topics than the other groups, many questions presented by the researchers generated relatively short discussions. Consequently, moderators had to probe more than in the other groups by asking additional questions that were included in the discussion guide.

In all groups, two to four people tended to speak most frequently, while two to three participants made a moderate contribution and one or two people talked relatively little. Group size influences the dynamics of the discussion within the group. In large groups, discussion tends to be less balanced, with one or a few participants dominating the discussion while others are more silent (Peek and Fothergill 2009, 37–38). Group discussions are increasingly difficult to manage as the group size increases (ibid.). It has been suggested that discussions in groups with 3–5 participants tend to run more smoothly than in larger groups (ibid.). Better moderation could have promoted a more balanced discussion, particularly in the larger groups. I have taken this problem into account when analysing the data.

### 3.3.2 Qualitative data analysis

The discussions were transcribed verbatim by the project trainees. The preliminary analysis involved reading the discussion transcripts, taking note of the points, arguments and concepts raised in discussions and underlining the pieces of text that appeared important. I also wrote a short description of each group, noting down discussion dynamics within them, such as which participants tended to speak most frequently, which were more silent and to what extent the participants expressed agreement or disagreement. Reading the transcripts generated a general idea of the themes that were brought up and pursued in group discussions. The group discussions included rich and diverse data. As the research approach was explorative and as the discussion guide covered broad themes, the participants

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25 The focus group discussions were transcribed by Marika Bäckman, Taru Anttonen, Annika Kettunen and Pasi Pohjolainen.
pursued diverse themes in the group discussions. This provided a possibility to select certain themes or topics for more detailed analysis.

Already early on when we conducted the focus groups and when I read the transcripts for the first time, I started to consider closely the question of managing distance to animals used in food production, and a related theme of negotiating the position of animals in the categories of companion and food. I noticed how the supermarket customers pondered the link between meat and an animal; they discussed how they tended not to make connections between farmed animals and the meat on their plates. I noticed how this discussion contrasted with those in the gastronomes’ and rural women’s groups, where the participants made connections between meat and animals in various ways. Their discussion seemed to challenge the previous literature on consumer views of farmed animals, where the consumer tendency to dissociate meat from its animal origin is typically emphasised. Based on my observations of the data and my reading of the literature on the topic, I started thinking that it would be interesting to make a more in-depth analysis of this theme. I dealt with this topic already in the early seminar and the conference papers I wrote soon after conducting the focus groups. However, I concentrated on working on the quantitative articles of the project, and it was a while before I went back to analysing the group discussions.

When I started working again with the focus group data, I reread the transcripts and started analysing them thematically. At this point, I carried out a close reading and an initial open coding where I coded the transcripts line-by-line or sentence-by-sentence, generating a code that appeared to capture the main point or meaning of the chunk of the text (see Rivas 2012, 370). Grouping these open codes based on the points raised in the discussion supported my more systematic thematic analysis of the data later in the analysis process. Thematic analysis involves organising the data based on certain themes (Rivas 2012). I used the qualitative analysis software NVivo to carry out this analysis. Segments of the transcripts ranging from a sentence to discussion extracts were assigned to the thematic codes. When I carried out the thematic analysis, I had already considered focusing on the questions of distancing and connection in my writing, as described above. Although this general idea influenced the thematic analysis, I coded the focus group data according to a wider range of themes. Thematic codes and their categories were linked to the discussion guide as well as various themes, concepts and points raised in the focus groups in addition to the themes that were important for my analysis of the meat–animal link. New codes emerged as I coded the transcripts when I noticed a theme or an angle to the data I had not previously thought about. Codes and their categories became more systematic as I coded the transcripts several times.

In the thematic analysis, the most relevant categories of codes included contact with farming and with animals reared for food, the position and the category of farmed animals, emotional relationships with farmed animals, contact with animal
slaughter and with the death of animals, the place of processed and unprocessed meats in consumption and the value of game meat. These categories included several thematic codes that covered different aspects of the broader categories. The interpretative work was a highly iterative process including writing different versions of the manuscript, reading research literature on the topic, going back to the coded data and reading the transcripts again. I had familiarised myself with Vialles’ writing on the sarcophagan and zoophagan orientations and I considered these concepts to reflect very well the discussions in the focus groups, so these concepts were important in guiding the interpretative process. Similarly, the literature on animal categorisation was an important conceptual starting point from early on when analysing the data and writing the manuscript.

The extent to which participant interaction is analysed in focus group studies varies according to the research goals and the theoretical approach of these studies (Belzile and Öberg 2012). In this study I was interested in exploring the themes construed in the groups, but the goal of the study was not to examine in detail the discussion dynamics within the groups. Therefore, the analysis focused on the content of the discussion, while I paid attention to the group interaction to contextualise the content. As a background analysis, I used NVivo to examine how frequently the participants spoke by creating a code for each participant and assigning their contributions to the codes. This helped me to take into account the points raised by a range of focus groups participants instead of overly focusing on points brought up by the most dominant participants.

3.4 ETHICAL CONSIDERATIONS

Key ethical principles in social research consist of respecting the autonomy of research participants by ensuring voluntary participation and informed consent, avoiding harm and protecting the privacy of research subjects through confidential handing of data, data protection and anonymous reporting (TENK 2009). Regarding the voluntary participation and informing the subjects, the cover letter of the postal survey included the presentation of the research topic and the rationale of the research, funding agency, the research institution, contact details, the source of the address and the assurance of anonymity and confidentiality (the cover letter is available in Finnish in Appendix 1). The participants were also informed about completing the form and estimated time of completion. The information provided to research subjects followed the guidelines of the Finnish National Board on Research Integrity TENK (2009, 7), except for explicitly mentioning the voluntary nature of participation. Although he letter was written in the form of a polite request suggesting non-compulsory participation, an explicit statement about voluntary participation in the cover letter is recommended (e.g. de Vaus 2014, 56–57). This is a possible shortcoming in the information provided for the research
subjects in this research. Responding to a questionnaire indicated that the person has consented to participate in the study (TENK 2009, 5).

Postal surveys include risks of harming subjects if, for instance, they deal with intimate topics or ask about attitudes or behaviours that are socially stigmatised (de Vaus 2014, 58–59). Although animal welfare is a morally and politically loaded topic, the themes covered in the survey cannot be considered particularly sensitive. Moreover, the respondents could regulate their participation by not answering those questions when they were unwilling to respond (TENK 2009, 8).

Regarding the protection of privacy, data with direct identifiers (name and address) were stored during the survey administration process and during transfer of the data to an analysable form (see TENK 2009, 10–13). Once it was ensured that there were no errors in electronically saved data, direct identifiers were erased. Care was taken to protect the data, for example, by storing the electronic data in personal computers behind usernames and passwords. Only the members of the research group had access to the data. As direct identifiers were deleted before commencing data analysis, the data was analysed anonymously. Because results were published statistically, there was no risk of identifying individual participants in research publications.

Focus group participants were informed about the research during the recruiting process and in focus group sessions before commencing the group discussion. The informing covered the presentation of the research topic, the research institution, the funding agency, and the topic content, as well as the estimated length and the recording of the group discussion, the assurance of the confidential management of the data and the securing of the participants’ anonymity in publications (see Appendix 3). As in the survey, the failure to describe explicitly the voluntariness of participation represents a possible shortcoming in the information provided for the research subjects. However, taking part in the focus groups required initiative and effort, implying voluntariness on the part of the participants. Agreeing to participate in the focus groups indicated that the person had given their consent to the research (TENK 2009, 5).

Animal welfare and animal use are morally and politically loaded, often controversial topic areas. Some of the focus group participants had a close interest in the topic, often from different perspectives. The topic came especially close to the everyday life narratives, identities and emotional memories of those participants who had personal relations with farmed animals. In a small farming context, as in the case of some of the rural women, everyday life is centrally organised around looking after domestic animals. The discussion in the group evoked emotional memories of the participants’ lives at the farm where animals, particularly cows, played a central role. The TENK’s (2009, 9) ethical guidelines suggest that research situations can include the same kinds of feelings, both positive and negative, as in everyday life situations where various facets of human life are dealt with. Research
participants define by themselves the limits of their privacy and how sensitive they consider the themes covered in the research (TENK 2009, 8). In the focus groups the participants could regulate their participation as the theme list flexibly guided the discussion and they could decide what they brought up during the discussion (comp. TENK 2009, 8). As using animals for food is a value-laden theme that divides opinions, the participants may not approve of all the findings presented in this research. TENK (2009, 9) emphasises the importance of careful and systematic analysis and balanced argumentation in politically loaded topics. I have tried to follow these guidelines when presenting the findings based on the focus groups.

Direct identifiers (name and contact details) of the focus group participants have been stored during the research process, as it has been important to store e-mail conversations with the participants as well as to maintain contact details to inform them about the publications. Care has been taken to protect data, such as storing the electronic data in personal computers behind a username and password. Only the members of the research group had access to the focus group data. In the research publications, gender, age group, living area and the focus group category are reported. The use of broad indirect identifiers ensures that an individual participant remains unidentifiable in the publications.
4 RESULTS

The main results of the three articles are summarised in this section. Descriptive statistics and OLS regression models are available in articles I and II.

4.1 FINNISH ATTITUDES TO FARMED ANIMALS

Based on the survey with Finns, article I examines how Finnish attitudes to farmed animals associate with social group positions, animal-related experiences and social equality attitudes. The article answers the first research question of the thesis. The connection between attitudes to farmed animals and the independent variables were analysed with linear OLS regression where all the independent variables were included in the same model. The empirical findings suggest that a farming background, valuing social equality and gender have the most coherent connection to attitudes to farmed animals. These variables are connected with all four attitudinal variables examined in the study, and their association remains despite statistically controlling the effect of other variables. Women, people who value social equality and people without farming backgrounds tend to evaluate the current state of farm animal welfare more negatively, express less trust in prevailing animal production, and place more value on the behavioural freedom and life of animals.

Regarding age, younger people are likely to evaluate the current state of farm animal welfare more negatively and express less trust in prevalent animal production than older people. However, age has a weak connection to the valuing of behavioural freedom and lives of animals. As regards place of residence, people living in towns and cities are likely to evaluate the current farm animal welfare situation more negatively and express less trust in prevalent animal production than people living in rural municipalities. Furthermore, people living in cities tend to place more value on the life of farmed animals than people living in rural municipalities. However, place of residence is not connected to the valuing of behavioural freedom.

Having a companion animal has a relatively minor connection to attitudes to farmed animals. It is linked to all attitudinal variables, suggesting that companion animal keepers are more likely to express concern for farmed animals than non-keepers, but the connection is small, the strongest association being with the valuation of behavioural freedom. Of the independent variables, educational level has the weakest connection to the attitudinal variables. It is not connected to farm animal welfare evaluation and trust in prevalent production, but it is somewhat
connected to the valuing of behavioural freedom and life of animals, as people with higher levels of education tend to place less value on them.

4.2 FINNISH PERCEPTIONS OF THE MENTAL CAPACITIES OF ANIMALS

Article II investigates to what extent Finns attribute cognitive and emotional abilities to different types of animals. The article also explores how perceptions of the animal mind associate with people’s social group positions, animal-related experiences and social equality attitudes, as well as attitudes toward animal welfare and animal use. Eight animal species positioned differently in cultural and phylogenetic categorisations are included in the analysis. The article answers the first research question on the factors that associate with Finns’ perceptions of animal mind and the second research question on how Finns perceive the mental capacities of farmed animals and how perceptions of animal mind vary according to the phylogenetic and cultural categorisation of animals.

Results suggest that Finns attribute most mental capacities to dogs, followed by cows, pigs or wolves, elks, chickens, salmon and shrimp. When eight mental capacities are grouped together (capacity to feel pain, pleasure, sadness, affection and anger, capacity to remember conspecifics, capacity to think and capacity to understand their own death and the death of a conspecific), Finns attribute fewer mental capacities to farmed mammals than to dogs, but they attribute more mental capacities to them than to wild mammals, although there is no statistically significant difference in mind attribution to pigs and wolves. While more than 90 percent of respondents ascribe pain perception to the mammals and chickens, only 61 percent and 43 percent believe that salmon and shrimps can feel pain. A large majority (80–96 percent) agree that alongside basic sentience (capacity to experience pain and pleasure), cows and pigs can feel affection and remember their conspecifics. A majority (56–70 percent) also thinks that cows and pigs can feel sadness and anger as well as being capable of thinking and understanding death. Chickens are given noticeably fewer mental capacities than mammals. There is a high consensus that chickens can feel pain (91 percent agrees) and most also think that they can feel pleasure (70 percent) and remember their conspecifics (63 percent). However, around half of the respondents (48 percent) think that chickens can feel affection, while a minority (32–41 percent) considers that they can feel sadness and anger and that they are capable of thinking and comprehending death. Only a small minority attributes to the salmon (12–35 percent) and the shrimp (9–25 percent) any mental capacities other than feeling pain. People are more tentative in ascribing mental capacities to chickens, salmon and shrimp than to mammals. Around half of the respondents reject attribution of most mental capacities to the salmon and shrimp.
In the article, linear OLS regression was used to examine how beliefs about the mental capacities of farmed animals associate with socio-demographic background, companion animal keeping, social equality attitudes and animal welfare and animal use attitudes, with all the independent variables included in the same model. Beliefs about the salmon and shrimp mind were excluded from the multivariate analyses because of the low belief in their abilities. Empirical findings suggest that valuing of social equality is associated with greater belief in the mental capacities of farmed animals. Additionally, keepers of companion animals are more likely to attribute mental capacities to farmed animals than non-keepers, although the connection is small. As would be expected, greater concern for farm animal welfare and less instrumentalist attitudes toward animals positively associate with the belief in the mental capacities of farmed animals, except that there was no connection between belief in the mental capacities of cows and farm animal welfare evaluation. When sociodemographic background and attitudinal variables were included in the same model, age associated with belief in the mental capacities of pigs; younger people were more likely to attribute mental capacities to them than older people. Gender, place of residence and education had no relation to belief in the mental capacities of farmed animals.

4.3 NEGOITIATING THE MEAT–ANIMAL LINK IN THE FOCUS GROUPS

Article III examines how different groups of omnivores construct connection and disconnection between meat and an animal and how they negotiate the position of animals in the categories of companion and food. The study is based on focus groups, each including gastronomes, hunters, organic consumers, rural women and supermarket customers. The article answers the third research question of the thesis.

The article demonstrates that omnivores construct the meat–animal link in varied ways. The discussion constructed in the supermarket customers’ group evinced the sarcophagan orientation toward meat eating; the participants tended not to associate meat with the animal it came from and they expressed dislike of products that reminded them of meat’s animal origin, such as rare or medium rare meat. By contrast, the zoophagan orientation was evident in the gastronome and rural groups. These participants showed no disgust toward those animal-derived food products that most visibly reflect their animal origin, such as tongue, offal, bones and tails. Rather, they appreciated these products and criticised the tendency to eat de-animalised meat in the mainstream food culture. For these participants, removing animal-like ingredients (such as fat, fascia and bones) from meat implied a deterioration in its taste and nutritive quality. Gastronomes and rural participants complained about the reduced availability of the products that are less de-
animalised. The process from a living animal into meat seemed visible to them. The notion that animals grow meat, bones and entrails in their bodies to be eventually consumed after slaughtering did not appear as an issue that needs to be concealed. Rural women and gastronomes associated the welfare of animals with the quality and taste of meat, and they valued short food supply chains to gain meat considered of good quality.

The hunters' attitude to game meat can be characterised as a zoophagan approach; the meat they consume comes from a specific animal they have hunted and processed into food. Hunters discussed at length the high value they give to game meat. Game meat was considered festive food that was served on special occasions. The rarity and distinct taste of game meat distinguished it from the meat of farmed animals, which was more mundane everyday food. Moreover, the high-regard for game meat was linked to the time and effort needed to catch the quarry; eating game was considered a culmination of the long hunting pursuit. Also, the whole chain from animal into meat was visible to the hunter.

The organic consumers expressed a moderate zoophagan orientation, where they acknowledged the animal behind meat but did not discuss consuming unprocessed meats to the same extent as rural women and gastronomes. Contact with animals categorised as food and their personalisation was addressed in different ways. The supermarket customers emphasised the distinction between companion and farmed animals, expressing the impossibility of eating an animal who has been personalised and acquired similar attributes to companion animals. In the rural women and organic consumer groups, some animals appeared to hybridise the categories of food and companion animals. Most rural participants had grown up on small farms and some kept or had kept farmed animals for commercial or domestic production. Looking after animals and learning about their personalities created unease about sending them to the slaughterhouse or eating them. However, it was also remarked that one should remember to maintain a degree of emotional distance to animals destined to become food. While rural women took contact with farmed animals as given because of their farming background, some of the organic consumers constructed personal contact with animal farming predominantly as a moral issue; proximity to animals was assumed to create a more moral relationship with them. Although some farmed animals became personalised and close to the rural women and organic consumers, they still did not lose their status as food animals. However, it was not emotionally easy to reassert the position of these animals as food animals once they had acquired similar attributes to companion animals.
5 DISCUSSION

Based on the survey and focus groups, this thesis has examined Finnish attitudes to farmed animals and perceptions of their emotional and cognitive capacities as well as specific meanings a selection of omnivore groups construct about the use of animals for food. In this chapter, I discuss the findings of the research articles. The first section of the chapter discusses how attitudes and perceptions about farmed animals associate with people’s social group positions, animal-related experiences and attitudes to equality among humans. The second section discusses how the focus group participants negotiate the meat–animal link. It also considers the role of gender, age, farming background and urban/rural residency when omnivores construct connections and disconnections between meat and an animal. The third section discusses the categorisation of animals. It examines how the categorisation of animals is linked to the perception of animal mind and how the placing of animals in the categories of food and companion is negotiated. The fourth section of the chapter discusses methodological issues, addressing both the methodological limitations of the thesis and its methodological contribution to developing measures for attitudes to farmed animals.

5.1 FINNISH VIEWS ABOUT FARMED ANIMALS: SOCIAL GROUP DIFFERENCES, ANIMAL-RELATED EXPERIENCES AND ATTITUDINAL FACTORS

5.1.1 Gender

In article I, across models of four dependent variables the study found support for gender differences in attitudes to farmed animals. The connection between gender and attitudes to farmed animals persists when the effect of other variables is controlled. The research supports findings from earlier studies based on American, Australian and European samples, which show that women are on average more concerned for the welfare of farmed animals than men (e.g. Deemer and Lobao 2011, Kendall, Lobao, and Sharp 2006, Maria 2006, McKendree, Croney, and Widmar 2014, Prickett, Norwood, and Lusk 2010, Signal, Taylor, and Maclean 2018, Vanhonacker et al. 2009). The article’s findings also accord with more general findings in animal studies, which suggest that women are more likely than men to show favourable attitudes to animal protection (Herzog 2007, 10–11). Along with previous research (Herzog 2007, 10–11), the study identified a moderate gender difference in attitudes to farmed animals. This suggests that although we can
identify large gender differences in several areas of human–animal interaction and animal-related practices (such as in hunting and participation in animal advocacy movements, as noted in section 2.3), there is a more moderate gender difference in attitudes to farmed animals in the population as a whole.

Contrastingly, in article II, gender did not associate with the perceptions of farmed animal mind.26 This accords with some of the previous studies, which have not identified any connection between gender and perceptions of animal mind (Knight et al. 2004, Morris, Knight, and Lesley 2012, Wilkins, McCrae, and McBride 2015). The belief in animal mind scales included attributing sadness and anger to animals. Walker, McGrath, Nilsson et al. (2014) found that there was no gender difference in attributing these two emotions, along other basic emotions, to animals among the Australian public. They did identify gender difference in attributing complex emotions to animals (depression, love, grief and anxiety), with women being more likely to accept them in animals than men. Similarly, McGrath et al. (2013) found that women were more likely than men to attribute the capacity to grieve to a range of animal species, including pigs and chickens. However, their study did not identify gender difference in attributing grief to all the animal species examined in it, including cows. Therefore, it may be the case that the relationship between gender and perceptions of animal mind varies according to the type of mental capacity and animal species. This study covered only basic emotions (pain, pleasure, sadness, anger and affection) and did not measure perceptions of complex emotions in animals. Further research is needed to examine the association between gender and perceptions of animal mind, and there is a need to investigate more fully the possible variation in gender effect according to the type of mental capacity and animal. Although more research is required, the results of both this and other research suggest that gender differences in perceptions of animal mind are not as consistent as they are in attitudes to animal welfare.

While this study did not identify notable gender differences in perceptions of the mental capacities of farmed animals, it did confirm gender difference in attitudes regarding farm animal wellbeing. Various reasons have been put forward for gender differences in attitudes to animal welfare. The stratification framework suggests that women’s and men’s positions in society contain gender-specific experiences and socialisation processes, which manifest in their attitudes toward animals (Kendall, Lobao, and Sharp 2006, 408–409). In the animal studies literature, stemming from early feminist animal studies and ecofeminist writings, gender differences in animal-related attitudes have been associated to gender role

26 As supplemental information to the data analysis presented in article II, it is useful to mention that there is a modest association between gender and belief in chicken mind, with women being more likely than men to attribute mental capacities to chickens. However, this connection disappears when the social equality scale is added to the model. This may reflect the fact that gender correlates with the social equality scale; women are more likely than men to place higher value to it.
socialisation and gender-specific locations in both paid and unpaid labour (Cudworth 2011b, 43–44, Cudworth 2016, 246, Kendall, Lobao, and Sharp 2006, 408). Additionally, this literature has suggested that the shared subordinate status of animals and women encourages women to develop more empathetic attitudes toward animals (Cudworth 2016, 246). The socialisation of women tends to reflect traditional female gender norms, promoting characteristics of caring, concern for others, empathy and emotional expressiveness, which are extended to other species as well (Cudworth 2016, 246, Graça et al. 2018, 68, Kendall, Lobao, and Sharp 2006, 408–409). Women have traditionally had more responsibility for domestic work related to childcare and daily housekeeping, looking after the needs of the family (Kendall, Lobao, and Sharp 2006, 408–409).

In Finland, women on average still put considerably more time into domestic work than men, including food preparation and childcare (Statistics Finland 2016, 125). In paid employment, the most common occupation of Finnish women is care worker in the healthcare sector and nursing services, and they vastly outnumber men as employees in the health and social services sector (Statistics Finland 2016, 46, 48). As women tend to be the main family carers and predominate in other care work, they are more likely to take on caring roles and attitudes, which can extend to animals as well (Cudworth 2016, 246–247, Kendall, Lobao, and Sharp 2006, 408–409). Additionally, women’s social position involves more contact with food in their roles as family carers (Neuman and Fjellström 2014, Kendall, Lobao, and Sharp 2006, 409). In Finland women on average use more than twice as much time in food preparation as men (Statistics Finland 2016, 125). Women’s greater responsibility for cooking in households may foster a greater interest in the origin of food, including the treatment of animals. To test the role of care work and household work in gender differences in attitudes to farm animal wellbeing, further studies should include measures related to them as intermediate variables in their explanatory models.

Conversely, the socialisation of boys and men tends to reflect male gender-role norms. Male norms of stoicism and emotional restriction require men not to express sensitivity for less privileged others, including animals (Rothgerber 2013, 366). Similarly, male norms of competition and achievement can generate more accepting views regarding status hierarchies, including the human–animal hierarchy (Rothgerber 2013, 367–368). Empirical evidence suggests that empathy and social dominance orientation seem to be intermediate variables that help explain why gender is associated with attitudes to animal exploitation (Graça et al. 2018). Compared to women, men are more likely to express higher social dominance orientation and lower levels of affective empathy and these in turn appear to partly underpin their higher support for animal use (ibid.). Empirical evidence also suggests that endorsing male norms of emotional restriction and dominance correlates positively with justifying both meat consumption in itself and greater
meat consumption (Rothgerber 2013). As noted in section 2.3.3, in Western cultural beliefs meat is associated with masculinity, and men eat meat greater amounts than women (Adams 1990, Rothgerber 2013). Men are also more likely to express pro-meat attitudes than women (Piazza et al. 2015, Rothgerber 2013). The association of meat with masculinity and men’s greater appreciation of meat may encourage men to perceive the utilization of animals in meat production more positively than women do.

It is worth noting that the gender difference was somewhat greater in the valuation of behavioural freedom and animal life scales than in the farm animal welfare evaluation and trust in prevalent production scales. The animal life scale included items that concerned the life expectancy of female farmed animals (cows and sows), the slaughtering of young animals and the need to consume low amounts of meat because animals are slaughtered for it. In addition to farmed animals’ general opportunities for species-specific behaviour and environmental enrichment, the behavioural freedom scale included questions on cow–calf separation, the banning of battery cages for hens and opportunities for calves to run and play. Women’s lower attachment to meat and empathy for female animals may partly explain why women agreed more with the statements of the scales.

Many animals utilised in agricultural production tend to be female (such as cows, sows and hens utilised for dairy or egg production or for breeding purposes) (Cudworth 2011a). These animals experience specific forms of suffering because of their gender, such as early separation from their offspring or living in cages (sows and hens). Research that has examined public attitudes toward the treatment of female animals in agriculture has shown that women are more likely than men to support late cow–calf separation (in place of early separation) and oppose gestation stalls for pregnant pigs (Busch et al. 2017, Ryan, Fraser, and Weary 2015). It may be the case that when bringing up the gender of animals and their gender-specific treatment in agriculture in survey settings, this strengthens gender differences in attitudes toward animals. Women may relate to the experiences of female animals because they are reminiscent of their own gender-specific experiences. For instance, in her analysis of written narratives on people’s relationships with cows, Taija Kaarlenkaski (2012) found that women can express sympathy and solidarity to cows based on their own experiences of pregnancy and child-birth. Future studies would benefit from paying more attention to the gender of animals and their gender-specific conditions in agriculture when examining gender differences in animal-related attitudes.

5.1.2 Age, place of residence and education

Article I suggests that older people are likely to evaluate the current state of farm animal welfare more positively and express more trust in prevalent animal
production than younger people. However, there does not appear to be any noticeable age difference in people's ways of valuing the behavioural freedom and life of farmed animals. The findings of this survey are in line with the findings of surveys in USA and European countries, which suggest that younger generations are likely to express greater concern about farm animal welfare in comparison to older generations (Deemer and Lobao 2011, Kendall, Lobao, and Sharp 2006, María 2006, McKendree, Croney, and Widmar 2014, Vanhonacker et al. 2007).

In article II, as regards belief in the mental capacities of farmed animals, age associated with belief in pig mind alone; younger people were more likely to attribute mental capacities to pigs. Previous research has not been consistent in its conclusions regarding the link between age and perceptions of animal mind. Some studies suggest that younger people are less likely to believe that animals are capable of a range of mental capacities (Knight et al. 2004, Walker, McGrath, Handel, et al. 2014), while one study suggests the reverse (McGrath et al. 2013). This study gives some support to the notion that younger generations are more likely to ascribe mental capacities to animals. However, a limitation of this study is that perceptions of animal mind were not measured with scaled items. Older people tended more frequently to choose the “no answer” option, and this may be because they found the question on animal mind more difficult to answer than people in younger age groups. Therefore, further research is needed to examine the association between age and perceptions of animal mind.

There are generation-based differences in people’s experiences with farmed animals. Finland was still a remarkably agrarian society in the mid-20th century when 46 percent of the employed population gained their income from agriculture and forestry (Siiskonen 2004, 289). Even in 1960, agricultural population formed nearly a third of the population, after which it declined considerably, with rapid rural depopulation and structural change toward larger farm sizes (Granberg 2004, 177–178). In the mid-20th century, most of the farms kept production animals, particularly dairy cows, the typical family farm keeping less than ten cows (Siiskonen 2004, 289–291). Because of this background, older generations are more likely to have had experiences with animal farming. However, their experiences relate to small-scale farming of animals, which differs markedly from contemporary industrialised animal production. It may be that the more positive perceptions of older people relate to their experiences of less industrialised farms. Public debate

27 As complementary information to the analysis presented in article II, it is important to note that there is small correlation between participants’ age and their belief in the mental capacities of cows and chickens, with younger people being more likely to ascribe mental capacities to them. However, when farm animal welfare evaluation and animal instrumentalization are added to the regression models, the connection between participants’ age and their belief in cow and chicken mind disappears. This may reflect the fact that age correlates with farm animal welfare evaluation and animal instrumentalization; older people are likely to rate farm animal welfare more positively and express a more instrumental attitude to animals than younger people.
about the status of farmed animals has become animated only recently in Finland (Kaljonen and Lonkila 2013, Lappalainen 2012, Lundbom 2009). The recent politicisation of farm animal issues may have influenced the views of younger age groups more, creating more concern for animal welfare in industrial farming among them.

According to article I, the place of residence associates with three of the attitudinal variables; overall, people living in rural municipalities tend to express less concern for farmed animals than those living in towns and cities. As the connection between place of residence and most of the attitudinal variables remains even when the farming background is included in the same model, this suggests that current residency in urban or rural locations is connected to attitudes to farm animal welfare independently of farming background. The study is in line with the findings of previous research, which suggest that urban residents are more concerned for farmed animals than rural residents (Boogaard, Oosting, and Bock 2006, Deemer and Lobao 2011, Erian and Phillips 2017, Musto, Faraone, and Cellini 2014, Vanhonacker et al. 2010).

In article II, place of residence was not connected to belief in farmed animal mind when sociodemographic background and attitudinal variables were included in the regression models. To my knowledge, the link between place of residence and perceptions of animal mind has not previously been studied. This study extends extant research on the topic by examining a wider range of sociodemographic variables than has been covered in previous studies on belief in animal mind. Based on the population-based sample with Finns, the study indicates that place of residence is not an important factor behind perceptions of farmed animal mind. However, further research is needed to determine whether it is linked with belief in animal mind.

This study identified association between current residency in urban or rural locations and attitudes toward farmed animals independently of farming background. In rural communities, farmed animals are more central to economic and social life than in urban communities (Tovey 2003, 197). Rural residents may perceive the situation of farm animal welfare more positively than urban people because rural neighbourhoods are more economically reliant on animal farming than urban neighbourhoods (Kendall, Lobao, and Sharp 2006, 405–407). Proximity to farmers in rural areas can affect the attitudes of rural residents, even those who are not themselves directly economically dependent on animal production. While using animals in agricultural production may be more normalised in rural communities, economic and social distance from animal agriculture can encourage

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28 As supplemental information to the data analysis presented in article II, it is useful to mention that running regression analysis by including only sociodemographic background variables, but excluding experiential and attitudinal variables, shows that place of residency does not associate with belief in the mental capacities of farmed animals.

According to article I, of the independent variables educational level has the weakest connection to attitudes to farmed animals. Educational level is not connected to farm animal welfare evaluation and trust in prevalent production, but it has a limited connection to the valuing of behavioural freedom and life of animals, people with higher levels of education placing less value on them. It may be that acquiescence was behind educational differences in these scales. Acquiescence can affect response to questions that use the agree–disagree format (de Vaus 2014, 107). The items in the behavioural freedom and animal life scales were all in the same direction, so that agreeing with the question-statement implied a more favourable opinion about behavioural freedom and life of animals. People with lower levels of education are more likely to express acquiescence than higher educated people in survey contexts (de Vaus 2014, 107). Previous studies have not identified any consistent link between educational level and attitudes to farmed animals. Article II did not identify any connection between educational level and perceptions of farmed animal mind. I have not identified any earlier research to compare with the findings of this study; to my knowledge, the link between education and perceptions of animal mind has not previously been studied.

Education is one indicator of people’s social class. Kendall’s et al. (2006) research suggests that class position is connected with concern for farm animal well-being; people who have experienced economic hardship, those in lower income groups and those with less education tend to express greater concern for animals. Their finding accords with the stratification theory suggestion that experiences of disadvantage can generate empathy for other disadvantaged groups. According to this study, the education level does not have an important connection with attitudes toward farmed animals. However, more indicators of social class (such as income, wealth and occupation) should be included in future study designs to determine whether social class is associated with animal-related attitudes. More research is needed to gain a better understanding of the role of education and social class in shaping attitudes toward animals.

5.1.3 Animal-related experiences

According to article I, farming background associates with all the four attitudinal variables examined in the study, indicating that those who live or grew up on a farm with agricultural animals tend to express less concern for farm animal wellbeing than those without farming backgrounds. The findings of this survey support findings from surveys carried out in other national contexts, which also suggest the above connection between farming background and concern for farmed animals (Boogaard, Oosting, and Bock 2006, Kendall, Lobao, and Sharp 2006,
Vanhonacker et al. 2007). The connection between farming background and belief in animal mind was not examined in article II.²⁹

People who have grown up on farms tend to be subjected to socialisation processes that encourage relating to farmed animals in different ways than those who do not have farming backgrounds (Kendall, Lobao, and Sharp 2006, 405–407, Wilkie 2010). Reliance on farmed animals as a source of income and food provides the context where farm children and farmers form their attitudes toward animals (Kendall, Lobao, and Sharp 2006, 405–407, Richards, Signal, and Taylor 2013, Wilkie 2010). According to Rhoda Wilkie (2010, 175–179), farm children are exposed to an informal socialisation process that requires them to learn to manage their emotions toward farmed animals; from an early age, they learn that animals end up being slaughtered, which encourages them to develop an emotionally reserved attitude toward farmed animals. Childhood farm experiences seem to have a lasting effect on attitudes to farmed animals in adulthood too (Kendall, Lobao, and Sharp 2006, 416–423).

Previous research suggests that farmers tend to define animal welfare in differing ways than non-farming citizens. Farmers typically emphasise a favourable living environment (such as solid floors and comfortable bedding), good health and humane treatment of animals in their definitions of animal welfare (Kauppinen et al. 2010). Additionally, they tend to associate animal welfare with the productivity of animals (Bock and van Huik 2007, Kauppinen et al. 2010). Citizens are likely to attach more importance to animals’ opportunities for natural behaviour than farmers (Vanhoonacker et al. 2008). Farmers do attach some importance to the natural behaviour of animals, but take into account economic constraints when they consider providing such opportunities for them (ibid.). As farmers emphasise physical health and productivity of animals in their framings of animal welfare, they tend to define the state of animal welfare more positively than do citizens on average (ibid.).

In summary, farmers are likely to consider the prevalent arrangements of conditions of agricultural animals more positively than non-farmers. Similar attitudes can be identified among those who were brought up in a farm (Kendall, Lobao, and Sharp 2006). Also this research identified that people with a farming background tended to perceive the situation of farm animal welfare more positively than those without a farming background. However, it is important to bring up the role of the type of farming experience and how it may affect attitudes toward farmed animals. Reflecting the late structural change of Finnish agriculture (as noted in the previous section), in this study the majority of respondents with farming background were over 55 years old. Consequently, it is likely that these

²⁹ Including farming background with the regression model where sociodemographic background is controlled shows that farming background is not connected with the belief in the mental capacities of farmed animals.
people were brought up on small-scale non-industrialised farms. Their positive perception of the situation of animal welfare may reflect the situation on the farms of their past rather than that on modern farms. Future studies that examine the role of farming background in attitudes toward farmed animals would benefit from including indicators for the type of farming background in their study designs.

According to article I, having a companion animal is connected to all attitudinal variables, suggesting greater concern for farmed animals among companion animal keepers in comparison to non-keepers, but the connection is relatively modest. This study gives some support for previous research, which suggests that having a companion animal associates positively with pro-animal attitudes and with greater concern for farm animal welfare (Boogaard, Oosting, and Bock 2006, Daly and Morton 2009, Kendall, Lobao, and Sharp 2006, McKendree, Croney, and Widmar 2014, Paul 2000, Signal, Taylor, and Maclean 2018). According to article II, keepers of companion animals are more likely to attribute mental capacities to farmed animals than non-keepers, although the connection between the variables is relatively small. This supports previous findings, which suggest that keeping companion animals promotes a tendency to attribute mental capacities to animals (Maust-Mohl, Fraser, and Morrison 2012, Walker, McGrath, Handel, et al. 2014). Regular contact with companion animals is likely to give their keepers plenty of behavioural evidence of their abilities (cf. Mitchell and Hamm 1997). These experiences with companion animals can develop correspondingly appreciative views of other animals. Our research measured only the presence of the companion animal in the household, not the details of the relationships with companion animals. To gain a more accurate picture of the influence on attitudes and beliefs, more than the mere presence of the companion animal would need to be measured: for instance, in future studies on attitudes to animals the species of the companion animal, the quality and length of the relationship and the level of attachment could be assessed (comp. Walker, McGrath, Nilsson, et al. 2014, 261–262, Wilkins, McCrae, and McBride 2015, 366).

People form varying kinds of relationships with companion animals. These relationships may be characterised by high degrees of domination and subordination where companion animals are made to fit into the human-defined family order (Charles 2016, Taylor and Sutton 2018). In this kind of relationship, the perspectives and species-specific needs of the animals are taken into account only to a limited extent, and the companion animal may be abandoned or ’euthanized’ if they do not fulfil their anticipated roles as ‘pets’ (Cudworth 2011b, 149–154). People may also form more equal and inclusive relations with companion animals where the species-typical needs of animals are accommodated and where the animals participate in shaping the family and the domestic space (Charles 2016). In this situation, people form significant and enduring relationships with companion animals across the species barriers (ibid.). Future research would benefit from
incorporating these sociological insights on humans’ varying relationships with companion animals when they examine how these relationships interrelate with attitudes toward animals as a broader group.

5.1.4 Attitudinal factors

According to article I, valuing of social equality associates with all the four attitudinal variables examined in the study. Those who value social equality (in terms of gender equality, the rights of sexual minorities and general social justice) tend to express more concern for farm animal wellbeing. Correspondingly, article II suggests that valuing social equality is associated with greater belief in the mental capacities of farmed animals. The association remains even when the effect of potentially relevant variables, such as gender, age and education, are statistically controlled. These findings are in line with previous research, which suggests a positive link between human-directed empathy and pro-animal attitudes, human-egalitarian views and species-egalitarian views, and human welfare concerns and animal welfare concerns (Deemer and Lobao 2011, Dhont et al. 2014, Park and Valentino 2019, Paul 2000, Signal and Taylor 2007, Signal, Taylor, and Maclean 2018, Taylor and Signal 2005). The study extends extant research by examining connection between belief in animal mind and attitudes to human-equality, which to my knowledge has not been examined in large surveys previously. This research provides empirical support for the stratification theory’s suggestion that attitudes toward disadvantaged groups, including animals, tend to converge (Deemer and Lobao 2011). People who aspire for a more equally organised society are more concerned about the exploitation of animals and tend to construct a smaller gap between humans and animals in terms of mental capacities. However, in this study, the measure for valuing social equality is based on only three items. Additionally, as people tended to value gender equality and social justice, the social equality scale was skewed, with most variation between points three and five. A more systematic investigation of the link between attitudes to human equality and attitudes to animals would require using scales that include more items and more variation in item responses.

Article II explored the connection between the perceptions of animal mind and attitudes to farm animal welfare and animal instrumentalization. As could be expected, greater concern for farm animal welfare and less instrumentalist attitudes toward animals positively associate with belief in the mental capacities of farmed animals. The connection between these variables is moderate. This is in line with previous research, which suggests that greater belief in the mental capacities of animals associates with favourable attitudes toward animal welfare and less support for animal use (Herzog and Galvin 1997, Knight et al. 2004).
5.2 CONNECTING AND DISCONNECTING MEAT AND THE ANIMAL

Article III explored the various ways in which the focus group participants negotiated the meat–animal link. The survey of this thesis identified differences in attitudes to farmed animals along the lines of gender, age, farming background and place of living. In this section, I take into account these factors when discussing how omnivores construct connections and disconnections between meat and an animal.

The supermarket customers expressed the sarcophagan orientation toward meat. The participants found it troubling to make connections between meat and animals, and those food ingredients that were visibly reminiscent of their animal origin were considered disgusting. In contrast, the zoophagan orientation was evident in the gastronome and rural women groups. Those animal-derived foods where the animal origin is less concealed, such as tongue, offal and bones, were used in the gastronomes’ and rural women’s culinary practices. The age and agricultural background of participants appeared to play a role in differences between supermarket customers, rural women and gastronomes. Most of the gastronomes and rural women were over 60 years old, so they had experienced a food culture that was less commercialised. Slaughtering animals and cutting up carcasses occurred more commonly in the household than today (Mäkelä and Niva 2016, 22). Similarly, people did not consume processed and highly de-animalised meat to the extent that they currently do (Kunst and Palacios Haugestad 2018, 357). Eating offal was also formerly more popular than today (Tucker 2014, 173).

The gastronomes and rural women had maintained their interest in preparing dishes from various parts of animals, although the industrialisation of the food system had made this more difficult. Indeed, the participants complained about the reduced availability of various products, such as unpacked meat, bones and tails. By contrast, the supermarket customers were the youngest participants of this study, accustomed to buying processed meats from conventional grocery stores. The findings here accord with those of a focus group study in New Zealand, which suggest that older people tend to express more positive attitudes to eating different parts of animals than younger people (Tucker 2014, 172). Similarly, a Norwegian study suggests that young consumers are more likely to express disgust toward meat when the connection between meat and an animal is made more salient (Kubberød et al. 2008). Age differences in sarcophagan or zoophagan orientations toward meat seem to reflect wider changes in Western food cultures. Whereas a few decades ago people were more exposed to unprocessed meats in food shopping situations, today’s food culture is characterised by using processed foods and eating out, encouraging omnivores to dissociate meat from its animal origin (Kunst and Palacios Haugestad 2018, 357).
Additionally, the rural women and some of the gastronomes had grown up on farms. These participants had had regular contact with animals destined to become food, and some of them had witnessed animal slaughtering and participated in cutting up carcasses. Previous studies suggest that people with farming or rural backgrounds express less unease about meat with a recognisably animal origin than urban residents (Kubberød et al. 2002). Similarly, those who have lived on farms express more positive views about eating various parts of animals, such as offal and feet, than those who do not have a farming background (Tucker 2014, 172). In the rural group, meat was occasionally linked to specific animals. The participants had, for instance, visited the farm where they bought their meat, or they ate animals they had raised themselves either as hobby farmers or as commercial farmers. Eating meat from an animal whom they had encountered or raised themselves made the link between meat and an animal evident (Wilkie 2010, 155). As Wilkie (2010, 155) writes, “Those who consume their own animals know the animated source of meat on their plates. This can neutralize the distancing effects of dissociation strategies.”

However, at the same time the rural women expressed emotional tensions about sending some animals to slaughter or eating them. As these women looked after the productive animals, they learned about their personalities and formed emotional affinities with them. In Finland, the traditional gendered division of labour, where women had the main responsibility for looking after farmed animals, was still prevalent in small family farms in the 1950s and 1960s, and it continued in family farms in Eastern Finland until the 1980s (Kaarlenkaski 2012, 71–79). As the rural women had grown up on small family farms, they have been influenced by the traditional gendered working culture. Looking after animals and regular interaction with them encouraged women to form emotional affinity with them, particularly with those animals who were kept for years on the farm, such as cows. Because of close contact with animals and the affectionate relationship with them, it seems that the emotional difficulties of giving up animals especially concerned women (cf. Kaarlenkaski 2012, 248–250). Yet these animal–human relations were characterised by contradictions: although the animals were both personalised and became emotionally close, they were also utilised for food and income (Kaarlenkaski 2014, 23). People who work closely with animals destined to become food need to manage distance to these animals; they form bonds with the animals, but have to undo this bond when the animal is sent to slaughter (Porcher 2011, 5). In the rural group, the participants described the importance of being able to let go of production animals and also of remembering that they are not companion animals, but maintained and bred for production purposes. I discuss this theme in more detail in section 5.3.2.

The zoophagan orientation was strong in the gastronome group, whose participants did not express similar emotional contradictions related to using animals for food to the rural women. The gastronomes valued products that visibly
reflect the animal origin of food, and they criticised the tendency to reject various pieces of animals and to prefer de-animalised meats in the mainstream food culture. Vialles (1988) suggests that the zoophagan logic of meat eating is evident in elite gastronomy. In this context, preparing dishes from different parts of animals, including offal, are part of the pursuit of cooking excellence and taste refinement (Buller and Cesar 2007). In the gastronome group, animals were approached from an alimentary perspective as potential food. Meat was linked to the animal, although not as a subject, but rather as a carrier of consumable materials. Additionally, the gastronomes considered that animals who are well cared for and fed with good quality feeds provide better quality meat. The gastronomes also favoured short food-chains to gain animal-derived products that were regarded as good quality.

Elite gastronomy is a male-dominated field, and despite growing women’s involvement in it in Nordic countries, it is still largely characterised by male leadership (Neuman and Fjellström 2014). In the Finnish gastronomic history only a few women have been mentioned as influential individuals, such as chefs, restaurant directors and gastronomic book authors (Martiala and Lylyharju 2017, 199–203). In the gastronome group, most participants were men. Perhaps because meat is associated with masculinity and because men are more likely than women to express favourable attitudes to meat (Adams 1990, Rothgerber 2013), approaching animals as objects of culinary refinement has been taken for granted in elite gastronomy and gourmet culture, where the participation of the privileged classes of men is central. Animal studies scholarship has given relatively little attention to this culinary field. However, as elite gastronomy is an influential field, which has an authoritative position to define ideals and norms regarding cooking and eating (Mennell 1985, 266–267, Neuman and Fjellström 2014), it would be useful to examine this field more in future studies on cultural constructions of meat and the legitimisation of use of animals for food.

Organic consumers emphasised the importance of animal welfare when making food consumption choices. They were interested in short food-chains because they were uncertain whether the organic standard is sufficient for animals. Buying directly from farmers and seeing animals at first-hand gave a stronger assurance that the animals were looked after well. The group expressed a moderate level of zoophagan orientation where the participants made connections between meat and animals and acknowledged the animal behind meat, but did not discuss consuming unprocessed meats to the same extent or in the same detail as rural women and gastronomes. Vialles (1988) presents the sarcophagan and zoophagan logics as dichotomous approaches to the meat–animal link. However, it may be useful to place these two logics in a continuum, as people can express different degrees of sarcophagan and zoophagan orientations.
Acknowledging the meat–animal link is an important theme in the contemporary locavore and ethical omnivore movements (e.g. Blecha and Davis 2014, Gillespie 2011). According to this perspective, the humane treatment of animals and the personal witnessing of their lives and deaths makes meat consumption ethical, while exploiting and killing animals for food is not questioned (Linné 2016, 721–722, Tiengo and Caffo 2012). The organic consumers suggested a similar ethical omnivore perspective; personal contact with animals destined to become food was considered to foster more responsible eating practices. The organic consumers’ group involved only female participants. In Finland, women are more interested in organic foods and buy them more frequently than men (Saarnivaara 2015), which may explain why only women responded to the focus group call. John Sanbonmatsu (2019) has analysed women’s participation in sustainable farming movements and their roles in legitimising the meat economy in a way that suggests ideas of ethicality and sustainability. Since women still tend to have the main responsibility for food preparation in families, as we saw in section 5.1.1., the marketing of so-called ethical or welfare meat has often been targeted at female consumers (ibid.). Sanbonmatsu suggests that in the ethical meat discourse ideas of care are used as a method of legitimising the killing of animals for food. Similarly, he notes, the idea of responsibility is built on the notion of bearing witness to the whole process, from living animal to meat. However, moral distance can function alongside physical closeness to animals (Aaltola 2018, 119–126, Gillespie 2011, Sanbonmatsu 2019). For some of the organic consumers, being able to face the animal one eats was considered important in maintaining one’s moral integrity as a consumer. However, it remained unacknowledged that simply facing the animals does not ensure that they are recognised as morally valuable individuals. Physical proximity does not in itself ensure a moral relationship with animals as it can involve absence of empathy and mental distance from them (Aaltola 2018, 119–126).

Across cultures, hunting is a masculinised animal-related practice, dominated by men (Herzog 2007, 13, Russell 2012, 155–162). In Finland around 95 percent of hunters are men (Toivonen 2009, 7), and consequently, the hunters’ group included mostly men, with only one woman attending. Male identity and prestige are constructed through hunting, and male bonding is also an important element in it (Russell 2012, 155–162). Masculine identities are constructed by ideas of adventure and outdoor life, which characterises hunting (Bye 2009, 282). Additionally, respected male status is gained through the tenacity, endurance, effort and skill needed to catch the quarry (Bye 2009, 282, Russell 2012, 155–162). The hunter often needs to walk long distances, sometimes in harsh weather (Bye 2009, 282). Men construct their masculine identities by demonstrating their capacity to cope with nature and their ability to kill an animal (ibid.). In the focus group, hunters constructed game meat as a highly valuable food item. Catching the quarry
required much time and effort. Eating game was the culmination of the hunt, which might have lasted for days. Also, the whole chain from animal into meat was visible to the hunters. The focus group indicates that there is something special in the meat gained through combat; game is valued by the hunter because it requires triumphing over many difficulties and failures (Marvin 2006). Game meat was considered festive food that was served on special occasions. It was also given only as a present and never sold.

The hunters’ attitude to game meat is characterised by the zoophagan approach as the hunter personally kills the animal, cuts up the carcass and prepares a meal from its meat. The highly valued game meat is differentiated from meat of farmed animals, which is easily acquired from the supermarket and entails no personal relationship to the animal where it comes from. In hunting, closeness to animals is harnessed to benefit humans (comp. Pedersen 2015); developing understanding of animal behavioural patterns and perceptions helps the hunter to succeed in killing the animal (Marvin 2006). Also physical distance between the hunter and the wild animals needs to be captured (ibid.). However, moral distance is maintained from animals as they are rendered killable.

5.3 THE CATEGORISATION OF ANIMALS: MIND PERCEPTION AND CULTURAL NEGOTIATIONS

In this section I discuss the categorisation of animals and how it connects to people’s perceptions of their mental capacities. I also discuss how the placing of animals in the categories of farmed animals and companion animals is negotiated.

5.3.1 Perceptions of animal mind and animal categorisation

Article II shows that people attribute most mental capacities to mammals. Chickens are given noticeably fewer mental capacities than mammals, followed by salmon (fish) and shrimp (invertebrate). This is in line with multiple studies that note the importance of phylogeny in the way people ascribe mental capacities to animals; mammals are ascribed the highest mental capacities, followed by birds, then fish and finally invertebrates (Herzog and Galvin 1997, Knight et al. 2009, McGrath et al. 2013, Phillips and McCulloch 2005, Phillips et al. 2010, Wilkins, McCrae, and McBride 2015). As humans are mammals, people can think that other mammals are more likely to share with them various emotional and cognitive capacities than evolutionarily more distant species (Wilkins, McCrae, and McBride 2015, 365). Similarly, people may also more easily recognise the expression of emotions in mammals, ranging from gestures to facial expressions and vocalisations (ibid.).

Alongside phylogeny and biological relatedness to humans, the cultural construction of animals is linked to the perceptions of their mental capacities. Belief
in the mental capacities of farmed mammals is lower than belief in the mental capacities of dogs. As companion animals, dogs are positioned high on the moral ladder of the sociozoological scale and they have enjoyed a long-standing special status in human communities (Arluke and Sanders 1996, 170–172, Sanders 1999). Regular interaction and close relationship with companion animals foster a more nuanced understanding of their abilities, while most people have little first-hand experience of the capacities of farmed animals (Morris, Knight, and Lesley 2012, O'Sullivan 2011, 64–76). Moreover, on the sociozoological scale, farmed animals are constructed as tools that are instrumentally utilised in food production (Arluke and Sanders 1996, 173–174). When lesser minds are attributed to farmed animals, rearing and killing them for food may become morally less bothersome (Bastian et al. 2011).

When comparing perceptions of the mind of wild animals and farmed animals, the study shows that, on average, wolves are ascribed slightly fewer mental capacities than cows, but there is no statistically significant difference in mind attribution to pigs and wolves. Differences are not large, but it is interesting to note that in comparison to cows and pigs, people tend to attribute the positive emotions of pleasure and particularly affection to wolves to a lesser extent: correspondingly, they are more ready to ascribe the more negative capacities of anger and understanding death to them. People also attribute clearly fewer mental capacities to wolves than to dogs, despite the close biological relatedness of these species. Negative stigmatization of wolves as a threat or pest has long-standing cultural roots in Finland (Bisi et al. 2010), and this negative perception evidently interrelates with the belief in their mental capacities. Historically, hatred toward wild carnivores has been prominent in Finnish culture as they have been regarded as a threat to human livelihoods because they kill domestic animals and game animals, and this hatred has been particularly heightened toward wolves (Bisi et al. 2010). Wolves have often been demonized because they are regarded as even a danger to humans, provoking feelings of fear toward them (Borgström 2012, Serpell 1996, 198–199).

Belief in the mental capacities of elk is somewhat lower than belief in the mental capacities of cows and pigs. In comparison to farmed animals, elks are even more unfamiliar and distant to people, which can diminish certainty in evaluating their mental capacities (cf. Mitchell and Hamm 1997). In Stewart and Cole’s (2009) categorical mapping, wild herbivores have even lower cultural visibility than farmed animals. They tend to be treated as an undifferentiated mass, lacking individuality. Moreover, the elk is a typical game animal in Finland and it is hunted all over the country (Bisi et al. 2010). The utilization of elks as game can motivate people to assign lesser minds to them.

Finns attribute the second most mental capacities to cows, following the dogs. Alongside basic sentience (capacity to feel pain and pleasure), there is a high
consensus that cows can feel affection and remember their conspecifics. A majority also ascribe to them the remaining mental capacities. Dairy farming has long been a central farming sector in Finland, and today dairy production is still the most common production line in Finnish animal farming (Kaarlenkaski 2012, 18–22, Luke 2016, 7). Dairy production is practised across the country (Luke 2016, 10), and cows are familiar sights in the Finnish rural landscape because they are kept in pastures over summer on most dairy farms (Norring 2014, 13). Consequently, cows are well-known animals for the Finnish population, and many Finns, particularly older generations, have had personal experiences with them. The cow has also been a popular figure in Finnish arts, literature and media (Kaarlenkaski 2012, 85–94). In popular culture, the cow has been associated with positive attributes, such as serenity and motherliness (ibid.), and this may explain why people attribute positive emotions such as affection to cows. The familiar status of cows in Finnish culture and their positive popular image may foster belief in their mental capacities among Finns. Additionally, unlike meat production, in cultural perceptions dairy production is not directly associated with slaughter, which may make the attribution of mind to cows easier.

In popular culture, pigs are often depicted as clever animals, which may encourage people to ascribe mental capacities to them. The survey suggested that most Finns agree that alongside basic sentience, pigs are capable of affection and social memory. The majority also ascribe to them the remaining mental capacities. Pigs have had a contradictory cultural role; while they are considered astute animals who resemble humans physically (such as hairless skin and the size and positioning of eyes), they are at the same time reared solely for meat (Stibbe 2003). Negative meanings (such as dirtiness and selfishness) associated with pigs may have been important cultural processes that have facilitated their consumption (ibid.).

In contrast to mammals, belief in the mental capacities of chickens was low, which aligns with the findings of other surveys (McGrath et al. 2013, Phillips and McCulloch 2005, Phillips et al. 2010). In addition to the phylogenetic distance of chickens from humans, the low cultural valuation of chickens can also influence the weak belief in their mental capacities (Marino 2017, 127–128). In the popular imagination, chickens are often represented as simple animals, their behaviour guided by instinct rather than complex cognition and emotions (Marino 2017, 127–128, Masson 2004, 55–96). Of the land animals utilised in farming, chickens are the most numerous (Potts 2016, 3). The commodity status of chickens shapes the processes by which people form perceptions about them (Marino 2017). It seems that the intelligence and emotional world of chickens is underestimated in popular understandings about them, as scientific evidence suggests that chickens have complex cognitive and emotional capacities (ibid.). Low belief in the mental
capacities of chickens both reflects and contributes to their use in vast quantities in food production (ibid.).

Article II suggests that the belief of Finns in the mental capacities of salmon and shrimps is very low. A majority of Finns believe that salmon can feel pain, but only a minority ascribe the rest of the mental capacities to them. A minority considers shrimps as sentient, as indicated by the low belief in their capacity to feel pain and pleasure. Among vertebrates, fishes tend to be attributed the least mental capacities (e.g., Herzog and Galvin 1997, McGrath et al. 2013, Phillips et al. 2010). There is greater belief in the mental capacities of vertebrates than invertebrates (Herzog and Galvin 1997, McGrath et al. 2013). Both phylogenetic distance and the unfamiliarity of salmon and shrimps influence public perceptions of their mental capacities (Brown 2015, 2). By comparison with knowledge of terrestrial animals, people have little knowledge of the behavioural abilities of fishes and underwater invertebrates such as shrimps (Brown 2015, 2, cf. Mitchell and Hamm 1997, 165–168). The welfare of farmed fishes has become a subject of legislation only relatively recently in European animal welfare regulatory frameworks (Lien 2015). Marianne E. Lien (2015, 131–132) highlights how difficult it is for people to relate with and empathise the subjective experiences of fishes; as underwater animals, they are mostly hidden from view and their vocalisations are inaudible to humans. Additionally, she notes that for a human viewer, the faces and eyes of fishes appear devoid of expression and their body language is difficult to understand. Consequently, she writes (ibid.), “This limits the cues to which we humans can respond and thus makes the sharing of suffering a less likely, or perhaps a less dominant, aspect of the human-animal relation.”

In studies that have examined the emergent farming of edible insects, it has been noted how in popular perceptions insects are considered “liminal animals”; although they are classified as animals, they are perceived to lack the sentience that ‘real’ animals have (Santaoja and Niva 2018, 80–81, Wilkie 2018, 521). In Finnish popular discussion on insect farming, insects are often likened to plants and biomass, and they appear as lesser animals (Santaoja and Niva 2018, 80–81). These perceptions of insects as insentient lesser animals seem to apply to other invertebrates utilised in farming, and this study also showed a low belief in the sentience of shrimps. As animal studies scholarship has given limited attention to humans’ relations with invertebrates in comparison to vertebrates, and particularly to mammals, Rhoda Wilkie (2018, 522) asks whether the field has been characterised by “institutional vertebratism”, referring to Leather’s (2009) concept. Animal welfare legislation has also been characterised by this bias: there has been limited regulatory attention to the welfare of invertebrates and there is limited expert knowledge on the topic (Santaoja and Niva 2018, Wilkie 2018). As invertebrates have a liminal animal status and tend to be considered “tiny automata” rather than sentient beings, their growing exploitation in intensive
farming remains largely unquestioned at present (Wilkie 2018, 526–527). More critical analysis of the growth in intensive farming of invertebrates and its ethical implications is needed in animal studies.

5.3.2 Categorising animals as companion and as food

Article III examined how the focus group participants negotiated the position of animals in the categories of companion animals and farmed animals. It is often emphasised that Western consumers make a strong divide between animals categorised as companions and as food (DeMello 2012, 49). The former is given a subjectivity and high degree of cultural visibility, while the latter is approached as an object and has low cultural visibility (Stewart and Cole 2009, 460–461). When farmed animals gain more visibility and subjectivity, keeping them in the category of food animals becomes more challenging. For instance, a study with Norwegian omnivores suggests that when meat comes from animals who are personified by naming them, it provokes more disgust than meat that originates from unnamed animals (Kubberød et al. 2008). However, categorising animals and locating them in the categories of food and companion are not always clear-cut in specific contexts and can be subjected to negotiation (Stewart and Cole 2009, 460, Wilkie 2010).

In the supermarket customer group, it was evident that when animals are given individuality and have become visible and affectively important, they can no longer be categorised as edible animals. For instance, the participants noted that when they or their family members kept rabbits or hens as companion animals, eating them became unthinkable. Eating horse also troubled the supermarket customers. In Finland, horses have an ambivalent status because they are both kept as companions and eaten (Schuurman 2012, 29–34). Some of the supermarket customers regarded horses as companion animals and found the idea of eating them unappealing.

While the supermarket customers made a clear-cut differentiation between animals kept as companions and those used as food, these categories sometimes overlapped for the rural women and some of the organic consumers. These participants had encountered or raised the animals they ate. As I discussed in section 5.2, the rural women developed emotional affinities with some of the animals kept on the farm, which made it emotionally difficult to send them to slaughter. The zoophagan orientation of the rural women and their emotional negotiations related to sending animals to slaughter appear contradictory. However, as Wilkie (2010, 175–186) suggests, in productive contexts people can hold diverse and multifarious attitudes to animals, and instrumental and affectionate attitudes toward them can co-exist. Some farmed animals, particularly those who are raised for meat, remain relatively de-individualised and emotionally distant, while others, particularly those kept for dairy production or breeding purposes, gain individuality and emotional importance due to close interaction.
with them on a daily basis (ibid.). It seemed that the rural women were less troubled if connecting meat to animals who were reared for meat and lacked rich individuality (such as pigs and cattle reared for beef production), but they had to negotiate their emotions when letting go animals (cows) they had become attached to. These animals had gained similar characteristics to companion animals, including visibility, individuality and emotional importance (comp. Arluke and Sanders 1996, 171, Stewart and Cole 2009). However, their status as production animals had to be re-asserted at the end of their production period when they were sent to slaughter. Rhoda Wilkie (2010, 176) suggests that farmers who work closely with production animals need to engage in emotion work to “avert the emotional angst associated with pet-type relations”. In the rural group, participants made the point that farmed animals are not only pets. For instance, it was suggested that keeping animals in large numbers helped in maintaining a certain degree of emotional distance from them, which was needed when giving up animals.

In the organic consumers group, it was considered that having personal contact with animals who were eaten produced more ethical eating practices. However, preparing a meal from a personally known animal was also disquieting. Although the distinction between farmed animals and companion animals is institutionalised in society, this distinction is subject to negotiation in the contexts where people come into contact with farmed animals. In specific contexts, the boundary between farmed animals and companion animals is porous, and animals can to some extent move between these categories (Wilkie 2010). Defining animals as production animals once they have been regarded as subjects and emotionally valued individuals is not easy and requires emotional work.

5.4 METHODOLOGICAL ISSUES

In this section I discuss the methodological limitations of the thesis and make some suggestions regarding the development of measures for attitudes to farmed animals. As mentioned in section 2.3.1, there are no established measures for these attitudes. Although it is useful to employ various kinds of indicators to tap different facets of these complex attitudes, utilising standardised indicators would improve the comparability of different studies. The farm animal welfare evaluation employed in this thesis is a robust indicator that measures how people assess the current situation of animal welfare in conventional farming. Based on people’s own understandings of animal welfare, they can indicate the extent to which they think that welfare of animals is good or poor in different production systems. The reliability of the measure was high. It covers assessment of animal welfare in eight animal production lines (hens kept for egg production, broiler chickens, turkeys, pigs, farmed fish, beef cattle, dairy cows and sheep). This measure provides basic information about how positively or negatively people assess the current situation
of farm animal welfare. Future studies could benefit by including this measure as a component in a wider assortment of attitudinal indicators regarding farmed animals.

The trust in prevalent animal production is also a relatively robust indicator, measuring the extent to which people regard knowledge of animal producers, technological development and customary farming practices as ensuring good animal welfare at farms. The measure has acceptable reliability. However, it is not conceptually fully coherent. Additionally, all items of the scale are in the same direction (agreeing with the items indicates greater satisfaction with the prevailing farming practices). Hence, the items of the measure require further development.

Survey results can be affected by social desirability bias; attitudes that are perceived as socially desirable can be over-reported, while attitudes considered to be less approved by others can be under-reported (de Vaus 2014, 107–108). Social desirability involves both maintaining a positive self-image and giving a positive impression of oneself to others (ibid.). Animal rights and welfare are normative issues and social desirability bias can affect answers to questions on them (Lusk and Norwood 2010). Self-administered surveys are less prone to social desirability biases than interviewer-administered surveys (de Vaus 2014, 107, Groves 2009, 17), so the use of the self-administered postal survey in this thesis may well have reduced social desirability bias. Acquiescence can affect response to questions that use the agree–disagree format (de Vaus 2014, 107). Acquiescence may have influenced responses in the behavioural freedom scale and the valuing animal life scale. The items in the scales were all in the same direction, so that agreeing with the question-statement implied a more favourable opinion about behavioural freedom and life of animals. Improved measures for these scales should include more variety in question directions.

The behavioural freedom scale includes items related to possibilities to perform species-specific behaviour, freedom to move, keeping animals in cages and cow–calf separation. People tend to value species-specific behaviour of animals and have negative views about restrictive methods of keeping animals, as discussed in the introduction. Respondents tended to agree with the items in the scale, resulting in a skewed variable with most variation between points three and five. Finding good measures for people’s attitudes to various methods of keeping animals and different agricultural practices requires utilising items where there is more variation in people’s ways of answering. Research on attitudes to farmed animals has tended to focus mostly on animal welfare and less on animal rights-based concerns. In this research, the valuing of animal life scale was developed to measure people’s attitudes to animal killing. However, an improved measure for this scale should contain more items and their order should vary. More research is needed on people’s attitudes toward animal rights as well as toward the political
and legal status of animals. Future studies should develop more measures for these attitudes.

In article II, we measured perceptions of animal mind with a dichotomous yes/no question with a “no answer” option. However, a scaled variable that measures the degree of certainty in belief in the mental capacities of animals would have been more appropriate. In addition, including a wider range of mental capacities and animal species in the survey would have provided more complete knowledge of how the cultural construction of animals is linked to perceptions of animal mind.

Regarding the independent variables, a weakness of the survey study was the limited number of indicators for socioeconomic class. Similarly, the survey should have included questions on people’s cultural and ethnic backgrounds. Additionally, companion animal keeping and social equality attitude measures would benefit from being more nuanced, with a wider range of items. In articles I and II, it would have been useful to report the regression analyses in blocks, separating socio-demographic variables from animal-related experiences and attitudinal variables, in order to describe better how social group positions associate with attitudes and perceptions regarding animals independently of experiential and attitudinal variables.

The findings of article III would have been strengthened if more focus groups had been convened in each omnivore category. Because there was only one discussion for each ‘orientation’, the study was unable to grasp the full diversity within the omnivore groups. Arranging a larger number of groups in each category could have enabled a more in-depth analysis of the specific themes that emerged across groups. Additionally, the relatively large group sizes tended to create group dynamics where a few individuals dominated the discussion, with several participants contributing to a limited extent and one or two saying little. Future studies employing focus groups in this topic area should consider the impact of the group size on the discussion dynamics. In smaller groups, each participant has more time to bring up their points of views. Employing smaller groups may also help to ensure balanced discussion in the focus group.
6 CONCLUSION

In this thesis, based on a population survey with Finns and focus groups with a range of omnivores, I have examined attitudes, perceptions and meanings regarding farmed animals in Finnish society from the perspectives of sociological animal studies. The thesis has contributed to three areas of discussion in sociological animal studies and in animal studies more widely: first, discussion on social differences in attitudes toward animals and social determinants of these attitudes; second, people’s perceptions of animal mind and the ways in which these perceptions vary in society and according to the categorisation of animals; and finally, the cultural meanings of meat and their connections to animals.

Regarding social differences in animal-related attitudes, the thesis shows, based on the solid data, that social group positions play a role in the ways in which the general public relates with farmed animals, demonstrating in particular that there are gender, age and urban/rural differences in attitudes to farmed animals. In analysing social differences, the thesis has utilised the theoretical work of Kendall, Lobao and Sharp (2006) and Deemer and Lobao (2011) regarding how commonalities in attitudes arise from shared living conditions, collective experiences and socialisation processes among people occupying similar positions in the stratified social structure. This theoretical approach provides a richer sociological understanding of social differences in attitudes to farmed animals, something which has been mostly lacking in empirical studies on the topic. Taking this approach, the study has participated in developing and extending sociological analysis of animal-related attitudes.

The thesis shows that, of the social group positions, gender has the most robust link with attitudes to farmed animals; on average, women express consistently higher concern for farm animal wellbeing than men. I interpret gender differences in terms of gender role socialisation and gendered placement of people in care-related labour, as suggested by Kendall et al. (2006) and in sociological feminist animal studies (e.g. Cudworth 2016). However, further studies should test care work and gender-role norms as potential intermediate variables that may help to explain gender differences in animal-related attitudes. In addition, the thesis highlights the possible interrelation between the gender of farmed animals and their gendered treatment in agriculture and the attitudes people adopt toward them. In particular, women may express greater concern for the conditions of female animals whose reproductive capacities are exploited in agricultural industry and who experience specific forms of suffering because of their gender. I suggest that this would be a useful line of enquiry to pursue in more depth in future studies on attitudes toward agricultural animals.
Alongside confirming greater concern for farmed animals among urban residents, the thesis also suggests that there are generational differences in animal-related attitudes; older people tend to have more trust in current animal farming and evaluate the state of farm animal welfare more positively than younger people do. Age differences may reflect deep changes in the status of farmed animals. The positive perceptions of older generations may relate to their past experiences of small-scale, pre-industrialised farming, which differs remarkably from today’s intensive farming where animals are treated as commodities and where their production is subjected to increasing efficiency requirements. A key interest in sociological animal studies concerns social change in species relations (Cudworth 2011b, 21–26). Because younger generations show on average more critical attitudes toward the situation of farm animal welfare, this suggests a potential for greater support for future reforms that seek to improve the social status of farmed animals.

In addition to social group positions, the thesis provides insights on the role of animal-related experiences in attitude formation. The thesis shows a robust and consistent link between farming background and animal-related attitudes; those who live or grew up on a farm with agricultural animals tend to express less concern for farm animal wellbeing than those without a farming background. I interpret these differences in light of the sociological literature on farmers’ relationships with farmed animals; when interacting with animals in economic settings, farmers and farm children develop a relatively instrumental attitude toward them (Wilkie 2010). Additionally, the thesis emphasises that it is important to consider the type of farming experience in attitude formation. In the survey study, the majority of respondents with farming background were older people, who are likely to have had experience of farmed animals in the context of small-scale non-industrial agriculture.

Experiences with companion animals point in the opposite direction to farming background; people who share their households with companion animals tend to express greater concern for farmed animals. The sociology of multi-species relations has shown that people can form varied and diverse relationships with companion animals, ranging from domination and subordination to more inclusive and equal relations (Charles 2016, Cudworth 2011b). Therefore, further studies that examine the role of companion animals in forming attitudes toward animals as a broader group would benefit from including more nuanced measures for the quality of relationship with companion animals.

This thesis contributes to the scholarly discussion concerning linkages between attitudes to animals and attitudes to human groups, showing that concern for the welfare of farmed animals is positively connected with valuing of social equality between human groups. In this way, the thesis provides empirical support for the stratification theory suggestion that attitudes toward human and animal disadvantage and inequality are linked (Deemer and Lobao 2011). David Nibert
(2003) has suggested that to develop a more inclusive sociology for other species, exploited groups of animals, such as farmed animals, should be included in the study of oppressed social groups. It may be the case that attitudes which support unequal positioning of other animals in society are developed in similar ways in everyday socialisation processes as attitudes that support unequal status of humans in stratified societies. Future studies could examine this theme in more depth.

Population-level studies have been relatively scarce in studies that have examined public perceptions of animal mind. Unfortunately, convenience samples and narrow adult samples are still employed in this field of study. The contribution of this thesis in scholarly discussion on human perceptions of animal mind is based on the use of a population-based survey with Finns, which produces generalizable findings on people’s perceptions of animal mind. The thesis has extended extant research by examining a wider range of possible factors that may associate with perception of animal mind than have been covered in previous studies in the field. Based on the community sample of Finns, the thesis suggests that young age, having a companion animal and valuing societal equality, alongside concern for farm animal welfare and concern about animal utilisation, are connected to a greater belief in the mental capacities of farmed animals.

The thesis suggests that cultural construction and categorisation of animals play a role in how people perceive their mind. Because there has been lack of research on how attribution of mind to different groups of wild animals and to farmed animals compare, this thesis advances existing research by bringing novel information on how people ascribe mind to a variety of wild animals. The thesis has drawn on sociological theories on animal categorisation when interpreting findings on Finnish perceptions of animal mind (Arluke and Sanders 1996, Stewart and Cole 2009). It shows that people ascribe most mental capacities to companion animals (dogs), followed by farmed animals (cows and pigs), which are defined as “good animals” in the sociozoological scale developed by Arluke and Sanders (1996). Wolves, which are defined as “bad animals” (vermin or demons) in the scale, are given fewer abilities than dogs and cows. Negative meanings associated with “bad animals” are linked to mind attribution to them; in particular, ascribing fewer positive emotions to wolfs than to cows may interrelate with the deep-rooted hatred of wolves that has a long history in Finnish society. In contrast, cows have been associated with positive meanings related to their historic importance in Finnish agriculture (Kaarlenkaski 2012). Finns ascribe to elks fewer mental capacities than to cows and pigs. According to Stewart and Cole (2009), wild herbivores tend to have even lower cultural visibility than farmed animals.

According to this thesis, chickens are given noticeably fewer mental capacities than mammals. The thesis also shows that the belief of Finns in the mental capacities of salmon and shrimps is very low. Mental capacities of fishes have long been underestimated and they have been considered barely sentient animals
As scientific understanding of the mind of fishes has begun to increase only recently, societal perceptions of fishes may change in upcoming decades. It has been suggested that the de-mentalization of farmed animals makes their consumption less morally troubling (Bastian et al. 2011). This seems to apply particularly to non-mammalian species, which are used in largest numbers in food production. Promoting greater public understanding of the minds and experiential world of chickens and fishes is imperative to enhance greater moral scrutiny of their exploitation in agriculture. Wilkie (2018) has emphasised that invertebrates have been largely ignored in the sociology of multi-species relations, which may suggest “institutional vertebratism” (Leather 2009) in the field. Invertebrates have been considered “liminal animals” that lack sentience (Santaoja and Niva 2018, Wilkie 2018), an attitude confirmed by the low belief in the mental capacities of shrimps attested in this thesis. As invertebrates are reared and killed in food production in their multitudes, there is a need to pay more critical scholarly attention to invertebrate farming and its ethical implications.

Finally, the thesis has participated in the animal studies discussion on cultural meanings of meat and how omnivores negotiate the link between meat and animals. In this analysis, I have employed Noëlie Vialles’ (1988) concepts of the sarcophagan and zoophagan logics of meat eating. The thesis suggests that omnivores make connections and disconnections between meat and animals in varying ways. Earlier literature has suggested that disconnecting meat from its animal origin is an important cultural process that helps to maintain the meat-eating practice. However, this thesis demonstrates that omnivores’ relationship to the meat–animal link is more complex, and different groups of omnivores may make different kinds of connections between meat and animals. Gender, age and agricultural background seem to play a role in the ways in which consumers make connections between meat and animals, and it would be useful for future research to give more attention to these differences. According to Vialles (1988), the zoophagan approach involves the negation of the animal in the sense that the animal is objectified as a body carrying food. While the zoophagan approach involves recognising the animal in meat, it does not involve recognising its subjectivity. Therefore, in that approach, objectification of animals as potential food is a central process that helps to uphold the meat-eating practice. As this thesis suggests, challenging dissociation does not in itself necessarily imply an increased moral valuation of animals if the objectification of animals is not confronted.

The thesis contributes to discussion on the categorisation of animals by focusing on examining how the place of animals in the categories of companion and farmed animal is negotiated. Although the deep divide between these categories is institutionalised in society, in those contexts where people engage with farmed animals, the boundary between them is less impermeable, and animals can to some extent move between these categories. Re-asserting the status of animals as farmed
animals once they have been given similar characteristics to companion animals, such as personality and emotional importance, requires emotional work.

Attitudes and perceptions regarding animals have been weakly integrated into the mainstream social science agenda of exploring Finnish society. Therefore, Finnish views of farmed animals have been poorly understood at the population level. This thesis is based on the first population-based survey that examines Finnish attitudes to farmed animals and perceptions of animal mind and employs multivariate analyses to examine determinants of these attitudes and perceptions. Establishing broad trends in Finnish perceptions of farmed animals provides a general context for societal discussion regarding animals as well as for research on human–animal relations in Finnish society. The thesis also provides a comparative point for future studies that explore Finnish attitudes to farmed animals. The survey employed in this thesis offers results from a single study: to gain an improved picture of Finns’ views, further studies that measure these attitudes would be necessary. Improved understanding of Finnish attitudes provides important information for policy making regarding farmed animals, which should consider the values, attitudes and perceptions of the public when framing policies concerning animals. Additionally, as empirical information on Finnish views about farmed animals accumulates, it will become possible to gain a more accurate understanding of how and how much these views change over time.

Methodologically, this thesis has participated in developing measures for attitudes to farmed animals. The farm animal welfare evaluation scale employed in the thesis is a robust attitudinal indicator with good reliability. Future studies could benefit by including it as a component in a wider assortment of attitudinal indicators. Social sciences have been criticised for employing research methods that exclude other animals; people are encouraged to think and talk about animals who are not present in the research context (Taylor 2012). Also, this thesis has employed human-centric methodology where humans evaluate numerically their opinions regarding animals and discuss their views about other species (see Birke and Hockenhull 2012, Cudworth 2018, Taylor 2012). There is much methodological renewal going on in developing multispecies methodologies that are more inclusive of other animals and their viewpoints (ibid.). I think that survey and focus group methods can also be developed in directions where animals are more visible as actors in the research process. Survey questions are inherently political. As they rely importantly on researchers’ constructs, there is a need to consider carefully what kinds of questions are asked in surveys and how animals are represented in them – as commodities or as subjects with their own perspectives.

Often research on citizen and consumer perceptions of farmed animals has been carried out from the animal welfare perspective, which reinforces the dominant perspective of farmed animals as commodities. There is a need to incorporate more critical animal studies perspectives in quantitative studies on animal-related
attitudes. In surveys and qualitative studies the low cultural visibility of farmed animals can be counteracted in different ways. For instance, online videos can be utilised in large surveys to make animals present in the research setting in more concrete ways. They can also be employed in smaller qualitative samples, alongside visits, for example, to animal sanctuaries. Both videos of animals in intensive farming and videos of them in settings where they can display their own subjectivity can encourage people to reflect on their attitudes toward animals in deeper ways. In this way, research can provide learning opportunities for participants and foster thinking about animals in less abstract and de-individualised ways. New innovative research methods in this field are needed to provide new insights into how people relate to animals and how their relations with them can change.
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APPENDICES

APPENDIX 1. COVER LETTER

Historia- ja maantieteiden laitos
PL 111
80101 Joensuu

KYSELYTUTKIMUS: SUOMALAISTEN NÄKEMYKSET ELÄINTUOTANNOSTA

Hyvää vastaanottaja


Tämän kyselyn aiheena ovat elintarviketuotannossa käytettävät eläimet, kuten naudat, siat ja kanat. Pyydämme Teitä vastaamaan oheisella kyselylomakkeella, jonka täyttämiseen menee aikaa noin 20 minuuttia. **Lomakkeen täyttäminen ei vaadi mitään alaan liittyvää erityistietämystä, sillä sen tarkoituksena on kerätä vastaajien näkemyksiä ja kokemuksia.** Tutkimuksen onnistumiseksi toivomme, että vastaatte kysymyksiin huolellisesti.

Kaikkien vastanneiden kesken arvotaan kahdensadan (200) euron arvoinen lahjakohtattu voittajan valitsemaan tavarataloon. Lomakkeet käsitellään nimettömästi ja ehdottoman luottamuksellisesti, ja yksittäiset vastaukset tulevat vain hankkeessa työskentelevien Itä-Suomen yliopiston tutkijoiden tietoon.


Pyydämme palauttamaan lomakkeen **7.5.2010** mennessä oheisessa yhteistyökumppaniemme palautuskuorressa, jonka **postimaksu on maksettu.**

Yhteistyöstä kiitän
Professori Pekka Jokinen, tutkijat Saara Kupsala ja Markus Vinnari

Osoitelähde: Väestötietojärjestelmä, Väestörekisterikeskus, PL 70, 00581 HELSINKI.
APPENDIX 2. QUESTIONNAIRE FORM
KYSELYTUTKIMUS − SUOMALAISTEN NÄKEMYKSET ELÄINTUOTANNOSTA

ITÄ-SUOMEN YLIOPISTO

Vastatkaa ympyröimällä Teille sopivimman vaihtoehdon numero. Tarvittaessa täydentäkää riville.

1. Sukupuoli:  
   Nainen 1  
   Mies 2

2. Syntymävuosi: ________

3. Asuinpaikka:
   Maaseutu 1  
   Taajama/kaupunki alle 20 000 asukasta 2
   Taajama/kaupunki 20 000 − 50 000 asukasta 3
   Taajama/kaupunki yli 50 000 asukasta 4

4. Siviilisääty:
   Naimaton 1  
   Avoliitossa 2
   Avoliitossa/ rekisteröidyssä parisuhteessa 3
   Eronnut/asumuserossa 4
   Leski 5

5. Oletteko:
   Yksin asuva, ei lapsia 1  
   Yksin asuva, lapset muuttaneet pois kotoa 2
   Yksinhuoltaja/yhteishuoltaja 3
   Avio-/avoliitossa ja kotitaloudessa lapsia 4
   Avio-/avoliitossa, lapset muuttaneet pois kotoa 5
   Vanhempien luona asuva 7
   Muu 8

6. Kuinka monta henkilöä kotitaloudessanne asuu?

(Kotitalouden muodostavat kaikki ne henkilöt, jotka asuvat ja ruokailevat yhdessä tai jotka muuten käyttävät yhdessä tulojaan.)

Yhteensä ________ henkilöä

Heistä on 18-vuotiaita tai sitä vanhempia aikuisia ________ henkilöä

Heistä on 7−17-vuotiaita lapsia tai nuoria ________ henkilöä

Heistä on 6-vuotiaita tai sitä nuorempia lapsia ________ henkilöä
7. Mikä on koulutuksenne?
Valitkaa korkein suorittamanne koulutusaste, vain yksi rengastus.

| Perusaste (perus-, keski-, kansasekä kansalaiskoulu tai vähäisempi) | 1 |
| Keskiaste (ammatti- ja ylioppilastutkinnot, esim. lähihoitaja, sähköasentaja) | 2 |
| Alempi korkea-aste (esim. teknikko, tradenomi, insinööri, hum. kand., alemmat yliopistotutkinnot ja ammattikorkeakoulututkinnot) | 3 |
| Ylempi korkea-aste (esim. valtiotieteiden maisteri, diplomi-insinööri) | 4 |
| Tutkijakoulutus (lisensiaatti, tohtori) | 5 |

8. Mihin seuraavista ryhmistä katsotte nyt kuuluvanne?
Vain yksi rengastus.

| Johtavassa asemassa, toisen palveluksessa | 1 |
| Ylempi toimihenkilö | 2 |
| Alempi toimihenkilö | 3 |
| Työntekijä | 4 |
| Yrittäjä tai yksityinen ammatinhajoittaja | 5 |
| Maatalousyrittäjä | 6 |
| Opiskelija | 7 |
| Eläkeläinen | 8 |
| Kotiäiti tai -isä | 9 |
| Työtön | 10 |
| Muu | 11 |

9. Kuinka paljon kotitaloutenne nettotulot (tulot verojen jälkeen) ovat yhteensä kuukaudessa?
Kotitalous voi saada tulota palkoista, omasta yrityksestä, eläkkeistä, työttömyyysturvesta, muista sosiaalieluukseista tai pääomatuloista. Jos ette tiedä tarkkaa lukua, voitte kertoa arvionne.

| Alle 500 euroa | 1 |
| 500–999 euroa | 2 |
| 1000–1499 euroa | 3 |
| 1500–1999 euroa | 4 |
| 2000–2499 euroa | 5 |
| 2500–2999 euroa | 6 |
| 3000–4999 euroa | 7 |
| 5000–7499 euroa | 8 |
| 7500–10000 euroa | 9 |
| Yli 10 000 euroa | 10 |

10. Vastatkaa ympyröimällä Teille sopivimman vaihtoehdon numero.

<table>
<thead>
<tr>
<th>Ei</th>
<th>Kyllä</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harrastatteko metsästystä?</td>
<td>1</td>
</tr>
<tr>
<td>Kuuluuko kotitalouteenne lemmikkieläintä (esim. akvaariokala tai koira)?</td>
<td>1</td>
</tr>
<tr>
<td>Maksatteko tuki- tai jäsenmaksua jollekin luonto- tai ympäristöjärjestölle? (Esimerkiksi Suomen Luonnonsuojeluliitto, Greenpeace, BirdLife Suomi)</td>
<td>1</td>
</tr>
<tr>
<td>Harrastatteko kalastusta?</td>
<td>1</td>
</tr>
<tr>
<td>Maksatteko tuki- tai jäsenmaksua jollekin eläinasiajärjestölle? (Esimerkiksi Suomen Eläinsuojeluyhdistys, Animalia, Fauna)</td>
<td>1</td>
</tr>
<tr>
<td>Harrastatteko ratsastusta/hevosurheilua?</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Arvostatte hyvin paljon</th>
<th>Ette arvosta lainkaan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sukupuolten välinen tasa-arvo</td>
<td>1</td>
</tr>
<tr>
<td>Suomalainen kulttuuri</td>
<td>1</td>
</tr>
<tr>
<td>Uskonto</td>
<td>1</td>
</tr>
<tr>
<td>Yhteiskunnallisesti arvostetun aseman saavuttaminen</td>
<td>1</td>
</tr>
<tr>
<td>Yksilönvapaus</td>
<td>1</td>
</tr>
<tr>
<td>Sosialinen oikeudenmukaisuus</td>
<td>1</td>
</tr>
<tr>
<td>Seksuualivähemmistöjen oikeudet</td>
<td>1</td>
</tr>
<tr>
<td>Ympäristönsuojelu</td>
<td>1</td>
</tr>
<tr>
<td>Kotiseutu</td>
<td>1</td>
</tr>
<tr>
<td>Korkea tulotaso</td>
<td>1</td>
</tr>
</tbody>
</table>

12. Kuinka usein olette elämänne aikana käynyt maatilalla, jolla on eläintuotantoa (mm. maidon, lihan tai munien tuotantoa; pois lukien kotieläinpihat)?

| Ette koskaan | 1 | 1–3 kertaa | 2 | 4–10 kertaa | 3 | Yli 10 kertaa | 4 |

13. Mikä on suhteenne eläintuotantoon?
Rengastakaa vain yksi, parhaiten Teitä kuvaava vaihtoehto.

- Kasvoitte tai elätte maatilalla, jolla oli tai on tuotantoeläimiä 1
- Sukulaisillanne (isovanhemmat, sedät, tädit, serkut jne.) on tai on ollut eläintuotantoa harjoittava maatila, jolla olette käynyt 2
- Olette käynyt muuten maatiloilla, joilla on eläintuotantoa (pois lukien kotieläinpihat) (naapurit, tuttavat, maatilamatkailu, työn kautta, yms.) 3
- Ette ole koskaan käynyt eläintuotantoa harjoittavalla maatilalla 4

14. Kuinka usein syötte lihatuotteita (ei kalaa; esim. kanaa, nautaa tai sikaa; tähän sisältyy myös lihajalosteet, kuten leikkeleet)?

| Päivittäin | 1 | 5–6 päivänä viikossa | 2 |
| 3–4 päivänä viikossa | 3 | 1–2 päivänä viikossa | 4 |
| 1–3 kertaa kuussa | 5 | Harvemmin kuin kerran kuussa | 6 |
| Ette koskaan | 7 |
15. Mikä seuraavista kuvaa ruokavaliotanne parhaiten?  
Ympyröikää vain yksi vaihtoehto.

Sisältää lihatuotteita (esim. nautaa, kanaa ja sikaa) (sekaravinto)  1

Ei sisällä punaista lihaa (esim. nautaa, sikaa, lammasta ja poroa)  2

Sisältää kalaa, mutta ei muita lihatuotteita  
(pesco-vegetaristinen)  3

Ei sisällä lainkaan liha- ja kalatuotteita, vaan ainoastaan kasviksia, 
maitotuotteita ja / tai kanannunia  
(lakto-ovo-vegetaristinen tai lakto-vegetaristinen)  4

Ei sisällä mitään eläinperäisiä tuotteita (vegaaninen)  5

16. Kuinka usein syötte seuraavia eläinperäisiä luomutuotteita?  
Vastatkaa ympyröimällä Teille sopivimman vaihtoehdon numero.

<table>
<thead>
<tr>
<th></th>
<th>Päivittäin</th>
<th>Vähintään kerran viikossa</th>
<th>Vähintään kerran kuussa</th>
<th>Harvemmin kuin kerran kuussa</th>
<th>Ette koskaan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kanannunia ja / tai maitotuotteita</td>
<td>1  2  3  4  5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lihatuotteita</td>
<td>1  2  3  4  5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

17. Millaiseksi arvioitte seuraavien tuotantoeläinten hyvinvoinnin Suomessa tavanomaisessa tuotannossa?  
Vastatkaa ympyröimällä Teille sopivimman vaihtoehdon numero.

<table>
<thead>
<tr>
<th></th>
<th>Erittäin hyvä</th>
<th>Erittäin huono</th>
</tr>
</thead>
<tbody>
<tr>
<td>Munijakanat</td>
<td>1  2  3  4  5</td>
<td></td>
</tr>
<tr>
<td>Broilerit (lihantuotantoon kasvatetut kananpoikaset)</td>
<td>1  2  3  4  5</td>
<td></td>
</tr>
<tr>
<td>Kalkkunat</td>
<td>1  2  3  4  5</td>
<td></td>
</tr>
<tr>
<td>Kasvatetut kalat</td>
<td>1  2  3  4  5</td>
<td></td>
</tr>
<tr>
<td>Lihanaudat</td>
<td>1  2  3  4  5</td>
<td></td>
</tr>
<tr>
<td>Lypsylehmät</td>
<td>1  2  3  4  5</td>
<td></td>
</tr>
<tr>
<td>Siat</td>
<td>1  2  3  4  5</td>
<td></td>
</tr>
<tr>
<td>Lampaat</td>
<td>1  2  3  4  5</td>
<td></td>
</tr>
<tr>
<td>Porot</td>
<td>1  2  3  4  5</td>
<td></td>
</tr>
</tbody>
</table>
18. Seuraavassa on esitetty joukko tuotantoeläinten hyvinvointiin liittyviä väittämiä.
Vastatkaa ympyröimällä Teille sopivimman vaihtoehdon numero.

<table>
<thead>
<tr>
<th>Täysin samaa mieltä</th>
<th>Täysin eri mieltä</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tuotantoeläimillä on nykyisin riittävästi tilaa käytössään</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Eläinten hyvinvoinnin kannalta tilakoot ovat kasvaneet liian suuriksi</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Kun eläin syö ja tuottaa hyvin, se myös voi hyvin</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Tuotantoeläimet voivat luoda ystävyys- ja kiintymyssuhteita</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Kaikilla tuotantoeläimillä pitäisi olla mahdollisuus päästä ulos kesäisin</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Eläinten hyvinvoinnin kannalta tilakoot ovat kasvaneet liian suuriksi</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Kaikilla tuotantoeläimillä pitäisi olla mahdollisuus lajinmu-kaiseen käyttäytymiseen</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Nykyisin eläimet tuottavat liian suuria määriä, mikä aiheuttaa niille sairauksia</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Tuotantoeläimillä ei tulisi typistää tai poistaa ruumiin osia (esim. sarvienpoisto, kastrointi) tuotannollisista syistä</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Eläintuottajat tuntevat hyvin eläinten hyvinvointitarpeet</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Eläinten terveyden pitäisi olla keskeinen arvo eläintuotannos-sa</strong></td>
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**Lajikohtaiset kysymykset:**

| Nautojen pitäisi päästä kesäisin laiduntamaan | 1 | 2 | 3 | 4 | 5 |
| Lehmien parsikasvatus (kytkettynä pitäminen navetassa) on hyvä kasvatustapa eläinten hyvinvoinnin kannalta | 1 | 2 | 3 | 4 | 5 |
| Vasikkaa ei saisi erottaa emostaan heti syntymänsä jälkeen | 1 | 2 | 3 | 4 | 5 |
| Vasikoilla tulisi olla riittävästi tilaa juosta ja leikkiä keskenään | 1 | 2 | 3 | 4 | 5 |
| Jos sikojen ja kanojen kasvatustilat on asianmukaisesti hoidet- tu, eläinten ei ole välttämätöntä päästä ulos kesäisin | 1 | 2 | 3 | 4 | 5 |
| Häkkikanalat tulisi lakkauttaa eläinten hyvinvointisyistä | 1 | 2 | 3 | 4 | 5 |
| Broilereilla (lihantuotantoon kasvatetuilla kananpoikasilla) on riittävästi tilaa käytössään | 1 | 2 | 3 | 4 | 5 |
| Sikoja (emakoita) ei pitäisi pitää häkeissä, jotka estävät käänn-tymisen | 1 | 2 | 3 | 4 | 5 |

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<tr>
<th>Väittäminen</th>
<th>Täysin samaa mieltä</th>
<th>Täysin eri mieltä</th>
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<tbody>
<tr>
<td>Suomalaisen ruoan laatua ja puhtautta liioitellaan</td>
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<td>Lainsääädäntö ja ohjeet takaavat Suomessa tuotantoeläinten hyvinvoinnin</td>
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<tr>
<td>Luotan suomalaiseen elintarvikeketjuun</td>
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<tr>
<td>Mielestäni on vaikeaa saada tietoa siitä, miten tuotantoeläimiä todellisuudessa kohdellaan</td>
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<td>Olen etsinyt tietoa tuotantoeläinten oloista (esimerkiksi kysymällä ruokakauppialta tai Internetistä)</td>
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<td>Yksittäinen kuluttaja ei pysty muuttamaan kaupan valikoimaa</td>
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<td>Minulla on omakohtaista tietoa siitä, että tuotantoeläimiä kohdellaan hyvin Suomessa</td>
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<td>Maataloustuotat ovat parhaita asiantuntijoita tuotantoeläinten olojen suhteen</td>
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<td>Tiedän, millä maatilalla omassa kaupassani myyttävä liha on tuotettu</td>
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<td>Tavallisen kansalaisen on vaikea tietää, mitä kaikkea hän voi tehdä parantaakseen tuotantoeläinten hyvinvointia</td>
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<td>Tuotantoeläinten hyvinvoinnista on julkisessa keskustelussa ratkaisuista tietoa</td>
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<td>Suomessa ei pidä liikaa puuttua maanviljelijöiden asioiden</td>
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<td>Tuotantoeläinten oloista ei tarvitse kantaa huolta, koska tiede ja teknikkaa ratkaisevat niihin liittyvät ongelmat</td>
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<td>Tuotantoeläinten käydössä olevaa tilaa pitäisi lisätä, vaikka se lisäisi lihantuotannon kielteisiä ympäristövaikutuksia</td>
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20. Missä määrin seuraavat tahot ovat vastuussa tuotantoeläinten hyvinvoinnista?

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<th>Taho</th>
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21. Kuinka luotettavina tietolähteinä pidätte seuraavia tahoja Suomessa, kun puhutaan tuotantoeläinten hyvinvoinnista?

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22. Seuraavassa on esitetty joukko väittämiä.
Vastatkaa ympyröimällä Teille sopivimman vaihtoehdon numero.

| Eläinten käyttö elintarvikehuonetanossa on sinänsä hyväksyttävää, kunhan eläimiä kohdellaan hyvin | 1 | 2 | 3 | 4 | 5 |
| Nuoria eläimiä (esim. vasikat, lihasiat, kananpoikaset) ei pidä lopettaa ruoantuotannon takia | 1 | 2 | 3 | 4 | 5 |
| Lysyylehmiä ja porsastotanossa olevia emakoita ei tulisi lopettaa pelkästään alhaisen tuottavuuden takia | 1 | 2 | 3 | 4 | 5 |
| Tuotantoeläinten elinikä on nykyisin riittävän pitkä | 1 | 2 | 3 | 4 | 5 |
| Lihatuotteita pitäisi kuluttaa alhaisia määriä, koska niiden tuottaminen edellyttää eläimen teurastusta | 1 | 2 | 3 | 4 | 5 |
| Eläintä tulee nähdä ensisijaisesti tuotantovälineenä | 1 | 2 | 3 | 4 | 5 |

23. Seuraavassa on esitetty joukko lihatuotteisiin ja lihantuotantoon liittyviä väittämiä.
Vastatkaa ympyröimällä Teille sopimimman vaihtoehdon numero. Lihalla tarkoitetaan tässä maatalouseläimistä peräisin olevaa lihaa, kuten sikaa, nautaa ja kanaa, sekä riistaa, mutta ei kalaa.

| Lempiruokani sisältävät lihaa jossain muodossa | 1 | 2 | 3 | 4 | 5 |
| Lihan syöminen on hyvin nautinnollista | 1 | 2 | 3 | 4 | 5 |
| Syön mieluiten minulle entuudestaan tuttuja ruokia | 1 | 2 | 3 | 4 | 5 |
| Ruokaostoksilla on mielekkääntä valitila aina halvin vaihtoehto | 1 | 2 | 3 | 4 | 5 |
| Liha on terveydellisesti välttämätöntä ravintoa ihmiselle | 1 | 2 | 3 | 4 | 5 |
| Ainakin yksi tuttavani tai perheenjäseneni on kasvissojä | 1 | 2 | 3 | 4 | 5 |
| Hyvä kasvisruokia on hankalampi valmistaa kuin liharuokia | 1 | 2 | 3 | 4 | 5 |
| Ruoantuotanto on merkittävä ympäristöongelmien aiheuttaja | 1 | 2 | 3 | 4 | 5 |
| Kasvisravinnon tuottaminen aiheuttaa huomattavasti suurempia ympäristöongelmaa kiu liharavinnon tuottaminen | 1 | 2 | 3 | 4 | 5 |
| Lihatuotteiden kuluttaminen voimistaa selvästi kasvisravintoa enemmän ilmastonmuutosta | 1 | 2 | 3 | 4 | 5 |
| Lihatuotteiden kuluttaminen aiheuttaa selvästi kasvisravintoa enemmän vesistöjen rehevöitymistä | 1 | 2 | 3 | 4 | 5 |
| Voin vaikuttaa ruoantuotannon ympäristövaikutuksiin kulutusvalikoilani | 1 | 2 | 3 | 4 | 5 |
| Voisin vähentää lihankulutustani ympäristöystäkaitse | 1 | 2 | 3 | 4 | 5 |
| Kotimaista lihaa suosimalla voidaan vähentää tuntuvasti lihanuotannon kielteisiä ympäristövaikutuksia | 1 | 2 | 3 | 4 | 5 |
| Luomuliha on hyvin ympäristöystävällistä | 1 | 2 | 3 | 4 | 5 |
| Tekniikan kehitys ratkaisee ruoantuotannon ympäristöongelmat | 1 | 2 | 3 | 4 | 5 |
24. Mihin seuraavista eläimistä sopivat seuraavat väittämät?
Ympyröikää Teidän käsitystänne kuvaava vaihtoehto (1 = olette samaa mieltä, 2 = olette eri mieltä) kaik- 
kien eläinten kohdalla. Jos ette osaa vastata kysymykseen, jättäkää kohta tyhjäksi.

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Kiitos vastauksistanne!


Palautelomake

Kiitos palautteestanne!
APPENDIX 3. DISCUSSION GUIDE IN FOCUS GROUPS

RYHMÄKESKUSTELUIDEN KESKUSTELURUNKO

ALOITUS

Tutkimushankkeen esittely ja mainintoja ryhmäkeskustelun kulusta ja perussäännöistä (ks. erillinen liite)

Esittäytymiskierros


KESKUSTELUTEEMAT

Tieto / informaatio / kokemus

- Millaisia kokemuksia teillä on tuotantoeläimistä?
- Mistä saatte tietoa maatalouseläintuotannosta ja tuotantoeläinten pidosta ja kohtelusta? (Tarvittaessa jatkokysymyksiä keskusteluun virittämiseksi: media, mainokset, tuotepakkaukset, erikoislehdet, järjestöt, maataloushallinto jne.)

Kulutuskäytännöt (ruuan kulutus, valmistaminen ja ostaminen)

- Mitä eläinperäisiä ruoaka-aineita käytätte ja miten hankitte niitä?
- Mihin kiinnitte huomiota ostaessanne eläinkunnan tuotteita? Mitkä seikat ovat tärkeitä valitessanne eläintuotteita?
- Millaisilla kulutustavoilla voitte mielestänne vaikuttaa tuotantoeläinten asemaan ja hyvinvointiin? (Maininnat voi olla: kasvissyönti, kasvispainotteisuus, riista, kala, luomu, lattiakananmunat, välttää hanhenmaksaa, valkoista vasikanlihaa, broileria jne.)
• Koetteko, että haluaisitte vielä muuttaa kulutustapojanne "eläinystävällisemmäksi"? Mitkä tekijät rajoittavat kulutusmuutoksia? (Tärvittaessa jatkokysymyksiä keskustelun virittämiseksi: esim. perhesyöttö, sosiaaliset syyt, hinta, laatu, saatavuus, tuotevalikoima, aika, tieto, mukavuus jne.)

Eläinten hyvinvointi
• Millä on mielestänne hyvä tuotantoeläinten pito ja kohtelu?
• Mitä tuotantoeläinten hyvinvointi mielestänne tarkoittaa? Minkälaisissa tilanteissa eläin voi hyvin, entä huonosti? Mitkä tekijät vaikuttavat eläinten hyvinvointiin?

Luottamus ja vastuu maatalouseläinten kohtelussa [vaihtuva teema – teemasta keskusteltiin supermarketkuluttajien ja marattojen ryhmissä]
• Miten näette eri tahojen roolin tuotantoeläinten hyvinvoinnin turvaamisessa? Mitkä toimijat ovat mielestänne vastuuominaisuuksia siitä, että eläimät kohdellaan hyvin eri tuotantomuodoissa? (Tärvittaessa jatkokysymyksiä keskustelun virittämiseksi: tuottajat, eläinsuojeluvalvontajärjestelmä, lainsäädäntö / valtio, kuluttajat, kauppa, teollisuus, kansalaisjärjestöt)
• Entä missä määrin luotatte eri elintarvikeketjun toimijoihin, kun puhutaan eläinten hyvinvoinnin turvaamisesta?

Eläinkäsitykset ja eläinten moraalinen asema

Eläinkäsitykset:
• Mitä ajattelette tuotantoeläinten kokemusmaailmasta – esimerkiksi millaisia tuntee ne voivat tuntea tai millaista ajattelukykyä niillä mielestänne voi olla?
• Miten näette niiden olevan samanlaisia tai erilaisia suhteessa esimerkiksi kaloihin, koiriin, hevosii ja ihmisiin?

Eläinten moraalinen asema:
• Mitä ajattelette eläinten käyttämisestä ruoantuotannosta – missä määrin se on mielestänne moraalisesti hyväksyttävää?
• Miten suhtauditte eläinten tuurastukseen tai lopettamiseen – onko eläinten elämällä mitään moraalistaa arvoa sinänsä?
• Millaisia oikeuksia eläimillä mielestänne on?
• Mitä ajattelette siitä, että ihmiset suhtautuvat eläimiin usein hyvin ristiriitaisesti ja eläimillä tuntuu olevan hyvinkin eriarvoinen asema (esim. lemmikkien asema perheenjäsenenä vs. nautojen käyttäminen ruoantuotannonnossa)?

Eläinkysymys yhteiskunnallisena ja poliittisena kysymyksenä; tulevaisuus [vaihtuva teema – teemasta keskusteltiin luomukuluttajien, gastronomien ja metsästäjien ryhmässä]
• Ovatko kuluttajat kiinnostuneita eläinten hyvinvointikysymyksistä ja pystyvätkö he vaikuttamaan ratkaisevasti eläinten aseman?
• Millaisia muutoksia suomalaisessa eläintuotannossa ja suomalaisilla maatiloilla tapahtuu parhaillaan, ja miten tämä tulee jatkumaan sanotaan vaikka seuraavan 30 vuoden kuluessa, siis vuoteen 2040 mennessä?
• Mitä mieltä olette nykyisestä kehityksestä kehityksestä? Minkälaisia vaikutuksia sillä on tai tulee olemaan tuotantoeläimiin?

LOPETUSKYSYMYKSET

Tehdään tähän loppuun vielä kierros, jossa jokainen teistä voisi kertoa, mitä haluaisi sanoa vielä keskustelun loppuun ja mitä asioita haluaisi painottaa. (Antaa osallistujille mahdollisuuden vielä ilmaista jokin seikka, jota on ehkä halunnut saada vielä sanottua.)

LIITE: TUTKIMUKSEN ESITTELY RYHMÄHAASTATTELUISSA

Aloitus ja esittely:
− Tervetuloa ja kiitos, että olette päässeet paikalle.
− Olemme kutsuneet teidät paikalle, koska olemme kiinnostuneita ihan tavallisten kuluttajien kokemuksista ja näkemyksistä tästä aiheista [supermarketkuluttajaryhmä]. / Olemme kutsuneet teidät paikalle, koska olette kaikki luomukuluttajia / gastronomian alan ihmisiä / mukana Martoissa / metsästäjät ja olemme kiinnostuneita juuri teidän kokemuksista ja näkemyksistä tästä aiheista [erityisyhdmät]
Käytännön asiat:
− Paikalla on kaksi tutkijaa, jotka vetävät vuorollaan keskusteluua. Paikalla on myös hankkeen harjoittelija, joka tekee muistiinpanoja.
− Keskustelu nauhoitetaan.
− Keskustelu on luottamuksellinen, nauhoja ei luovuteta kenellekään ulkopuoliselle jaaineistoä käytetään vain tutkimustarkoituksien. Aineisto tulee tämän tutkijaryhmän käyttöön ja kenekään osallistujan nimi ei tule ilmi missään tutkimusraporteissa.
− Keskusteluun on varattu aikaa noin puolitoista – kaksi tuntia, keskusteluun loputtaa hoidetaan matkakuluasiat sekä jaetaan elokuvaliput.
− Jos teillä on kysyttävää tutkimuksesta tai muusta, voidaan vastata näihin kysymyksiin sitten lopussa.

Ryhmän säännöistä ja keskustelun kulku:
− Keskustelujen kulku on seuraavanlainen:

Aloitamme menemällä tuotantotekijän alkupäähän ja keskustellaan teidän omista kokemuksista tuotantoeläimiin liittyen. Sen jälkeen keskustelemme kulutustavoista, eläinten hyvinvointikysymyksistä, luottamus- ja vastuukysymyksistä sekä eläinten asemasta ja eläinkäsityksistä. [supermarketkuluttajat ja martat]  

Aloitamme menemällä tuotantotekijän alkupäähän ja keskustellaan teidän omista kokemuksista tuotantoeläimiin liittyen. Sen jälkeen keskustelemme kulutustavoista, eläinten hyvinvointikysymyksistä, eläinten moraalisesta asemasta ja eläintuotannon tulevaisuudesta. [luomukuluttajat ja gastronomit]  

Aluksi keskustelemme kulutustavoista, sitten omista kokemuksista tuotantoeläimiin liittyen, ja näiden jälkeen eläinten hyvinvointikysymyksistä, eläinten moraalisesta asemasta sekä eläintuotannon tulevaisuudesta. [metsästäjät]
ARTICLES

ARTICLE I

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AUTHOR’S CONTRIBUTION

Articles I and II were co-authored with Markus Vinnari, Pekka Jokinen and Pekka Räsänen. Both articles were based on a survey that was carried out in a research project where the first three authors were responsible for planning and administering the survey and the fourth was responsible for providing expert advice on survey methodology. As the first-author of article I, I was responsible for planning the article both conceptually and empirically. My task was to search for and assess the previous research on the topic, write the literature review and define the objectives and framing of the article. Most of the dependent variables of the article are based on the questions I was responsible for designing in the survey, with feedback from Jokinen and Vinnari and advice from Räsänen. My tasks included developing the dependent variables, selecting independent variables for analysis and carrying out statistical analyses, receiving advice from Räsänen. I wrote all the sections of the article, with feedback from the co-authors. Räsänen
contributed to writing the materials and methods section and made valuable suggestions for other parts of the article. In addition to being involved in designing and conducting the survey, Vinnari and Jokinen contributed to the writing process by making valuable suggestions to the different versions of the manuscript, commenting on the argument, content and analytical approach. Jokinen also supervised the research and writing process.

In article II, Vinnari was initially responsible for developing the article, which was based on the question about the animal mind, as the first author. I participated in producing this first manuscript as the second author, writing various parts of the manuscript. The order of authors was later changed and I became responsible for developing the article both conceptually and empirically as the first author. In this version of the article, I searched for and assessed previous research and theoretical discussion on the topic and wrote the literature review and the theory part, as well as defined the research objectives. I participated in developing the survey questions on animal mind, suggesting various mental capacities that were included in the survey as well as making proposals on how to formulate the questions on animal mind. My tasks included developing the scales for belief in animal mind, selecting independent variables for analysis and carrying out statistical analyses, which I did with advice from Räsänen. I was responsible for writing all the sections of the article, with feedback and input from the co-authors. Räsänen made written contributions to several sections, particularly the methods section. Vinnari and Jokinen contributed to the writing process by making valuable comments about the argument, content and analytical approach of the different versions of the manuscript. Jokinen also supervised the research and writing process.
ARTICLE I


This is the author’s accepted manuscript published by Springer.
CITIZEN ATTITUDES TO FARM ANIMALS IN FINLAND: A POPULATION-BASED STUDY

Saara Kupsala, Markus Vinnari, Pekka Jokinen & Pekka Räsänen

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ABSTRACT

Citizen attitudes and opinions form an important driving force for improvements in the ethical status of farm animals in society. Hence, it is important to understand how attitudes to farm animals vary in society and what factors, mechanisms and social processes influence the development of these attitudes. In this study we examine the relative importance of socio-demographic background, animal related experiences and social-equality attitudes in the formation of attitudes to farm animals in Finland. The research is based on a nationwide survey (n = 1,890). Our research findings suggest that female gender, young age, urban residency, a non-farming background and social-equality attitudes are linked to greater concern for farm animals. A farming background, valuing social equality, and gender have the strongest connections to farm animal attitudes, followed by age and place of residence. Having a companion animal and education level have a relatively modest connection to attitudes to farm animals. In order to accumulate comparative evidence of social-group differences in attitudes to farm animals, further research should continue to develop improved indicators for attitudes to farm animal welfare and rights. Moreover, explanations for social-group differences in citizen attitudes to farm animals should be subjected to further empirical testing.

Keywords: attitudes; animal rights; animal welfare; citizens; farm animals; survey.
1 INTRODUCTION

Citizen attitudes to farm animal welfare and rights affect the ways in which farm animals are treated in society (cf. Serpell 2004). Evidently, the relationship between attitudes and behaviors is complex, and citizens’ attitudes do not directly translate into their consumption behavior, voting behavior or civic activity. For instance, although people may feel concerned for farm animals, the availability of products that meet their ethical standards may be limited (Lusk 2011). However, the attitudes and beliefs of the general public do influence the level of political pressure to improve the situation of farm animals and the level of potential consumer demand for ethical food products (Deemer and Lobao 2011; Serpell 2004; Lusk 2011). In order to promote improvements in the moral, political and legal status of farm animals, it is important to understand how attitudes to farm animals vary in society and which factors, mechanisms and social processes influence the development of these attitudes (Vanhonacker and Verbeke 2014).

In recent years, survey-based research on citizen attitudes to farm animals has increased. Although many of these studies have been descriptive, exploring attitudes to farm animal welfare and rights in the population at large, a growing number of studies have started examining social differences in citizens’ perceptions of animal farming and the factors behind these differences (Boogaard et al. 2006; Deemer and Lobao 2011; Kendall et al. 2006; Musto et al. 2014; Prickett et al. 2010; Vanhonacker et al. 2007; Vanhonacker et al. 2009). Since studying citizen views on animal farming is a new research field, there are no standardized and tested measures for assessing attitudes to farm animals, and a wide range of attitudinal measures have been employed in different studies (Deemer and Lobao 2011). Consequently, research findings concerning social-group differences in citizen views on farm animals are not directly comparable across different studies. Moreover, previous studies have tended to examine the direction of the relationship between attitudes to farm animals and various background variables, giving less attention to the strength of these relationships. Yet in order to assess the importance of different factors in the formation of attitudes to farm animals, it is essential to examine how strongly these factors are linked to attitudes towards animals. Likewise, the geographical coverage of studies on citizen views on farm animal welfare has mostly been limited to North America (Deemer and Lobao 2011; Kendall et al. 2006; Prickett et al. 2010) and Western and Southern Europe (Boogaard et al. 2006; Cohen et al. 2012; Frewer et al. 2005; Leenstra et al. 2011; Vanhonacker et al. 2009; Vanhonacker et al. 2007; Gracia 2013; María 2006; Musto et al. 2014; Vecchio and Annunziata 2012). International comparison of citizen attitudes to farm animals requires these attitudes to be investigated in other national settings too.
In this article we investigate citizen attitudes to farm animals in Finland. We analyze the direction and the strength of the relationship between attitudes to farm animals and socio-demographic variables, animal-related experiences and societal attitudes. Based on this analysis, we discuss the relative importance of factors that affect attitudes to farm animals. By documenting the direction and the strength of the relationship between attitudes to farm animals and various background variables, our study facilitates the development of explanatory models for the social formation of attitudes to farm animals. Furthermore, our study contributes to the accumulation of global comparative evidence of citizen views on farm animals by extending the geographical coverage of the research on attitudes to animals to Northern Europe.

2 INDICATORS OF ATTITUDES TO FARM ANIMALS

Farm animal welfare and rights are complex phenomena, and consequently, it is challenging to develop indicators that measure citizen attitudes to them. Animal welfare, as a concept describing the quality of life of an animal, is a wide and multidimensional notion which consists of various factors, such as negative and positive emotions, physical health and natural behavior of animals (e.g. Broom and Fraser 2007; Fraser 2008; Keeling et al. 2011). For instance, housing conditions, outdoor access, feeding, breeding, and human–animal interactions at farms affect different aspects of animal welfare in complex ways (Appleby et al. 2011). Research can focus on attitudes to particular farming practices, particular animal species or specific dimensions of animal welfare, and develop indicators for these attitudes (e.g. Vanhonacker et al. 2009). However, most studies have explored attitudes to farm animal welfare as a broader concept. The usual practice has been to include a measurement for general concern regarding farm animal welfare or for the assessment of the current state of farm animal welfare (Heleski et al. 2006; María 2006; Vanhonacker et al. 2007). Likewise, summated attitudinal scales for animal treatment or animal agriculture concerns have been developed from questions that gauge general attitudes to respecting animal welfare, the regulating of animal welfare, and the importance of animal welfare as an ethical issue (Deemer and Lobao 2011; Kendall et al. 2006). Since citizens are not familiar with many specific animal farming practices, they may not have developed any coherent attitudes to these practices, and hence, the proportion of non-responses can increase (Deemer and Lobao 2011). Therefore, studying attitudes to specific farming practices or to particular dimensions of farm animal welfare requires the citizens’ knowledge level to be taken into account.
Ethical questions surrounding animal farming do just not include questions related to animal welfare, but also questions related to animal rights (McCausland 2014; Pluhar 2010). Animal welfare ethics focuses on the quality of life of animals used by humans, but does not question the use and killing of animals for human benefit (Garner 2013). Animal rights perspectives question the exploitation and subordination of animals as well as the confinement and killing of animals for human benefit (Francione 2008; Donaldson and Kymlicka 2011; Regan 1983). Hence, citizen views on farm animal rights cover attitudes to animal killing, the value of animal life, animal captivity and freedom, the property status of animals, the inherent worth of animals, and the personhood of animals. Although research on attitudes to animals in general has covered issues of animal rights (Phillips et al. 2010; Phillips et al. 2012), research on attitudes to farm animals has tended to focus mostly on animal welfare. In this study we investigate citizen attitudes to farm animal welfare as a general concept. In addition to attitudes to animal welfare, we also explore citizen views on the value of animal life.

3 SOCIAL FORMATION OF ATTITUDES TO FARM ANIMALS

Previous studies have evaluated the link between attitudes to farm animals and socio-demographic variables, personal animal-related experiences and political attitudes or values (Deemer and Lobao 2011; Kendall et al. 2006; María 2006; Musto et al. 2014; Prickett et al. 2010; Vanhonacker et al. 2007; Vanhonacker et al. 2009). Socio-demographic variables that potentially are associated with views on farm animals include gender, place of residence, age, level of education, and socioeconomic status. Regarding gender, previous research suggests that women are more concerned about farm animal welfare than men (Deemer and Lobao 2011; Kendall et al. 2006; María 2006; Musto et al. 2014; Prickett et al. 2010; Vanhonacker et al. 2007; Vanhonacker et al. 2009). However, these studies have not typically discussed how strong the link between gender and concern for farm animal welfare is. A review of 18 survey studies on animal use suggests a moderate gender difference in attitudes to animal use, with most effect sizes in the medium range (mean Cohen’s d = 0.49) (Herzog 2007). The review suggests that the magnitude of the gender difference varies depending on the type of human–animal interaction being investigated (Herzog 2007). For instance, while in animal activism or recreational hunting gender differences are large, in attitudes to animal use gender differences appear to be moderate (Herzog 2007). However, since the review included studies of attitudes to various uses of animals, and not solely attitudes to animal farming, and since the majority of studies were based on student samples,
this finding is only indicative as regards citizens’ perceptions of farm animal issues.

Regarding other socio-demographic variables, studies indicate that urban residents are more concerned for farm animal welfare than those living in rural areas (Deemer and Lobao 2011; Boogaard et al. 2006; Kendall et al. 2006; Musto et al. 2014; Vanhonacker et al. 2010) and that younger people are more concerned with farm animal welfare than older people (Deemer and Lobao 2011; Kendall et al. 2006; Maria 2006; Vanhonacker et al. 2007). However, the strength of the link between these variables and attitudes to farm animals has not been discussed.

The findings of studies on the association between educational level and attitudes to farm animals have been inconsistent. Some studies suggest that those with a lower level of education are more concerned about farm animal welfare than those with a higher level of education (Kendall et al. 2006; Prickett et al. 2010), while other studies suggest the reverse (Vecchio and Annunziata 2012; Musto et al. 2014) or fail to find any association between these variables (Deemer and Lobao 2011; Vanhonacker et al. 2007). The school system has a central role in shaping attitudes, behavior and worldviews, but both empirical and theoretical exploration of the link between education and views on farm animals has thus far been limited.

Alongside socio-demographic background, personal experiences with animals shape attitudes to farm animals. In particular, previous studies suggest that having a companion animal promotes positive attitudes toward animals in general and greater concern for farm animal welfare (Boogaard et al. 2006; Daly and Morton 2009; Kendall et al. 2006; Paul 2000). An attachment to one’s animal companion creates feelings of affinity that can extend to other nonhuman animals (Paul and Serpell 1993). Moreover, living with a companion animal can encourage people to develop a more nuanced understanding of the emotions and mental capacities of animals (Morris et al. 2012; Walker et al. 2014). Research also suggests that a farming background, in terms of living or having grown up on a farm, is associated with a weakened concern for farm animal welfare (Kendall et al. 2006; Vanhonacker et al. 2007).

Alongside socio-demographic background and personal animal-related experiences, societal and political attitudes are also associated with attitudes to farm animals (Deemer and Lobao 2011). Studies suggest a positive link between human-directed empathy and animal-directed empathy, human-egalitarian views and species-egalitarian views, and human welfare concerns and animal welfare concerns (Deemer and Lobao 2011; Paul 2000). In particular, Deemer and Lobao (2011) found evidence that people who express greater tolerance for social out-groups and support economic equality are more concerned about farm animal welfare. Moreover, their study suggests that concern for farm animal welfare coincides with greater concern for human welfare, as indicated by the valuing of humane labor conditions and fair trade. Psychological studies indicate that prejudicial attitudes toward human out-groups are connected to negative attitudes
toward nonhuman animals (Dhont et al. 2014). Hence, it seems that people who value egalitarian relations among humans tend also to value more egalitarian relations between humans and nonhuman animals, suggesting that other-oriented concerns are not restricted by species-boundaries.

4 MATERIALS AND METHODS

4.1 SURVEY DATA COLLECTION

This research uses data from a nationwide mail survey of Finnish people, which was administered April–July 2010. The purpose of the survey was to investigate citizen attitudes to farm animal welfare, meat eating and the moral value of animals. The address data (n = 4,000) was obtained as a random sample from the Population Register Centre of Finland, which maintains a national register of all Finnish citizens and foreign citizens residing permanently in Finland. The sampling frame was 18–75-year-old individuals, living in mainland Finland, and with Finnish as their first language. A raffle of a 200-euro gift voucher to a department store provided a small incentive for people to respond. A reminder letter including the questionnaire form was sent twice to people who had not responded. We received 1,890 adequately completed forms, and the final response rate was 47.4 per cent. In Finland nowadays a response rate of around 50 per cent or under is common (Räsänen and Sarpila 2013). The authors formulated the questions with advice from experts in animal welfare science, animal ethics and agro-environmental studies. The final questionnaire form was 11 pages long with a feedback form, and included 24 questions.

4.2 DEPENDENT MEASURES

Farm animal welfare evaluation. As we already noted, in previous studies it has been typical to include a measurement for general concern regarding farm animal welfare or for the assessment of the current state of farm animal welfare. In this study, we include a measurement for the evaluation of the current state of farm

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1 Ethnicity was not measured in our questionnaire. Finland’s population (2010) is relatively homogenous as it consists mostly (90.4 per cent) of people with Finnish as their first language, followed by Swedish-speaking people (5.4 per cent) and people from other language groups (4.2 per cent) (Statistics Finland 2014a). Likewise, only 4.8 per cent of Finland’s population are of foreign origin (Statistics Finland 2012).

2 We removed 15 persons from the original sample as they were unreachable due to moving, death and other force majeure reasons. Hence, the number of people sampled is 3,985, and this number is used in the calculation of the response rate.
animal welfare in Finland. The welfare evaluation scale is a scaled variable based on eight items. Respondents were asked to evaluate the current state of animal welfare in eight animal production lines in Finland (including laying hens, broiler chickens, turkeys, pigs, farmed fish, beef cattle, dairy cows and sheep). Items were measured on a five-point scale ranging from “very good” (1) to “very poor” (5). A reliability test for these items yields a Cronbach’s α of .923. The variable is reversed (1 = very poor, 5 = very good), so that higher scores on the scale indicate a more positive evaluation of farm animal welfare.

Three remaining attitudinal measures (trust in prevalent animal production, behavioral freedom and valuing animal life) were created using 5-point items, ranging from “fully agrees” to “fully disagrees”. To confirm that items load on a single component for each attitudinal measure, principal component analysis with varimax rotation was used. Items were re-coded as needed so that higher scores on the scale indicate a higher valuation of the behavioral freedom and life of animals and a higher trust in prevalent animal production, respectively. As the variables are scaled, their possible scores range from one to five.

Trust in prevalent animal production. This scale covers attitudes to prevalent animal production and the level of trust in knowledge of animal producers, technological development and customary farming practices in terms of animal welfare. The items include the following six items: “Animal producers are well informed of the welfare needs of animals”, “Animals can be looked after well on large farms because of technological developments”, “When an animal eats and produces well, it also fares well”, “Nowadays farm animals have sufficient space to move around”, “Nowadays the longevity of animals is sufficient at farms”, and “When the housing conditions of pigs and poultry are adequate, it is not necessary to provide them with outdoor access”. A reliability test for these items indicates high reliability (Cronbach’s α = .789). Higher scores on the scale indicate a higher trust in prevalent animal production to provide adequate animal welfare.

Behavioral freedom scale. This variable includes five items measuring views on behavioral restriction and species-specific behavior of animals. The items include the following statements: “All farm animals should be given the opportunity to carry out species-specific behavior”, “Farm animals can become depressed in inadequately enriched living conditions”, “Calves should have enough space to run and play with each other”, “Calves should not be separated from their mothers right after their birth” and “Keeping laying hens in cages should be banned for animal welfare reasons”. A reliability test for these items is high (a Cronbach’s α = .758). Higher scores on the behavioral freedom scale indicate a higher valuation of the behavioral freedom of animals.

Valuing animal life scale. This scale measures attitudes toward the longevity of animals as well as toward killing animals for production optimization reasons. The scale also includes an item concerning the minimization of animal slaughtering through modest consumption of meat. The scale is based on three statements:
“Young animals (e.g. calves, fattening pigs and pullets) should not be killed for food production reasons”, “Dairy cows and sows should not be killed solely for reasons of low productivity”, and “Meat products should be consumed in low quantities because their production requires animals to be slaughtered”. Again, the reliability test for these items is relatively high (Cronbach’s $\alpha = .719$). Higher scores on the scale indicate a higher valuation of the life and longevity of agricultural animals.

4.3 INDEPENDENT MEASURES

Socio-demographic variables. We analyzed correlations between independent variables and various socio-demographic variables in order to identify those variables that are connected to attitudes to farm animals. Gender, age, education, and place of residence had a modest correlation with the dependent variables. Being employed, living with a partner or having children had very low (less than 0.1) or no correlation with the dependent variables, so they were not included in the further analysis.

Apart from age, all socio-demographic variables are categorical and included in the regression analysis as dummy variables, coded 1/0. Gender was coded as 0 = male (a reference group) and 1 = female. Age was measured in years. The place of residence was based on the municipalities of the respondents that were included in the Population Register Centre data. We categorized municipalities according to the number of residents, which we gathered from the statistics of the Population Register Centre (2010). The place of residence includes four categories: rural municipality (fewer than 10,000 inhabitants) (a reference group), a small town or municipality (10,000–49,999 inhabitants), a medium-sized town (50,000–190,000 inhabitants) and a large town or city (over 190,000 inhabitants). Education is divided into three categories measuring the highest educational level attained by the respondent: basic education (compulsory basic education, such as comprehensive school or lower), intermediate education (vocational school or upper secondary school) and tertiary education (including college, polytechnic, university and doctorate level education).

Animal-related experiences. We examined two animal-related experiences. Firstly, respondents were asked whether they have any companion animals in the household. Affirmative responses were coded as 1, negative responses as 0. Secondly, respondents were asked about their personal contact with animal farming with four options (lives / has lived on a farm with agricultural animals, has visited a relative’s farm with agricultural animals, has otherwise visited a farm with agricultural animals, has never visited a farm with agricultural animals). Those who responded that they grew up or are currently living on a farm that has agricultural animals were coded as 1 and all others as 0.
Human-equality attitudes. The social equality scale is based on three items. Respondents were asked how much they value gender equality, social justice and the rights of sexual minorities. The possible scores for these items range from 1 (respondent values very much) to 5 (does not value at all). A reliability test for these items yields a Cronbach’s α of .642. In the analysis, the scale is reversed and the higher scores on the scale indicate a higher valuation of social equality.

4.4 ANALYSIS TECHNIQUES

Multiple Ordinary Least Squares (OLS) regression was used to analyze the association between variables. The method was selected as the dependent variables are interval variables and as the independent variables include both interval variables and ordinal or nominal variables that can be transformed into dummy variables (Tabachnick and Fidell 2007). The method allows the analysis of the strength of association between the dependent and independent variables when the effect of other variables is controlled (Tabachnick and Fidell 2007). All the regression models met the assumptions of the regression analysis regarding the multicollinearity and singularity of independent variables as well as the normality, linearity and homoscedasticity of residuals (Tabachnick and Fidell 2007). There was no singularity between independent variables because none of them were a combination of two or more of other variables. Likewise, the independent variables did not correlate strongly with each other. The maximum correlation between the independent variables was .364, and in the collinearity statistics the minimum tolerance level was .530. In all models the residual distributions were normal, linear and homoscedastic. We also examined outliers and found that they were not based on any systematic errors with data collection. Hence, outliers were not removed from the analysis.

The linear connection between the dependent and independent variables was tested using F- and t-tests. We report coefficients of the regression equations in both standardized (Beta) and non-standardized (β) form. In addition to this, we report adjusted R² coefficients for each model, which describe the total variances accounted for the independent variables. The changes in R² describe how much the explanatory shares of the models change when the given independent variable is added to the model containing all the other independent variables. These coefficients enable us to compare the relative strengths of the independent variables with each other.
5 RESULTS

5.1 DESCRIPTIVE ANALYSIS

Table 1 shows descriptive statistics for all variables. Women comprise 56 per cent of respondents, and the mean age is 50. Around a third of respondents have tertiary education, and around a fifth live in large towns or cities. About 40 per cent have a companion animal in the household, and around a third currently live or grew up on a farm with agricultural animals.

The survey sample was evaluated against the population statistics of Statistics Finland and the Population Register Centre in terms of main socio-demographic variables. Table 2 shows that there are six per cent more women in the survey data than in the population data. The youngest age group is underrepresented by 7.8 per cent, the difference is small in the mid-age group, and the oldest age group is overrepresented by 9.2 per cent. A more detailed examination shows that women are over-represented in younger age groups, whereas there is no noticeable gender difference in the oldest age group (56–75 years-old) (data not shown in the table). People with basic education and tertiary education are somewhat overrepresented in the data (3 and 1.4 per cent), while people with intermediate education are somewhat underrepresented (4.4 per cent). The regional distribution of the survey data is approximately even, with only residents from Southern Finland slightly (2.5 per cent) underrepresented. The survey data is also distributed well in terms of place of residence. All in all, the survey data is slightly skewed as regards age and gender, with women over-represented and younger people, particularly younger men, under-represented in the sample. There are also small differences in terms of educational level.

5.2 REGRESSION ANALYSIS

Tables 3 and 4 present regression coefficients, adjusted $R^2$ and changes in $R^2$ based on multiple OLS-regression. Regression coefficients describe the relationship between the dependent and independent variables when the effect of other variables has been controlled in the regression solution.

Farm animal welfare evaluation. Table 3 presents the OLS-regression models for the farm animal welfare evaluation. As noted, this variable measures how people evaluate the current state of animal welfare in eight animal production lines in Finland. Higher scores on the scale indicate a more positive evaluation of farm animal welfare. After statistical adjustments, women and people living in urban areas evaluate the current state of farm animal welfare more negatively than men and people living in rural municipalities. Older people and people with a farming
background tend to assess the current farm animal welfare situation more positively than younger people and people who are not from farms. Valuing social equality is negatively associated with farm animal welfare evaluation. Having a companion animal has only a minor connection to farm animal welfare evaluation, while education level is not connected to this attitudinal variable. Regression coefficients tend to be relatively low, indicating a modest association between farm animal welfare evaluation and the independent variables. The variables explain 9.6 percent of the variance in farm animal welfare evaluation. Changes in R² indicate that a farming background, age and place of residence explain the most of the variance in the variable.

*Trust in prevalent animal production.* As table 3 shows, older people and people with farming backgrounds express more trust in prevailing animal production, while women, urban residents and people with companion animals express less trust in animal welfare in prevalent farming. Valuing social equality is negatively associated with the scale, while education level is not connected with the scale. These variables account for 11.7 per cent of the variation in trust in prevalent animal production. A farming background, age, place of residence and valuing social equality explain the most of the variance in the variable.

*Behavioral freedom.* Table 4 shows regressions for behavioral freedom. Higher scores on the scale indicate a higher valuation of the behavioral freedom of farm animals. Women and people with companion animals place greater value on the behavioral freedom of farmed animals, while those with farming backgrounds and with tertiary education place less value on it. Valuation of social equality is positively linked to the behavioral freedom scale. Age has a weak connection with the scale, while place of residence is not connected to it. The model explains 14.7 per cent of variance in the behavioral freedom scale. Social equality, gender, a farming background and having a companion animal explain the most of the total variance in the variable.

*Valuing animal life.* Table 4 gives results for valuation of animal life. Higher scores on the scale indicate higher valuation of the life of agricultural animals. Women and people with companion animals place greater importance on the life of animals, while people with intermediate and tertiary education and with a farming background place less value on it. The valuation of social equality is positively connected with the valuation of animal life. Age has only a weak connection with the variable. The independent variables explain 9.3 per cent of the variation in the valuation of animal life. Changes in R² indicate that education level, social equality, gender and a farming background explain the most of the variance in the variable.
6 DISCUSSION

This research suggests that a farming background, valuing social equality and gender have the most coherent connection to attitudes to farm animals. These variables are connected with all the attitudinal variables examined in this study. Regression coefficients indicate a relatively strong association even when the effect of other variables has been controlled. Women, those who value social equality and those without farming backgrounds evaluate farm animal welfare more negatively, express less trust in prevailing animal production, and place more value on the behavioral freedom and life of animals.

Previous research suggests a moderate gender difference in attitudes to animal use (Herzog 2007). Our research identified a similar level of gender difference with most of the independent variables; on average women are somewhat more concerned about farm animals than men. Various reasons have been put forward for gender differences in attitudes to animals (e.g. Donovan and Adams 2007). For instance, women tend to be main family caretakers and they predominate in the care work sector (Donovan and Adams 2007; Kendall et al. 2006). The socialization of women into caring roles can generate nurturing attitudes that also extend to nonhuman animals (Kendall et al. 2006). Likewise, meat consumption is associated with masculinity, which may encourage men to perceive the utilization of animals in meat production more positively than women do (Rogers 2008; Rothgerber 2013). In order to test these hypotheses, further studies should include family-care activities, involvement in care work, nurturing attitudes and masculine values as intervening variables in their explanatory models.

Our research confirms that a farming background is associated with less concern for farm animal welfare (Boogaard et al. 2006; Kendall et al. 2006). In farm settings, animals are utilized as economic resources, and this appears to reflect in the more instrumental attitudes to farm animals (Kendall et al. 2006). Research suggests that farmers express less empathy for animals in general, compared to non-farmers (Hills 1995). Childhood farm experiences seem to have a lasting effect on attitudes to agricultural animals in adulthood too (Kendall et al. 2006).

Research indicates that attitudes to animals are connected to human-welfare, human-equality and out-group-tolerance attitudes (Deemer and Lobao 2011; Dhont et al. 2014; Paul 2000). This research gives evidence for this link as those who value social equality (in terms of gender equality, the rights of sexual minorities and general social justice) express greater concern for agricultural animals across all variables included in this study.

Regarding age, younger people evaluate the current state of farm animal welfare more negatively and express less trust in prevalent animal production than older people. However, age has a weak connection to the valuing of behavioral freedom and lives of animals. This indicates that age does not have a robust connection with
different attitudinal dimensions regarding farm animals. Research often reports greater concern for farm animals among younger people, yet reasons for these differences have not been examined empirically. Age differences in animal attitudes may be related to generation-based experiences (as regards age-cohort differences, for instance, in life conditions and socio-political situations) or lifecycle-based experiences (as regards studying, career development, parenthood, retirement and aging) (cf. Kendall et al. 2006). Our research suggests that older people tend to hold more trust in current animal farming than younger people do. However, older people do not appear to differ noticeably from younger people in the way they value the behavioral needs and lives of farm animals. In Finland, the structural change toward large intensive farms is a relatively recent phenomenon, and public debate about the status of farm animals has become animated only recently (Kaarlenkaski 2012; Kaljonen and Lonkila 2013; Lappalainen 2012; Lundbom 2009). The late politicization of farm animal issues may have influenced the views of younger people more, and consequently, younger people may be more aware of the animal welfare problems in industrial farming. Further studies could explore whether there are any age-based differences in knowledge or awareness of animal farming practices and farm animal welfare, and whether differences in knowledge have any effect on concern for farm animals in different age-groups.

As regards place of residence, people living in towns and cities evaluate farm animal welfare more negatively and express less trust in prevalent animal production than people living in rural municipalities. Yet place of residence is not connected to the valuing of behavioral freedom, and its connection to the valuation of animal life is weak. Research suggests that greater concern for farm animal welfare can be found in cities (Deemer and Lobao 2011; Boogaard et al. 2006; Kendall et al. 2006; Vanhonacker et al. 2010). While urban experience is characterized by a noticeable segregation from animal farming and slaughter, people from rural areas live in communities that are economically more reliant on animal farming (Franklin 1999; Kendall et al. 2006; Thomas 1983). Economic and social distance from animal utilization can encourage stronger moral problematization of current farming methods in urban settings (Franklin 1999; Kendall et al. 2006; Thomas 1983).

Having a companion animal has a relatively minor connection to attitudes to farm animals. This variable is mostly connected to the valuation of behavioral freedom, with companion animal keepers placing more value in it. Previous research suggests that companion animals have an important role in developing empathic attitudes toward animals (Daly and Morton 2009; Paul 2000). Our research measured only the presence of the companion animal in the household, and we did not examine other aspects of companion animal keeping, such as the species of the companion animal and the level of attachment, which can have a stronger influence on attitudes to farm animals than the mere presence of the companion animal (cf. Daly and Morton 2009). Further studies would benefit from
more nuanced measures regarding keeping of a companion animal, including indicators for the species of the companion animal, the quality of interaction with the companion animal, and the level of attachment to the companion animal.

Compared to other independent variables, education level has the weakest connection to the attitudinal variables. Education level is mostly connected to the valuing of animal life; people with higher levels of education place less value on it. As we noted before, previous studies have not identified any consistent link between education level and attitudes to farm animals. Our study gives some indication that people with higher levels of education are less concerned for farm animals, but a wider range of variables should be used in order to explore the issue in more detail.

7 CONCLUSION

Overall, our research findings indicate that female gender, young age, urban residency, a non-farming background and social equality attitudes are linked to greater concern for farm animals. A farming background, valuing social equality, and gender have the strongest connections to farm animal attitudes, followed by age and place of residence. Our study also suggests that having a companion animal tends to have a relatively modest connection to attitudes to farm animals, with companion animal keepers expressing more concern for farm animals. Education level has the weakest connection to the attitudinal variables, with some indication that people with higher levels of education are less concerned for farm animals.

The background variables explained nine to fifteen per cent of the variation in the attitudes to farm animals. The formation of animal attitudes is a highly complex process, and the variables examined in this study covered only a portion of the numerous forces that affect these attitudes. A more thorough understanding of the link between attitudes to farm animals and companion animal keeping requires more nuanced measures for this factor. Moreover, in order to fully explore how socioeconomic status or social class background is connected to concern for farm animals, the study design should include measures for income, wealth, employment activity, occupation, economic hardship and social class identification. Likewise, a more systematic investigation of the link between attitudes to human-equality and attitudes to animals would require using more comprehensive measurements for social equality attitudes.

More research is needed in order to establish why some people come to care for farm animals while others remain relatively unconcerned for them. Alongside socio-demographic background, animal-related experiences and social equality attitudes, which we investigated in this study, political and religious affiliations
also appear to play an important role in the formation of attitudes to farm animals (Deemer and Lobao 2011). A more comprehensive analysis of the relative importance of different factors in the formation of attitudes towards animals would require the inclusion of these factors in the study design.

Further research should continue to develop improved indicators for attitudes to farm animal welfare and rights. The use of well-tested and standardized indicators would improve the comparability of findings across different studies. Moreover, ethical discussion about farm animals is not limited to animal welfare alone – on the contrary, the ethical acceptability of exploiting animals for human use is constantly becoming ever more important as a moral concern (Francione 2008). Hence, there is a need to develop attitudinal measures for farm animal rights, alongside farm animal welfare. In this research we developed a measure for the valuation of animal life, but a more comprehensive analysis of attitudes to farm animal rights would benefit from a wider range of measures.

A sound understanding of social-group differences in attitudes to farm animals helps with identifying the base of supporters of initiatives that promote improvements in the status of farm animals (Deemer and Lobao 2011). As farm animal concern is linked to human equality values, those who already value societal equality are more likely to be mobilized to support farm animal causes compared to those who hold less egalitarian views (Deemer and Lobao 2011). Societal trends, such as improved opportunities for women, urbanization and reduced personal reliance on farming industry are also likely to increase the base of supporters of farm animal welfare and rights (cf. Deemer and Lobao 2011). However, further empirical testing is required to enhance understanding of the specific processes that promote greater concern for farm animals in different social groups. Improved understanding of these processes will help developing more effective policy measures for advancing farm animal welfare and rights in society.
### Table 1. Descriptive statistics for all variables.

<table>
<thead>
<tr>
<th>% or M</th>
<th>N</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farm animal welfare evaluation</td>
<td>3.37</td>
<td>0.78</td>
</tr>
<tr>
<td>Trust in prevalent animal production</td>
<td>3.14</td>
<td>0.78</td>
</tr>
<tr>
<td>Behavioral freedom</td>
<td>4.19</td>
<td>0.67</td>
</tr>
<tr>
<td>Valuing animal life</td>
<td>3.02</td>
<td>1.03</td>
</tr>
<tr>
<td><strong>Socio-demographic variables</strong></td>
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<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>56.0</td>
<td>1,058</td>
</tr>
<tr>
<td>Male</td>
<td>44.0</td>
<td>831</td>
</tr>
<tr>
<td>Years of age</td>
<td>49.9</td>
<td>15.59</td>
</tr>
<tr>
<td>Place of residence</td>
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<td></td>
</tr>
<tr>
<td>Rural municipality</td>
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<td>397</td>
</tr>
<tr>
<td>Small town/municipality</td>
<td>32.3</td>
<td>610</td>
</tr>
<tr>
<td>Medium-sized town</td>
<td>26.5</td>
<td>500</td>
</tr>
<tr>
<td>Large town/city</td>
<td>20.3</td>
<td>383</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic</td>
<td>24.7</td>
<td>462</td>
</tr>
<tr>
<td>Intermediate</td>
<td>41.1</td>
<td>769</td>
</tr>
<tr>
<td>Tertiary</td>
<td>34.3</td>
<td>642</td>
</tr>
<tr>
<td><strong>Animal-experiential variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Companion animal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>With companion animal</td>
<td>39.3</td>
<td>719</td>
</tr>
<tr>
<td>Other</td>
<td>60.7</td>
<td>1,111</td>
</tr>
<tr>
<td>Farming background</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Currently lives or has lived in a farm</td>
<td>34.2</td>
<td>642</td>
</tr>
<tr>
<td>Other</td>
<td>65.8</td>
<td>1,236</td>
</tr>
<tr>
<td><strong>Attitude variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social equality</td>
<td>4.01</td>
<td>0.72</td>
</tr>
</tbody>
</table>
Table 2. Survey participant demographics in comparison with national population statistics (2010).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Survey (%)</th>
<th>Survey (n)</th>
<th>Population (%)</th>
<th>Population (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>56.0</td>
<td>1,058</td>
<td>50.2</td>
<td>1,765,641</td>
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<tr>
<td>Male</td>
<td>44.0</td>
<td>831</td>
<td>49.8</td>
<td>1,752,873</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18–35</td>
<td>22.7</td>
<td>428</td>
<td>30.5</td>
<td>1,072,495</td>
</tr>
<tr>
<td>36–55</td>
<td>35.0</td>
<td>662</td>
<td>36.5</td>
<td>1,282,693</td>
</tr>
<tr>
<td>56–75</td>
<td>42.3</td>
<td>799</td>
<td>33.1</td>
<td>1,163,326</td>
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<td>Education</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic</td>
<td>24.7</td>
<td>462</td>
<td>21.7</td>
<td>753,608</td>
</tr>
<tr>
<td>Intermediate</td>
<td>41.1</td>
<td>769</td>
<td>45.5</td>
<td>1,581,537</td>
</tr>
<tr>
<td>Tertiary</td>
<td>34.3</td>
<td>642</td>
<td>32.9</td>
<td>1,143,153</td>
</tr>
<tr>
<td>Place of residence</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural municipality (&lt;10,000 inhabitants)</td>
<td>21.0</td>
<td>397</td>
<td>19.5</td>
<td>1,046,567</td>
</tr>
<tr>
<td>Small town/municipality (10,000–49,999)</td>
<td>32.3</td>
<td>610</td>
<td>32.9</td>
<td>1,764,053</td>
</tr>
<tr>
<td>Medium-sized town (50,000–190,000)</td>
<td>26.5</td>
<td>500</td>
<td>24.4</td>
<td>1,307,825</td>
</tr>
<tr>
<td>Large town/city (over 190,000)</td>
<td>20.3</td>
<td>383</td>
<td>23.1</td>
<td>1,240,110</td>
</tr>
<tr>
<td>Region⁵</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lapland</td>
<td>3.7</td>
<td>69</td>
<td>3.7</td>
<td>129,692</td>
</tr>
<tr>
<td>Northern Finland</td>
<td>10.4</td>
<td>197</td>
<td>9.3</td>
<td>325,969</td>
</tr>
<tr>
<td>Western and Inland Finland</td>
<td>21.7</td>
<td>411</td>
<td>21.8</td>
<td>768,200</td>
</tr>
<tr>
<td>Eastern Finland</td>
<td>12.6</td>
<td>239</td>
<td>11.5</td>
<td>402,898</td>
</tr>
<tr>
<td>Southwest Finland</td>
<td>13.4</td>
<td>254</td>
<td>13.2</td>
<td>463,043</td>
</tr>
<tr>
<td>Southern Finland</td>
<td>38.1</td>
<td>720</td>
<td>40.6</td>
<td>1,428,712</td>
</tr>
</tbody>
</table>

³ Population statistics are derived from Statistics Finland online databases (Statistics Finland 2014b, 2014c), except for the place of residence, which is based on the data of Population Register Centre (2010). Variables were selected so that the population data is equal to the population of the survey: year 2010, mainland Finland, 18–75-year-old people with Finnish as their first language. In the case of education, the population statistics and survey population are not fully equivalent: in the Statistics Finland data the age group is 20–69 years and the population includes all language groups, not only Finnish-speakers. The Population Register Centre data includes the full population of the municipalities, including all age groups and language groups.

⁴ The Statistics Finland educational categories are as follows: basic education, upper secondary / intermediate, lowest level tertiary, lower level tertiary, higher level tertiary and doctorate level (Statistics Finland 2014c). We combined tertiary levels of education and doctorate level into a single category of tertiary education.

⁵ Regions are categorized according to Finland’s regional state administrative agencies.
Table 3. OLS regression models for farm animal welfare evaluation and trust in prevalent animal production, adjusted coefficients.

<table>
<thead>
<tr>
<th></th>
<th>Farm animal welfare evaluation</th>
<th>Trust in prevalent animal production</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \hat{\beta} )</td>
<td>S.E.</td>
</tr>
<tr>
<td><strong>Socio-demographic variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (Male = 0)</td>
<td>-0.128***</td>
<td>0.036</td>
</tr>
<tr>
<td>Years of age</td>
<td>0.006***</td>
<td>0.001</td>
</tr>
<tr>
<td><strong>Place of residence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural municipality (ref. group)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Small town/municipality</td>
<td>-0.113*</td>
<td>0.049</td>
</tr>
<tr>
<td>Medium-sized town</td>
<td>-0.125*</td>
<td>0.052</td>
</tr>
<tr>
<td>Large town/city</td>
<td>-0.235***</td>
<td>0.056</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic (ref. group)</td>
<td>0.081</td>
<td>0.047</td>
</tr>
<tr>
<td>Intermediate Tertiary</td>
<td>-0.002</td>
<td>0.049</td>
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<tr>
<td><strong>Animal-related experiences</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Companion animal (Non-owner = 0)</td>
<td>-0.077*</td>
<td>0.036</td>
</tr>
<tr>
<td>Farming background (No background = 0)</td>
<td>0.245***</td>
<td>0.040</td>
</tr>
<tr>
<td><strong>Societal attitudes</strong></td>
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<td></td>
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<tr>
<td>Social equality</td>
<td>-0.087**</td>
<td>0.025</td>
</tr>
<tr>
<td><strong>Constant</strong></td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td><strong>Adjusted R2</strong></td>
<td>0.096</td>
<td></td>
</tr>
</tbody>
</table>

Linear OLS-regression; T-test: * \( p < .05 \), ** \( p < .01 \), *** \( p < .001 \).
\( \hat{\beta} \) = Unstandardized coefficients, Beta = Standardized coefficients.
Table 4. OLS regression models for behavioral freedom and valuing animal life, adjusted coefficients.

<table>
<thead>
<tr>
<th>Socio-demographic variables</th>
<th>Behavioral freedom</th>
<th>Valuing animal life</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>S.E.</td>
</tr>
<tr>
<td>Gender (Male = 0)</td>
<td>0.194***</td>
<td>0.031</td>
</tr>
<tr>
<td>Years of age</td>
<td>0.003**</td>
<td>0.001</td>
</tr>
<tr>
<td>Place of residence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural municipality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ref. group)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small town/municipality</td>
<td>0.021</td>
<td>0.042</td>
</tr>
<tr>
<td>Medium-sized town</td>
<td>-0.025</td>
<td>0.044</td>
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<tr>
<td>Large town/city</td>
<td>0.039</td>
<td>0.048</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic (ref. group)</td>
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<td></td>
</tr>
<tr>
<td>Intermediate</td>
<td>-0.086*</td>
<td>0.040</td>
</tr>
<tr>
<td>Tertiary</td>
<td>-0.130**</td>
<td>0.042</td>
</tr>
<tr>
<td>Animal-related experiences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Companion animal (Non-owner = 0)</td>
<td>0.150***</td>
<td>0.031</td>
</tr>
<tr>
<td>Farming background (No background = 0)</td>
<td>-0.193***</td>
<td>0.034</td>
</tr>
<tr>
<td>Societal attitudes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social equality</td>
<td>0.260***</td>
<td>0.021</td>
</tr>
<tr>
<td>Constant</td>
<td>2.971</td>
<td></td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.147</td>
<td></td>
</tr>
</tbody>
</table>

Linear OLS-regression; T-test: * p < .05, ** p < .01, *** p < .001.
β = Unstandardized coefficients, Beta = Standardized coefficients.
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ge+%281-year%29%2C+sex%2C+marital+status+and+language+by+area+1990--
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Public Perceptions of Mental Capacities of Nonhuman Animals

Finnish Population Survey

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Abstract

Mental capacities are an essential basis on which people give moral concern to nonhuman animals. Hence, it is important to investigate public perceptions of animal mind and the factors underlying these perceptions. Although research into citizen beliefs in animal mind has been increasing, population-based studies utilizing multivariate methods have been scarce. In this article, public perceptions of animal mind are investigated with a nationwide survey in Finland (n = 1,824). Eight animal species positioned differently in cultural categorizations are included in the analysis. Dogs were ascribed the most capacities, followed by cows, pigs, wolves, and elk. Citizens expressed a low belief in the mental capacities of chicken, salmon, and shrimp. Classifying animals as companions, food, and threat influences the perceptions of animal mind. Young age, having a companion animal, valuing societal equality, and concern for animal welfare and for animal utilization are connected to a greater belief in animal mind.
Keywords
animal mind – beliefs – mental capacities – public perceptions – survey

Introduction

Regarding nonhuman animals as mindless automata has helped to place them outside the realm of moral consideration (Arluke & Sanders, 1996). Moreover, when an animal's similarity to humans is used as a yardstick against which to measure her or his moral worth, a moral hierarchy between nonhuman animals is created: Those animals who are considered more human-like in terms of mental capacities are given a higher moral standing than those animals that less resemble humans (Francione, 2008). Because mind attribution is central for moral consideration of other beings (Bastian, Loughnan, Haslam, & Radke, 2011), it is important to investigate how the general public perceives the mental capacities of animals and which factors shape these perceptions.

Major shifts in the science of animal mind have significantly changed human knowledge about the mental capacities of nonhuman animals (Griffin & Speck, 2004; Panksepp, 2011). There has been a considerable inertia in science in considering the mental experiences of animals as a serious subject of empirical research, because mental events are not directly observable, measurable, and verifiable (Rollin, 2000). However, significant advances in cognition research, neurosciences, and animal behavior sciences have generated new scientific methods to investigate the mental capacities of animals (Boissy et al., 2007; Duncan, 2006; Panksepp, 2011). Evidence on animal consciousness has converged rapidly, and recently a prominent group of neuroscientists made a declaration on animal consciousness, proclaiming that nonhuman animals possess neurological substrates of conscious states (Low et al., 2012).

The accumulation of scientific knowledge of animal mind necessitates updating the image of animals in social sciences, as social sciences have continued portraying animals as de-minded objects and have been reluctant to include animals as minded actors in their research agendas (Irvine, 2007; Noske, 1993; Young & Thompson, 2013). By applying their specific perspectives and research methods, social sciences can make a distinct contribution to interdisciplinary discussion on animal mind (Irvine, 2007; Noske, 1993; Young & Thompson, 2013). Alongside investigating how animal mind emerges in human–animal interaction (Irvine, 2007; Irvine, 2008), social sciences can explore how understandings of the mental capacities of animals
Social Formation of Beliefs Regarding the Nonhuman Animal Mind

People’s perceptions of animal psychology can result from a number of factors, including the phylogenetic categorization, familiarity, and cultural stereotype of the animal, and the animal’s behavior in context (Mitchell & Hamm, 1997). Regarding phylogenetic categorization, animals who are evolutionarily close to humans are assigned more mental capacities than animals who are biologically less related to humans (Herzog & Galvin, 1997). Mammals are typically ascribed the highest mental capacities, followed by birds, reptiles or amphibians, fish, and then a range of invertebrates (Eddy, Gallup, & Povinelli, 1993; Herzog & Galvin, 1997; Knight, Vrij, Bard, & Brandon, 2009; McGrath et al., 2013; Phillips et al., 2010; Phillips & McCulloch, 2005). This hierarchical “scale of nature” schema, according to which the human is at the peak of mental development, followed by the animals most similar to humans, has a strong hold in the collective imagination, despite the complexity of the evolution of mind in different phylogenetic groups (Brown, 2015; Morris et al., 2012).
Alongside phylogenetic categorization, the cultural categorization of animals influences people's perceptions of animal mind (Herzog & Galvin, 1997). In this article, we evaluate how classifying animals according to the sociozoological scale is connected to perceptions of the mental capacities of animals. The sociozoological scale refers to the ranking of animals on a ladder of moral worth according to how well animals are considered as fitting into the social order (Arluke & Sanders, 1996). Animals who have a valued place in society and who comply with their subordinate status are classified as “good animals” (“pets” and “tools”), while animals who are considered harmful to humans and resist their subordinate status are classified as “bad animals” (“vermin” and “demons”) (Arluke & Sanders, 1996).

Companion animals are at the top of the sociozoological scale, as they are valued for their affective importance (Arluke & Sanders, 1996; Sandøe & Christiansen, 2009). Concurrently, companion animals are ranked high in terms of mental capacities (Eddy et al., 1993; Herzog & Galvin, 1997; Knight et al., 2009; McGrath et al., 2013; Phillips et al., 2010; Phillips & McCulloch, 2005). Familiarity, close interaction, and emotional affinity with companion animals encourage perceiving them as minded actors (Eddy et al., 1993; Morris et al., 2012). Moreover, animals’ behaviors in particular contexts are important determinants for people’s perceptions of their psychology (Mitchell & Hamm, 1997). Due to regular contact with companion animals, people tend to gain plenty of behavioral evidence of their abilities in their everyday lives (cf. Mitchell & Hamm, 1997).

Animals on the farm are categorized as tools on the sociozoological scale, and their status is lower than that of companion animals (Arluke & Sanders, 1996). To become tools, farm animals must be transformed into objects that are assigned diminished mental capacities (Arluke & Sanders, 1996). Indeed, psychological studies indicate that people tend to de-mentalize farm animals in order to diminish moral disquiet involved in meat eating (Bastian et al., 2011). People express disgust at the thought of eating animals regarded as intelligent (Ruby & Heine, 2012), and they regard as morally wrong and unpleasant to eat animals who are ascribed with high mental capacities (Bastian et al., 2011).

Although research has analyzed in detail the attribution of mental abilities to animals categorized as companion animals and tools, less attention has been given to animals classified as vermin and demons on the sociozoological scale. Vermin and demons are perceived as threats to the social order because they cross human-drawn boundaries and stray from or reject the place assigned to them (Arluke & Sanders, 1996). These animals are ranked on the bottom-rung of the moral hierarchy established by the sociozoological scale, and their low
moral status is reflected in their poor protection (Arluke & Sanders, 1996). It may be the case that people assign lesser minds to animals classified as vermin and demons due to their low moral status, but this question would need further empirical investigation.

Alongside animal categorization, belief in animal mind also varies according to socio-demographic background. Studies on gender differences in human perceptions of animal mind suggest that women are more willing to ascribe mental capacities to animals than men (Herzog & Galvin, 1997; McGrath et al., 2013; Walker, McGrath, Nilsson, Waran, & Phillips, 2014). Some studies suggest that older people ascribe fewer mental capacities to animals (McGrath et al., 2013), while other studies suggest the reverse (Knight et al., 2004; Walker, McGrath, Handel, Waran, & Phillips, 2014). Younger people tend to be more concerned about animal welfare than older people (Deemer & Lobao, 2011; Kendall, Lobao, & Sharp, 2006), but regarding animal mind, the research findings are less consistent.

People who live in urbanized areas are more concerned about animal welfare than people who live in rural areas (Deemer & Lobao, 2011; Kendall et al., 2006). However, to our knowledge, the link between place of residency and perceptions of animal mind has not been studied empirically. Education can influence the ways in which scientific findings on animal mind reach the wider public. Yet, to our knowledge, empirical research on the link between education and belief in animal mind is lacking. Previous research suggests that keeping a companion animal has an important impact on attitudes to animals (Kendall et al., 2006). Caregivers of companion animals tend to attribute more mental capacities to animals than non-caregivers (Maust-Mohl, Fraser, & Morrison, 2012; Walker, McGrath, Handel, et al., 2014).

Research suggests that animal welfare concerns are linked to human welfare concerns (Deemer & Lobao, 2011; Paul, 2000). Similarly, psychological studies indicate that biases toward human out-groups are related to biases toward animals (Dhont, Hodson, Costello, & MacInnis, 2014). De-mentalization plays an important role in both human-related and animal-related prejudices: when lesser minds are attributed to human out-groups and nonhuman animals, they are ascribed with diminished moral worth (Bastian, Costello, Loughnan, & Hodson, 2012; Costello & Hodson, 2010). However, the connection between belief in animal mind and human-egalitarian attitudes has not been investigated empirically with population-based studies.

Greater belief in animal mind is connected to favorable attitudes toward animal welfare and less support of animal use (Herzog & Galvin, 1997; Knight et al., 2004). When animals are perceived as capable of a range of inner experiences, it appears less acceptable to cause them suffering and to prevent them from
using their capacities in captivity (see Knight et al., 2004). Yet, again, the link between belief in animal mind and attitudes to animal welfare or animal use has not been investigated with large data samples.

Although there have been important findings related to people’s perceptions of animal mind, studies have tended to suffer from limited generalizability. In fact, we have not identified any study on perceptions of animal mind that utilizes a nationwide and representative data sample. Similarly, multivariate analyses investigating a range of competing determinants have been rare.

**Objectives**

This study investigates public perceptions of the mental capacities of animals in Finland. By utilizing a representative nationwide data sample, we aim to produce robust knowledge of factors underlying citizen perceptions of animal mind. More specifically, the research questions are as follows:

1. To what extent do people attribute mental capacities to animals positioned differently in phylogenetic categories and on the sociozoological scale?
2. How do perceptions of animal mind associate with socio-demographic background variables, human-equality attitudes, as well as animal welfare and animal use attitudes?

**Materials and Methods**

*Survey Data Collection and Questionnaire Design*

Finns’ perceptions of the mental capacities of animals were surveyed as a part of a wider survey on citizen attitudes to farm animals carried out in 2010. The address data (n = 4,000) were obtained as a random sample from a national population register maintained by the Population Register Centre of Finland.

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1 Previous studies have been based on student samples (e.g., Eddy et al., 1993; Herzog & Galvin, 1997; Phillips et al., 2010; Phillips & McCulloch, 2005); small and non-representative adult samples (Knight et al., 2004; Morris et al., 2012); samples collected in a single city (McGrath et al., 2013; Walker, McGrath, Handel, et al., 2014); or samples of specific groups, such as museum visitors, animal activists, and animal caregivers (Hills, 1995; Knight et al., 2009; Maust-Mohl et al., 2012; Morris et al., 2008).
The sampling frame was Finns aged 18-75. We received 1,890 adequately completed forms, but excluded 66 forms from further analysis because they included no responses to the question on animal mind. The remaining amount of respondents was 1,824, and the final response rate was 45.8 percent.²

Only a limited range of animal species and mental capacities could be included in the questionnaire due to the wider purpose of the survey. The question concerning the mental capacities of animals included eight animal species (elk, chicken, shrimp, dog, cow, salmon, pig, and wolf).³ These animal species covered four broad phylogenetic categories (mammals, birds, fish, and invertebrates). They also covered the categories of companion animals (dog), tools (animals utilized for food—cow, pig, chicken, elk, salmon, and shrimp), and vermin or demons (wolf) on the sociozoological scale.

The questionnaire included five emotions and three cognitive capacities. The question read as, “To which of the following animals do the statements below apply?” The statements were as following: the animal feels pain/pleasure/sadness/affection/anger, the animal remembers its conspecific, the animal has a capacity to think, and the animal can understand its own death and the death of its conspecific. Respondents were instructed to circle either “yes” or “no,” or to leave the space blank if they felt they did not know the answer. Blank responses are coded as “no answer” in the analysis.

Previous studies on beliefs regarding animal mind have included a variety of emotions, ranging from basic (e.g., pain, pleasure, and fear) to more complex emotions (e.g., love, jealousy, and guilt) (e.g., Herzog & Galvin, 1997; Morris et al., 2012; Morris et al., 2008; Walker, McGrath, Handel, et al., 2014). We included pain and pleasure in this study because these emotions define whether the animal is regarded as sentient and whether he/she has a moral standing based on his/her sentience (Francione, 2008; Singer, 1975). We also included more complex emotions (sadness, affection, and anger) in order to examine to what extent people ascribe a richer inner world to animals, in addition to basic sentience.

Previous studies have also included a wide variety of cognitive capacities, such as capacity to reason, self-awareness, learning, memory, problem solving, and numerosity (Eddy et al., 1993; Herzog & Galvin, 1997; Hills, 1995; Knight et al., 2009; Maust-Mohl et al., 2012). In this study we included the capacity to think as a general indicator of the ability of animals to form any mental representations or ideas. Remembering conspecifics refers to a more specific

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² The survey did not reach 15 sampled people, and these people have been removed from the calculation of the response rate.

³ We have discussed in detail citizen perceptions of the mental capacities of salmon in our previous publication (Kupsala, Jokinen, & Vinnari, 2013).
cognitive ability related to social recognition and social memory (e.g., Gieling, Nordquist, & Staay, 2011). Finally, comprehending death refers to a complex cognitive capacity, related to an ability to conceive finitude and loss (Kaldewaij, 2008). Understanding death is an important theme in the ethical discussion about the harm of death to animals (Kaldewaij, 2008).

**Belief in Animal Mind Scales**

We formed belief in animal mind scales for each animal species. In these scales, “yes” answers in the eight mental capacities of each species are summed (“yes” = 1, “no” or no answer = 0). The maximum score is eight, indicating that all mental capacities are attributed to the animal, and the minimum score is zero, indicating that none of the mental capacities are assigned to the animal. The belief in animal mind scales measure how many mental capacities people confidently attribute to each animal species. However, they do not distinguish between “no” and no answer responses. An inter-item reliability test for these measures yielded Cronbach’s alpha coefficients as follows: elk .823, chicken .820, shrimp .864, dog .764, cow .801, salmon .837, pig .826, and wolf .859.

**Independent Variables**

Socio-demographic variables include gender, age, place of residence and education. Apart from age, all the socio-demographic variables are categorical and included in the analysis as dummy variables, coded 1/0. Gender was coded 0 = male (a reference group) or 1 = female. Age was measured in years. The place of residence includes three categories: countryside (a reference group), a small town or a densely populated area (with 50,000 inhabitants or less), and a big town or a city (with over 50,000 inhabitants). Education is divided into three categories: basic education (compulsory basic education, such as comprehensive school or below), intermediate education (vocational school or upper secondary school), and tertiary education (including college, polytechnic, university, and doctorate education). Having a companion animal was coded 1 for respondents who currently have a companion animal in the household; all others were coded 0.

The social equality scale is based on three items. Respondents were asked how much they value gender equality, social justice and the rights of sexual minorities. Possible scores for these items ranged from 1 (values them very much) to 5 (does not value them at all). The Cronbach's alpha of these items was .645. The variable was reversed for the analysis, so that higher scores in the scale indicate a higher valuation of social equality.

Attitudes toward animal welfare and animal use were measured with two variables: Firstly, farm animal welfare evaluation is a scaled variable created
from eight items. Respondents were asked to evaluate the current state of animal welfare at eight animal production lines in Finland (including laying hens, broilers, turkeys, pigs, farmed fish, beef cattle, dairy cows, and sheep). Possible scores ranged from 1 (very good) to 5 (very poor). The Cronbach’s alpha of these items was .922. Higher scores in the scale indicate a more negative evaluation of the current state of farm animal welfare.

Secondly, the animal instrumentalization scale is based on a single-item statement measuring an instrumental orientation toward animals. The statement reads, “An animal should be seen primarily as a means of production,” and possible answers score between 1 (fully agree) to 5 (fully disagree). The scale is reversed, so higher scores in the scale indicate a more instrumental attitude toward animals.

**Analysis Techniques**

Our analytical techniques include descriptive statistics and linear regression models. Because the independent variables did not correlate strongly with each other (in collinearity statistics, tolerance levels were above 0.5 in all variables), multiple OLS regression was deemed an appropriate technique in the predictive analysis. In the analysis, the connection between the dependent and independent variables are tested by using F- and t-tests. We report regression coefficients in both standardized (Beta) and non-standardized (β) forms. The belief in salmon and shrimp mind scales were excluded from the regression analysis because they did not contain a sufficient number of “yes” answers to form viable dependent variables.

**Sample Representativeness**

Table 1 shows descriptive statistics for background variables. It also shows how the sample compares with the population in terms of gender, age, and education. Women comprise 56 percent of respondents, and they are over-represented by six percent in comparison to population data. The mean age is 49.5, which is somewhat higher than the mean age of Finland’s adult population (46.1 in the age range of Finns aged 18-75). Educational distribution in the survey sample is fairly similar to that of the population.

**Results**

**Descriptive Analysis**

As Table 2 shows, most people believe that dogs possess all eight mental capacities. Over 79 percent believe that cows and pigs can feel pain, pleasure,
and affection, and that they can remember their conspecifics, and 56-70 percent attribute to them all the rest of the mental capacities. In addition, over 77 percent believe that wolves and elk can feel pain and pleasure and remember conspecifics, and 57-68 percent think that they are capable of the remain-

### Table 1

Descriptive statistics for background variables and survey participant demographics in comparison with national population statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Percentage (Mean)</th>
<th>N (SD)</th>
<th>Population (% or mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>56.1</td>
<td>1,022</td>
<td>50.2</td>
</tr>
<tr>
<td>Male</td>
<td>43.9</td>
<td>801</td>
<td>49.8</td>
</tr>
<tr>
<td><strong>Years of age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(49.5)</td>
<td>(15.51)</td>
<td>46.1</td>
</tr>
<tr>
<td>Place of residence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Countryside</td>
<td>21.7</td>
<td>386</td>
<td>-</td>
</tr>
<tr>
<td>Town or densely populated area</td>
<td>38.6</td>
<td>686</td>
<td>-</td>
</tr>
<tr>
<td>(≤50,000 inhabitants)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Town or city (&gt;50,000 inhabitants)</td>
<td>39.7</td>
<td>706</td>
<td>-</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic</td>
<td>23.5</td>
<td>425</td>
<td>21.7</td>
</tr>
<tr>
<td>Intermediate</td>
<td>41.9</td>
<td>758</td>
<td>45.5</td>
</tr>
<tr>
<td>Tertiary</td>
<td>34.6</td>
<td>625</td>
<td>32.9</td>
</tr>
<tr>
<td><strong>Companion animal</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With companion animal</td>
<td>39.7</td>
<td>703</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td>60.3</td>
<td>1,067</td>
<td>-</td>
</tr>
<tr>
<td><strong>Attitudinal variables</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Social equality</td>
<td>(4.02)</td>
<td>(0.72)</td>
<td>-</td>
</tr>
<tr>
<td>Farm animal welfare evaluation</td>
<td>(2.64)</td>
<td>(0.77)</td>
<td>-</td>
</tr>
<tr>
<td>Animal instrumentalization</td>
<td>(2.25)</td>
<td>(1.18)</td>
<td>-</td>
</tr>
</tbody>
</table>

*Population statistics are derived from online databases from Statistics Finland (Statistics Finland, 2014a; Statistics Finland, 2014b). Variables were selected so that the population data are equal to the population of the survey: year 2010, mainland Finland, people 18-75 years old with Finnish as their first language. Yet, regarding education, in the Statistics Finland data the age group is 20-69 years and the population includes all language groups, not only Finnish-speakers. We combined the educational categories of Statistics Finland with corresponding categories of the survey.*
More than 62 percent believe that chickens can feel the basic emotions of pain and pleasure, and that they remember their conspecifics. Yet, only the minority think chickens possess the remaining mental capacities. The majority believe that salmon can feel pain, but otherwise the belief in the mental capacities of salmon is low (see a more detailed discussion in Kupsala et al., 2013). Less than 50 percent believe that shrimp can feel pain, and only around 9-25 percent of the respondents believe that shrimp are capable of the remaining mental capacities.

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Dog</th>
<th>Cow</th>
<th>Pig</th>
<th>Wolf</th>
<th>Elk</th>
<th>Chicken</th>
<th>Salmon</th>
<th>Shrimp</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pain</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>97.3</td>
<td>96.0</td>
<td>95.3</td>
<td>92.1</td>
<td>94.0</td>
<td>91.4</td>
<td>60.7</td>
<td>43.3</td>
</tr>
<tr>
<td>No</td>
<td>0.5</td>
<td>1.0</td>
<td>0.9</td>
<td>1.9</td>
<td>1.5</td>
<td>2.8</td>
<td>21.2</td>
<td>33.6</td>
</tr>
<tr>
<td>NA</td>
<td>2.2</td>
<td>3.0</td>
<td>3.8</td>
<td>6.0</td>
<td>4.5</td>
<td>5.8</td>
<td>18.1</td>
<td>23.2</td>
</tr>
<tr>
<td><strong>Pleasure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>93.1</td>
<td>89.4</td>
<td>87.6</td>
<td>77.7</td>
<td>77.3</td>
<td>69.6</td>
<td>28.7</td>
<td>22.5</td>
</tr>
<tr>
<td>No</td>
<td>3.6</td>
<td>4.9</td>
<td>4.8</td>
<td>7.7</td>
<td>8.4</td>
<td>15.3</td>
<td>40.3</td>
<td>45.7</td>
</tr>
<tr>
<td>NA</td>
<td>3.3</td>
<td>5.7</td>
<td>7.6</td>
<td>14.6</td>
<td>14.3</td>
<td>15.1</td>
<td>31.0</td>
<td>31.9</td>
</tr>
<tr>
<td><strong>Sadness</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>87.1</td>
<td>69.7</td>
<td>63.6</td>
<td>62.4</td>
<td>57.0</td>
<td>37.8</td>
<td>12.9</td>
<td>10.5</td>
</tr>
<tr>
<td>No</td>
<td>5.8</td>
<td>13.9</td>
<td>16.0</td>
<td>15.1</td>
<td>19.8</td>
<td>34.6</td>
<td>52.2</td>
<td>54.2</td>
</tr>
<tr>
<td>NA</td>
<td>7.1</td>
<td>16.4</td>
<td>20.4</td>
<td>22.5</td>
<td>23.2</td>
<td>27.6</td>
<td>34.9</td>
<td>35.3</td>
</tr>
<tr>
<td><strong>Affection</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>96.6</td>
<td>87.6</td>
<td>79.5</td>
<td>63.4</td>
<td>56.7</td>
<td>48.2</td>
<td>11.6</td>
<td>9.2</td>
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<td>No</td>
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<td>8.4</td>
<td>15.7</td>
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<td>29.2</td>
<td>54.1</td>
<td>55.7</td>
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<td>33.9</td>
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<tr>
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<td>25.8</td>
<td>32.3</td>
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<td><strong>Understanding death</strong></td>
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<td></td>
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<td>77.7</td>
<td>61.1</td>
<td>56.6</td>
<td>67.7</td>
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<td>13.2</td>
<td>9.9</td>
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<tr>
<td>No</td>
<td>9.9</td>
<td>18.7</td>
<td>21.4</td>
<td>13.3</td>
<td>16.9</td>
<td>39.9</td>
<td>53.8</td>
<td>56.6</td>
</tr>
<tr>
<td>NA</td>
<td>12.3</td>
<td>20.2</td>
<td>22.0</td>
<td>19.0</td>
<td>20.9</td>
<td>27.7</td>
<td>32.9</td>
<td>33.4</td>
</tr>
</tbody>
</table>
People are more uncertain in ascribing mental capacities to chickens, salmon, and shrimp than to mammals, as indicated by the share of “no answer” responses in Table 2. Regarding denying the mental capacities, the share of “no” answers is 1-23 percent in the case of mammals, 15-40 percent in the case of chickens, and 34-57 percent in the case of salmon and shrimp, excluding the capacity to feel pain.

Table 3 presents the mean values of the belief in animal mind scales. The belief in dog mind scale has the highest mean value, and people attribute to dogs on average seven capacities out of the eight. Other mammals are given on average approximately six capacities out of the eight. In this group of mammals, cows are ascribed the most capacities, followed by pigs or wolves, and then elk. People ascribe to chickens on average only half of the capacities. Salmon and shrimp are given on average only one or two capacities.

<table>
<thead>
<tr>
<th>Belief in animal mind scales</th>
<th>Mean</th>
<th>Confidence interval (95%) for mean</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dog</td>
<td>7.04</td>
<td>6.97-7.10</td>
<td>1.50</td>
</tr>
<tr>
<td>Cow</td>
<td>6.15</td>
<td>6.06-6.25</td>
<td>2.04</td>
</tr>
<tr>
<td>Pig</td>
<td>5.84</td>
<td>5.74-5.95</td>
<td>2.25</td>
</tr>
<tr>
<td>Wolf</td>
<td>5.81</td>
<td>5.70-5.92</td>
<td>2.45</td>
</tr>
<tr>
<td>Elk</td>
<td>5.50</td>
<td>5.39-5.61</td>
<td>2.37</td>
</tr>
<tr>
<td>Chicken</td>
<td>4.23</td>
<td>4.12-4.34</td>
<td>2.47</td>
</tr>
<tr>
<td>Salmon</td>
<td>1.95</td>
<td>1.85-2.04</td>
<td>2.12</td>
</tr>
<tr>
<td>Shrimp</td>
<td>1.41</td>
<td>1.31-1.50</td>
<td>2.02</td>
</tr>
</tbody>
</table>

Predictive Analysis
Table 4 presents the OLS regression models for the belief in dog and cow mind scales, Table 5 for the belief in pig and wolf mind scales, and Table 6 for the belief in elk and chicken mind scales. In terms of statistically significant findings, older people attribute fewer mental capacities to dogs, pigs, wolves, and elk than younger people. Women attribute fewer mental capacities to wolves and elk than men. People with a tertiary education express greater belief in the mental capacities of wolves than people with a basic education. The place of residence is not associated with the belief in animal mind scales.
### Table 4  Regression models for belief in dog and cow mind scales

<table>
<thead>
<tr>
<th>Variable</th>
<th>Belief in dog mind</th>
<th>Belief in cow mind</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \beta )</td>
<td>SE</td>
</tr>
<tr>
<td>Gender (Male = 0)</td>
<td>-.020</td>
<td>.072</td>
</tr>
<tr>
<td>Years of age</td>
<td>-.006*</td>
<td>.002</td>
</tr>
<tr>
<td>Place of residence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Countryside (reference group)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Town or densely populated area (≤50,000 inhabitants)</td>
<td>-.012</td>
<td>.094</td>
</tr>
<tr>
<td>Town or city (&gt;50,000)</td>
<td>.049</td>
<td>.096</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic (reference group)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Intermediate</td>
<td>.099</td>
<td>.095</td>
</tr>
<tr>
<td>Tertiary</td>
<td>-.015</td>
<td>.099</td>
</tr>
<tr>
<td>Companion animal (Non-keeper = 0)</td>
<td>.184*</td>
<td>.072</td>
</tr>
<tr>
<td>Attitudinal factors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social equality</td>
<td>.065</td>
<td>.050</td>
</tr>
<tr>
<td>Farm animal welfare evaluation</td>
<td>-.039</td>
<td>.049</td>
</tr>
<tr>
<td>Animal instrumentalization</td>
<td>-.171***</td>
<td>.032</td>
</tr>
<tr>
<td>Constant</td>
<td>7.471</td>
<td></td>
</tr>
<tr>
<td>Adjusted ( R^2 )</td>
<td>.034</td>
<td></td>
</tr>
</tbody>
</table>

Linear regression: \( t \)-test: *\( p < .05 \), **\( p < .01 \), ***\( p < .001 \); \( \hat{\beta} \) = Unstandardized coefficients; Beta = Standardized coefficients.

Having a companion animal is associated with a greater belief in the mental capacities of all animals. Regarding attitudinal variables, valuing social equality is connected to a greater belief in the mental capacities of all animals, apart from dogs. A negative evaluation of the farm animal welfare situation is related to greater attribution of mental capacities to pigs, wolves, elk, and chickens. Animal instrumentalization is connected to reduced belief in the mental capacities of all animals.
Table 5

<table>
<thead>
<tr>
<th>Variable</th>
<th>Belief in pig mind</th>
<th>Belief in wolf mind</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \beta )</td>
<td>SE</td>
</tr>
<tr>
<td>Gender (Male = 0)</td>
<td>- .207</td>
<td>.108</td>
</tr>
<tr>
<td>Years of age</td>
<td>-.012**</td>
<td>.004</td>
</tr>
<tr>
<td>Place of residence</td>
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<td></td>
</tr>
<tr>
<td>Countryside (reference group)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Town or densely populated area (≤50,000)</td>
<td>-.120</td>
<td>.142</td>
</tr>
<tr>
<td>Town or city (&gt;50,000)</td>
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<td>.146</td>
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<tr>
<td>Education</td>
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<td></td>
</tr>
<tr>
<td>Basic (reference group)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Intermediate</td>
<td>.042</td>
<td>.143</td>
</tr>
<tr>
<td>Tertiary</td>
<td>.232</td>
<td>.150</td>
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<tr>
<td>Companion animal (Non-keeper = 0)</td>
<td>.283*</td>
<td>.109</td>
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<tr>
<td>Attitudinal factors</td>
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<td></td>
</tr>
<tr>
<td>Social equality</td>
<td>.269***</td>
<td>.076</td>
</tr>
<tr>
<td>Farm animal welfare evaluation</td>
<td>.222**</td>
<td>.075</td>
</tr>
<tr>
<td>Animal instrumentalization</td>
<td>- .286***</td>
<td>.049</td>
</tr>
<tr>
<td>Constant</td>
<td>5.400</td>
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</tr>
<tr>
<td>Adjusted ( R^2 )</td>
<td>.074</td>
<td></td>
</tr>
</tbody>
</table>

Linear regression: \( t \)-test: *\( p < .05 \), **\( p < .01 \), ***\( p < .001 \); \( \beta \) = Unstandardized coefficients; Beta = Standardized coefficients.

Discussion

Belief in the Mental Capacities of Animals: The Effect of Cultural Constructs

This study demonstrated important differences in Finnish citizen perceptions of the mental capacities of animals. As could be expected, people attributed more mental capacities to mammals, who are evolutionarily closer to humans than other animals. Chickens are given noticeably fewer mental capacities than mammals, followed by salmon (fish) and shrimp (invertebrate).

Alongside biological relatedness to humans, the cultural construction of animals also influences the perceptions of their mental capacities. In this
research, citizens ranked dogs as high in terms of mental capacities, confirming previous findings (e.g., Herzog & Galvin, 1997; Knight et al., 2009; McGrath et al., 2013). Dogs are at the top of the moral ladder of the sociozoological scale, and they have enjoyed a long-standing special status in human communities (Arluke & Sanders, 1996; Sanders, 1999). Due to the close-knit social interaction between humans and dogs, people gain plenty of behavioral evidence of their abilities in their everyday lives (cf. Mitchell & Hamm, 1997).

People attribute clearly fewer mental capacities to wolves than to dogs, despite the biological relatedness of these species. For instance, while 97 percent of the respondents believe that dogs can feel affection and 80 percent believe that dogs can think, these figures are only 63 and 66 percent,
respectively, in the case of wolves. The contrasting cultural construction of these biological cousins on the sociozoological scale—dogs as companion animals and wolves as vermin or demons—is evident in the differing perceptions of their mental capacities. Negative stigmatization of wolves as a threat or pest has long-standing cultural roots in Finland (Bisi, Liukkonen, Mykrä, Pohja-Mykrä, & Kurki, 2010).

In cultural imagery wolves are often demonized because they are regarded as dangerous animals, provoking collective feelings of fear toward wolves (Borgström, 2012; Serpell, 1996). Moreover, wolves are also regarded as vermin who threaten human livelihoods by killing domestic animals and game animals (Bisi et al., 2010). As vermin or demons, wolves are on the bottom-rung of the moral ladder of the sociozoological scale (Arluke & Sanders, 1996). De-mentalization of wolves can help to place them outside the realm of moral consideration, supporting attitudes favoring their eradication (Arluke & Sanders, 1996; Serpell, 1996).

According to our findings, belief in the mental capacities of farmed mammals is lower than belief in the mental capacities of dogs. Because of familiarity and emotional bonding with companion animals and having personal knowledge of their behavioral abilities, people tend to attribute a rich inner world to companion animals, while farm animals are more distant and anonymous to people (Mitchell & Hamm, 1997; Morris et al., 2012). Moreover, on the sociozoological scale, farm animals are constructed as tools that are instrumentally utilized in food production (Arluke & Sanders, 1996). Transforming farm animals into tools requires their objectification and de-mentalization (Arluke & Sanders, 1996). When lesser minds are attributed to farm animals, farming and killing these animals for food appears morally less bothersome (Bastian et al., 2011).

Belief in the mental capacities of elk was the lowest of all the mammals in this study. People have little behavior-based knowledge of the abilities of elks in comparison to domestic animals, which can diminish certainty in evaluating their mental capacities (cf. Mitchell & Hamm, 1997). Moreover, elk is a typical game animal in Finland, and they are hunted all over the country (Bisi et al., 2010). Because of the utilization of elks as food and game, they are constructed as tools in the sociozoological scale, which can motivate people to assign them lesser minds.

This research confirms that belief in the mental capacities of chickens is low (McGrath et al., 2013; Phillips et al., 2010; Phillips & McCulloch, 2005). In addition to the phylogenetic distance of chickens from humans, the low cultural valuation of chickens can also influence the weak belief in their mental capacities. On the sociozoological scale, chickens appear as highly commodified
tools. The anonymity of chickens and regarding them as fast convenience food can diminish people's willingness to attribute mind to them.

In this study, belief in the mental capacities of salmon was very low, apart from the capacity to feel pain. Fish tend to be attributed the least mental capacities among vertebrates (e.g., Herzog & Galvin, 1997; McGrath et al., 2013; Phillips et al., 2010). Both phylogenetic distance and the unfamiliarity of fish influence public perceptions of their mental capacities (Brown, 2015). In contrast to knowledge of terrestrial animals, people have little knowledge of the behavioral abilities of fish (Brown, 2015; cf. Mitchell & Hamm, 1997). Moreover, fish lack recognizable facial expressions and their vocalizations are inaudible to humans (Brown, 2015). The widespread utilization of salmon in farming and fishing in Finland can also motivate people to attribute fewer mental abilities to them.

People tend to attribute only minimal mental capacities to invertebrates (Herzog & Galvin, 1997; McGrath et al., 2013). In this study as well, the belief in the mental capacities of shrimp was low. Invertebrates are often treated in a way that indicates a low belief in their ability to feel pain and distress, and animal welfare legislation for invertebrates has also been limited, apart from the legislation for cephalopods (Horvath, Angeletti, Nascetti, & Carere, 2013; Sherwin, 2001). Yet, pain research indicates that there is some evidence for pain experience in decapod crustaceans, the taxon of invertebrates that includes the shrimp (Elwood, 2012). Research also suggests there is a range of cognitive capacities in invertebrates, including learning, memory, and communication, which may indicate that invertebrates are cognitively more complex than they have been credited for (Elwood, 2012; Griffin & Speck, 2004; Horvath et al., 2013; Sherwin, 2001).

Belief in Animal Mind, Social Group Differences, and Attitudinal Factors

In this study, the most important factors associated with belief in animal mind included age, having a companion animal, human-egalitarian attitudes, as well as animal welfare and animal use attitudes. Younger people tend to attribute more mental capacities to animals. However, because older people tended to more frequently choose the “no answer” option, this study suggests that younger people are more certain in their belief in the mental capacities of animals. While important gender differences have been identified in attitudes to animals (Kendall et al., 2006; Walker, McGrath, Nilsson, et al., 2014), in this study gender was not associated with perceptions of animal mind, although we identified a modest gender difference in beliefs regarding the minds of wolves and elks.
Although the place of residence has been identified as an important factor shaping attitudes to animals (Kendall et al., 2006), in this study the place of residence was not connected to belief in animal mind. Likewise, no connection was identified between education and belief in animal mind, with the exception of wolves.

This study confirms that having a companion animal is associated with greater belief in animal mind (Morris et al., 2012; Walker, McGrath, Handel, et al., 2014). Our research also demonstrates that valuing human equality is connected with greater belief in animal mind, indicating that there is a link between human-egalitarian and species-egalitarian attitudes (Deemer & Lobao, 2011; Dhont et al., 2014). As could be expected, people expressing greater concern for farm animal welfare and having less instrumentalist attitudes toward animals tend to attribute more mental capacities to animals. Mind denial helps to diminish moral unease when utilizing animals, while considering animals as mentally complex increases concern for their welfare (cf. Bastian et al., 2011).

This study has some limitations: In this research, we measured perceptions of animal mind with a dichotomous yes/no question with a “no answer” option. However, a scaled variable that measures the degree of certainty in belief in animal mind would have provided more nuanced knowledge of perceptions about animal mind. In addition, including a wider range of mental capacities and animal species in the survey would have provided more complete knowledge of how the cultural construction of animals influences perceptions of animal mind.

**Conclusion**

In this research, we have aimed to further the current knowledge of the public perceptions of animal mind by examining Finnish citizens' perceptions of animal mind and analyzing the connection between belief in animal mind and an array of background variables. Phylogenetic categorization and construction of animals on the sociozoological scale as affectively important, instrumentally useful, and harmful, influence people's perceptions of animal mind. Young age, having a companion animal, valuing societal equality, as well as concern for animal welfare and for animal utilization, are connected to greater belief in animal mind.

Future work should continue developing improved measures for the perceptions of animal mind and include a wider range of mental capacities and animal species in the study design. Studies based on nationwide samples from
other countries are needed in order to develop a comprehensive understanding of the public perceptions of animal mind, the social factors shaping these beliefs and the moral implications of these beliefs.

Acknowledgments

The research material was gathered in a project called “Politicised Animals: the Consumer and Farm Animals” funded by the Academy of Finland (research grant 128122). The writing of the manuscript was funded by grants from the Alfred Kordelin Foundation, Ella and Georg Ehrnrooth Foundation, as well as Kone Foundation. We thank these organizations for funding this research. We are grateful to Elisa Aaltola, Anna Valros, and Petri Tapio for providing expert advice when constructing the questionnaire. We thank Pasi Pohjolainen for his assistance during data collection and coding. We also thank three anonymous reviewers for valuable comments and suggestions.

References


ARTICLE III


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Contesting the meat–animal link and the visibility of animals killed for food: a focus group study in Finland

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Faculty of Social Sciences and Business Studies, Department of Geographical and Historical Studies, University of Eastern Finland, Joensuu, Finland

ABSTRACT
Dissociating meat from its animal origins has been considered a central strategy omnivores employ to sustain their meat consumption despite their concerns for animal welfare. In recent years, the dissociation strategy has become increasingly contested as short food-chain movements promote consumer contact with farmed animals as a means to more ethical eating. This article examines how different groups of Finnish consumers construct the meat–animal link based on focus groups with gastronomes, hunters, organic consumers, rural women, and supermarket customers. The theoretical approach is based on Noëlie Vialles’s concepts of the sarcophage and zoophage logic of meat eating and on the literature on animal categorization. Supermarket customers preferred to dissociate meat from the animal, while gastronomes and rural residents regarded the presence of the animal in meat as important for its quality. Hunters valued game meat highly as animals were transformed into meat through their own effort. Although rural women and some organic consumers personalized certain farmed animals due to their proximity, these animals were still edible and killable. The research suggests that challenging dissociation does not in itself necessarily imply an increased moral valuation of animals if the objectification of animals is not confronted.

Introduction
Meat has acquired increasingly ambivalent meanings: although meat is considered central and desirable everyday food, concerns for the detrimental ethical, environmental, and health consequences of meat consumption have been increasing (Holm and Møhl 2000; Rothgerber 2013). Qualitative studies suggest that consumers have negative views about industrial animal farming, and they often reject various factory-farming practices, such as confined conditions, minimal enrichment, and routine mutilations (Boogaard et al. 2011; Te Velde, Aarts, and Van Woerkum 2002). Industrial farming contrasts with consumers’ ideas of naturalness, according to which animals should be able to go outdoors and to
perform species-specific behavior (Lassen, Sandøe, and Forkman 2006; Spooner, Schuppli, and Fraser 2014).

However, these concerns about industrial animal farming rarely appear in everyday food practices, as indicated by the high consumption of meat from intensive farms (Miele and Evans 2010; Verbeke 2009). Although interest in meat reduction and vegan and welfare-labeled products has increased, changes in actual consumption behavior have been slow and have tended to occur only among concerned consumers (Jallinoja, Niva, and Latvala 2016; Verbeke 2009). For instance, while the proportion of vegetarians and vegans has increased in many industrialized societies, they still comprise a minority, 3–12 percent of the population (Potts 2016; Ruby 2012). In the European Union, per capita consumption of poultry meat is increasing, while per capita consumption of beef, veal, and pork meat has stagnated or is slowly declining (OECD 2017).

Psychological research suggests that omnivores frequently experience a meat paradox: they enjoy eating meat, but dislike harming animals (Joy 2011; Loughnan, Haslam, and Bastian 2010). Dissociation is a powerful strategy to resolve the meat paradox: consumers avoid the thought that meat comes from once-living animals (Kunst and Hohle 2016; Rothgerber 2014; Tian, Hilton, and Becker 2016). In the dominant meat culture, animals are absent referents in meat, and meat is disconnected from an animal for instance in language and methods of food presentation (Adams 1990). Dissociation reduces empathy towards animals and feelings of disgust toward eating dead animals, and this in turn sustains willingness to eat meat (Kunst and Hohle 2016). People show more empathy toward the slaughtered animal, more disgust, and less willingness to eat meat when the meat–animal link is made more salient, for instance, if confronted by a picture of a living animal in a meat advertisement, or the words “cow” and “pig” in place of “beef” and “pork” on a restaurant menu (Kunst and Hohle 2016). Similarly, meat eaters report lower willingness to eat beef when the image of a cow appears in a recipe (Tian, Hilton, and Becker 2016).

Growing sensitivity toward the violence meat implies and a concurrent tendency to disguise the animal origin of meat have been long-term cultural processes in European societies (Elias [1939] 1978; Mennell 1985). As Norbert Elias ([1939] 1978, 99) suggests, repugnance toward violence has increased during modernization but, rather than ending the violence, the solution has been “hiding 'behind the scenes' of what has become distasteful.” Elias considered the concealing of the animal origin of meat as one example of this segregation of practices now considered repulsive. Currently, meat is frequently consumed in highly processed and de-animalized forms (Autio et al. 2018; Evans and Miele 2012). Qualitative studies suggest that consumers prefer products in which the animal origin of meat is well disguised, such as mincemeat and meat fillets (Autio et al. 2018; Holm and Møhl 2000; Te Velde, Aarts, and Van Woerkum 2002). They also express unease about the thought of eating dead animals and a sense of disgust that meat has been an animal (Holm and Møhl 2000; Kubberød et al. 2002). Meat eaters want to suppress thoughts about animal production while consuming meat because of worries that these thoughts would put them off eating meat and remove the enjoyment of it (Schröder and McEachern 2004). People feel more disgust toward red meat than white meat because red invokes the idea of blood (Kubberød et al. 2002). Raw meat and offal also arouse disgust (Kubberød et al. 2002). The feeling of aversion toward meat and linking it to the killing of animals are important reasons for turning to vegetarianism (Roth 2005). Animal personification is an important aspect of
the meat–animal link. The more an animal is personalized, the more the thought of eating it provokes disgust (Kubberød et al. 2008).

In the current consumer culture, consumers are highly distanced from food production, and this distance impedes the social, ethical, and ecological feedback from production (Princen 2002). Because of long and multi-actor supply chains, consumers can remain unaware and ethically insulated from the impacts of their consumption choices (Princen 2002). However, in recent years, the industrialized food system, in which consumers are disconnected from meat production and routinely employ the dissociation strategy, has become increasingly challenged (Blecha and Davis 2014; Gillespie 2011). There has been a strengthening discourse of meat where the meat–animal link and animal killing behind meat is acknowledged (Linné 2016). In the so-called conscientious omnivore, ethical omnivore, and happy meat movements, obtaining meat from local farms or raising animals oneself appear means to more ethical eating and counteracting the de-linking processes of the industrialized food system (Blecha and Davis 2014; Gillespie 2011; Pedersen and Stanescu 2014; Tiengo and Caffo 2012). For instance, rearing and slaughtering small animals for domestic consumption have increased in cities as part of wider short food-chain movements (Blecha and Davis 2014).

The impacts of the industrialization of farming on animal welfare and consumer knowledge of food have also become increasingly contested in Finland. Compared with most Western European societies, Finland was a remarkably agrarian society until the 1950s, with a notable proportion of the population living on small family farms (Kaarlenkaski 2014). Raising and slaughtering animals for domestic consumption was still commonplace in urban households in the early twentieth century (Sillanpää 2003). The industrialization of farming and urbanization has been rapid since the 1960s, accompanied by a decline in Finnish consumer contact with food production (Jokinen, Kupsala, and Vinnari 2012; Kaarlenkaski 2014). In recent years, public debate on farm animal welfare and rights has increased in Finland, and undercover videos from Finnish farms and slaughterhouses by animal rights activists have received considerable media attention (Vinnari and Laine 2017). Interest in vegan foods has been growing, but the proportion of vegetarians (including vegans) has remained steady at 2–4 percent of the population since the mid-1980s (Jallinoja, Niva, and Latvala 2016). Consumer interest in local and organic meat has been also growing; however, the market share of organic meat is only 1 percent (Pro Luomu 2017).

**Research objectives**

This study examines how different groups of Finnish omnivores construct the meat–animal link and their connection to food production animals. Several psychological studies have investigated omnivores’ perceptions of the meat–animal link based on an experimental approach. However, psychological measurement can provide only a limited understanding of the question due to the multiplicity of cultural meanings attributed to the visibility of the animal origin of meat in everyday food practices. These cultural meanings can support and enhance in various ways the psychological mechanisms employed to cope with the meat paradox. Although several qualitative studies have explored consumer perceptions of the connection between meat and animals, the topic has tended to receive scant attention in these studies because of their wider research objectives. This study contributes to the research on consumer perceptions of the meat–animal link by analyzing the question with
qualitative material that allows detailed study of the construction of cultural meanings attributed to the de-animalization and animalization of meat.

The specific research questions are:

1. How do different groups of Finnish consumers construct connection and disconnection between meat and an animal?
2. How do these consumers negotiate their contact with animals categorized as food?

**Theoretical concepts of the study**

This study utilizes the concepts of the sarcophage and zoophage logic of meat eating, as developed by Noëlie Vialles (1988). Vialles describes the prevailing logic of meat eating in Western societies as that of the sarcophage: a general distaste of eating any meat that is too reminiscent of the animal and its killing. The sarcophage logic involves a feeling of empathy toward animals, which leads to the concealing of the animal origin of meat to sustain meat eating. In the sarcophage logic meat is “a culinary substance” that is thought of “in terms of its destination and effects”, such as taste, fat content, and digestibility, and not in terms of the living creature.

Despite the predominance of the sarcophage logic, there are also meat eaters who are unconcerned about linking meat to an animal. Vialles (1988) calls this meat-eating approach zoophage logic—animal-eating. Zoophages like to recognize the animal in meat. Those food ingredients that remind them clearly of the animal, such as offal, are not despised but valued gastronomically. Because in the zoophage logic animals are objectified as bodies carrying food, there is no need to conceal the animal origin of food. People who are involved in gastronomy and animal farming often share the zoophage orientation to meat.

When examining how Finnish consumers negotiate their contact with farmed animals, I utilize literature on animal categorization. In the dominant meat culture, people are socialized from childhood to conceptually separate animals they eat from animals kept as companions (Stewart and Cole 2009). While companion animals are conferred high cultural visibility and some degree of subjectivity, animals destined to become food are not befriended, but typically remain unnamed, distant, and non-personalized (Serpell 1996; Stewart and Cole 2009). They have low cultural visibility and are highly objectified (Stewart and Cole 2009).

However, the positioning of individual animals in these categories is contingent and can change (Stewart and Cole 2009; Wilkie 2005). For example, the ostensible subjectivity given to pets is precarious, and they can lose their status as non-killable subjects when they do not fulfill their roles as pets (Stewart and Cole 2009). Likewise, some farmed animals can become personalized and people can become attached to them, particularly on small farms (Holloway 2001; Kaarlenkaski 2012; Wilkie 2005). These animals can “hybridize two categories—food animal and companion animal” (Stewart and Cole 2009, 463). However, their status as pets is unstable and there is always the threat of a return to the status of food animal (Stewart and Cole 2009, 463; Wilkie 2005). Often financial constraints lead to their re-commodification, and they are sent to slaughter (Wilkie 2005).
Materials and methods

Five focus groups were conducted in Finland in 2009 and 2010 as a part of a wider research project on consumers’ views about animal farming. The groups included participants with diverging orientations to the meat–animal link and varying contacts with farmed animals: gastronomes, hunters, organic consumers, rural women, and a randomly selected group of supermarket shoppers. Because a single group discussion was carried out with each group, the findings are not generalizable to each omnivore category. Instead, the research material brings out a diverse range of discourses around the meat–animal link among various groups of omnivores.

Focus groups give access to collectively generated meanings constructed in the group interaction (Morgan 1996; Tonkiss 2012). Group discussions provided a possibility to study how omnivores together produce discourses on the meat–animal link. In the collective meaning-making promoted by the focus group setting, participants describe their experiences and explain their views to other participants: they can ask questions of each other, express agreement or disagreement, and debate the topic (Belzile and Öberg 2012; Morgan 1996).

Because the focus group study explored generally consumers’ views about animal farming, the themes related to the meat–animal link were constructed when participants discussed, for instance, their shopping practices. The discussion guide included four broad themes: (1) information and experiences concerning animal farming, (2) consumption practices, (3) understandings of farm animal welfare, and (4) the perceptions of the mental capacities and moral standing of farm animals. In addition to these four themes, there were two that were used alternately in different groups: the animal question as a societal/political question, and trust and responsibility in animal farming.

Each group included six to nine participants and met for two hours. Before commencing the discussion, we informed participants about the research project, the recording of the discussion, the confidential management of the discussion material, and securing their anonymity in subsequent publications. After the discussion, participants filled in a form concerning their socio-demographic background.

Gastronomes were recruited through the Chaîne des Rôtisseurs Finlande, a gastronomic organization that admits members only on the recommendation of an existing member. The Finnish Chef Association was also used as a recruiting channel and provided one member for the group. Some of the participants worked or had worked in the food and restaurant business and others were non-professionals pursuing gastronomy in their free time. The hunters’ group included highly active hunters who had been engaged in hunting for twenty to forty years. Hunters were recruited through local game management associations and the local societies of the Finland’s Hunters’ Association. A student involved in the project recruited one participant. Organic consumers were recruited through internet discussion forums, e-mail lists, and bulletin boards. Only female organic consumers participated in this research because no males responded to the focus group call.

Rural women were recruited by an active volunteer from the Martha Organization, which is a popular women’s organization in Finland, dealing with food, nutrition, household economics, and consumer issues. The participants lived in rural areas and most had been involved in the organization for decades. Most of the participants had grown up on a farm, one was a full-time beef producer, two were retired dairy farmers, and one kept animals for
Participants in the supermarket customers’ group were recruited randomly outside two supermarkets. I approached people who exited the supermarket, and any person who was willing to participate and was not a self-identified vegan/vegetarian was invited to the group discussion until a sufficient number of volunteering participants was recruited.

The basic variables of each group are described in Table 1. To widen the geographic reach of the study, two groups were administered in Eastern Finland, while the remaining groups were run in Helsinki. However, the study does not make any regional comparisons regarding attitudes to meat because only one group type was recruited in each region. The rural women’s and gastronome groups included the oldest participants of all groups, with an average age of over sixty. The hunters’ group included mostly men in their fifties, but also one younger male and one female participant. Most of the organic group participants were in their thirties and forties, while the supermarket customer group had the youngest participants, including four students aged between nineteen and twenty-four. The gastronomes, hunters, and organic consumers were highly educated, most participants having a college or university degree. The focus group discussions were carried out in Finnish. Ethnic background was not enquired about on the questionnaire form.

The discussions were transcribed verbatim by the project assistants. I coded the transcripts by using the qualitative software NVivo® (QSR International, Daresbury, UK). I created codes and their categories based on the discussion guide and on points raised in the group discussions. Segments of the transcripts ranging from a sentence to discussion extracts were assigned to the codes. When reporting the focus group discussions, I have changed names and locations so that no participant is identifiable.

**Dissociating meat and the animal**

A predominant orientation that characterized the supermarket customers group was that of distance from animal farming and from farmed animals. The participants typically bought food from supermarkets, and they visited a butcher’s shop only when seeking meat for special occasions. Animal welfare was not given much attention in everyday shopping choices—among the more ethical choices mentioned were buying barn eggs and avoiding goose liver. Apart from one participant whose parents were retired pig farmers, the supermarket customers had little contact with current industrial animal production. Participants mostly shared childhood experiences with animals on their relatives’ or neighbors’ small farms.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Women</th>
<th>Average age</th>
<th>Living area</th>
<th>Education</th>
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<td>61</td>
<td>Helsinki Region</td>
<td>High school/vocational school: 2 College/university: 6</td>
</tr>
<tr>
<td>Hunters</td>
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<td>1</td>
<td>49</td>
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<tr>
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<td>9</td>
<td>41</td>
<td>Helsinki Region</td>
<td>High school: 1 College/university: 8 Comprehensive school: 3 Vocational school: 3 College/university: 2</td>
</tr>
<tr>
<td>Rural women</td>
<td>8</td>
<td>8</td>
<td>63</td>
<td>Eastern Finland</td>
<td>College/university: 5</td>
</tr>
<tr>
<td>Supermarket customers</td>
<td>8</td>
<td>6</td>
<td>31</td>
<td>Helsinki Region</td>
<td>High school/vocational school: 5 College/university: 3</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>26</td>
<td>48</td>
<td></td>
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</tbody>
</table>

Table 1. Focus group participants.
The two participants who talked most in the group pondered the meat–animal link a great deal, while others tended to support their remarks. Participants discussed how the transforming of animal into meat is “hidden within four walls” (Maria, 30–39 years). Visits to countries where one could see the heads and carcasses of slaughtered animals in butchers’ shops were contrasted with experiences in Finland where one could buy meat in clean packages. The participants expressed dislike of products that visibly reminded them of the animal origin and felt repugnance towards eating anything alive, such as oysters or sushi with living fish. “Preferably the food you eat is dead on the plate…. The gills of the fish are still moving in the most valued sushi in Japan” (Vera, under 20 years). They also discussed how they feel repugnance toward rare and medium-rare meat. The red color in raw meat was associated with blood, which appeared repulsive. “I always say that you can see blood in medium rare steak…. It’s red, and it looks so awfully nauseating that no human being can eat it” (Heidi, 40–49 years).

Similarly, the living animal the person had encountered was not associated with the product. One participant described a visit to a cowshed: “You touch the cow’s head and you don’t then think that someday it produces milk for your cocoa or ends up on the plate” (Vera). The product and the living animal were fully separate categories, as if there was no connection.

Think about the names of food. We’ve beef and mincemeat, but not any chopped cow. And there’s ham, not pig. We use really different names when we refer to animals and to food. So a child doesn’t think mincemeat when she looks at a cow…. (Maria)

But an adult doesn’t think that either…. Quite a few adults think about such things when seeing an animal. Well, when I was a child, I must admit that when a pig was slaughtered in our neighbors’ place, you could know in a way what it would become at Christmas. But they never brought us meat from that pig, so I didn’t think that the meat I was eating is from a similar pig to the pig in our neighbor’s place. (Heidi)

Discussion constructed in the supermarket customers’ group evinced the sarcophage orientation toward meat eating. The willingness to avoid the meat–animal link and repugnance toward products that evoked the idea of the animal indicate this orientation. Repugnance is associated with the feeling of defilement when one has transgressed significant boundaries (Mennell 1985). If the animal-derived food shows any trace of life—an oyster that is said to be alive or a fish that still shows signs of movement—it appears highly repulsive for the sarcophage, who prefers to disguise the fact that the food eaten comes from an animal. This revulsion extends also to blood, which is visible in rare and medium-rare meat. Blood signifies life: it is the “essential vital fluid” that animates the body and makes it alive (Vialles [1987] 1994, 76). Visible blood indicates a trace of life in meat and evokes the idea of a once-living animal.

**Connecting meat and the animal**

The rural women and gastronomes appreciated products that included more overtly animal-like ingredients, such as tongue, offal, bones, and tails, and they criticized heavily the tendency to eat industrial and de-animalized meat in mainstream food culture. In the quote below, gastronomes note, partially in an ironic tone, how people nowadays do not want to associate meat products with animals. People are not willing to eat, for instance, tongue,
liver, and kidneys because these products vividly remind them that they have been entrails of an animal. “Blinkeredness” and “prejudices” against offal have increased:

People can associate the animal they’re eating with an image of a cute animal or a brutal animal…. Many eat almost any kind of meat, but when you serve tongue, they don’t eat it. “Yuck, the tongue.” … The animal creates a similar feeling in the person who is preparing the meat: “Yuck, this kind of beast.” So then she doesn’t eat it, isn’t it so? (Tuomas, 40–49 years)

Yes, and they don’t eat kidneys or liver. People have become more and more blinkered toward these products. (Hanna, 60–69 years)

…

We have tremendous prejudices toward entrails and the like. (Mikael, 60–69 years)

Gastronomes and rural participants complained about the reduced availability of the products that are less de-animalized. It was difficult to find non-packed and even non-marinated meat in supermarkets, not to mention whole chickens and meat with bones. Moreover, gastronomes discussed how even in more quality-oriented shops it was now difficult to find certain carcass parts, ox tails, offal, and certain types of meat such as piglets, horsemeat, and roasted sautéed reindeer. The selection of fish in fishmongers had also declined; even “fish is sold nowadays cleaned without bones, without head” (Matti, 60–69 years):

I thought Helsinki is a city where I could find the products when I want to prepare rams’ testicles, or I want to get tongue, or I want to prepare this and that. Really, in the shops you get nowadays…. I make myself seem stupid every day when I go to ask, “Do you have this product?” (Tuomas)

The more animal-like qualities, such as fats, skin, fascia, and bones, were seen as important for the taste and nutritive quality of food. Ready-packed and ready-marinated meat was considered low quality and bland. A gastronome mentioned, “[M]eat is purified too well in Finland. All the aromas are taken out, and the quality declines. Vitamins are probably removed with fascia and other ingredients, such as fats” (Matti). A rural participant remarked, “the packed meat doesn’t even taste like meat” (Linda, 60–69 years).

Because of the reduced availability of these products, it was difficult to prepare certain dishes anymore. Meat soup without bones “doesn’t taste as it should” (Liisa, 70–79 years, rural women). Gastronomes and rural participants criticized the mainstream food culture that values fast and easy cooking. Nowadays consumers lack even basic skills of preparing meat and understanding of different tastes. The decline in using different carcass parts and offal was considered a loss in the food culture: “We throw away those carcass parts our forefathers, and particularly foremothers, never threw away…. So we lose important food qualities and tasting experiences” (Henri, 60–69 years, gastronomes).

The process from a living animal into meat seemed visible to rural residents and gastronomes. The notion that animals grow meat, bones, and entrails in their bodies to be eventually consumed after slaughtering did not appear as an issue that needs to be concealed. This relates to the agricultural background of the participants; in addition to rural women, some gastronomes had also grown up on a farm. These participants had witnessed animal slaughtering and participated in cutting up carcasses:

Of course you always think that you’ve a background, that you’ve seen how those animals have grown up, and how they’ve been looked after well and seen how they’ve been killed. (Henri)

The following discussion excerpt from the rural women’ group also illustrates the lack of uneasiness with slaughtering an animal and utilizing various parts of it. Here, the animal
is already talked of as food, being evaluated in terms of the taste and quality of meat. Slaughtering the animal and cutting up the carcass at home is associated with high-quality meat:

We have this bull production, and always some accidents occur there, a leg is missing or something like that, so we have butchers there in the yard. We just take the bull out from there, and we hang it up for one day, we remove the skin…. (Laura, 50–59 years)

You lucky people. (Linda)

… and liver and all like this, we use the tongue. We just chop up the raw meat next day…. (Laura)

That's certainly good. (Anneli, 60–69 years)

It does take two or three days to chop up such a bull, but…. (Laura)

But think about what you can eat. (Anita, 70–79 years)

Yes, we can eat really good-tasting meat. (Laura)

Rural women and gastronomes associated the welfare of animals with the quality and taste of meat. Meat from industrial farms was considered lower quality than meat from farms that allowed animals to live a more natural life. “You can taste in pork what kind of life the pig has lived. You can taste if it has lived a good life” (Anneli). In both groups, participants favored short food-supply chains to gain good quality meat. Rural residents acquired food from their own farm or hobby farm, farmer relatives, or friends and local farms. Gastronomes also bought meat directly from farms, reindeer producers, hunters, and quality-oriented butchers. “Currently I buy meat from a certain butcher’s shop and there I consider what kind of meat I buy and I want to hear the story behind the meat…. I avoid bulk meat” (Timo, 50–59 years, gastronomes).

The zoophage orientation was evident in the discourse of meat constructed by gastronomes and rural residents. These participants showed no disgust toward those animal-derived products that most visibly reflect the animal origin of food. In contrast, if the animal is made absent from food by removing fat, bones, fascia, tails, and so on, this implies a notable deterioration in its taste and quality. According to Vialles (1988), the eating of offal most strongly differentiates zoophages from sarcophages. Of all animal-derived foods, offal evokes most vividly the idea of the animal. Offal is necessary to the biological functioning of the animal while meat represents a surplus: an animal with mere skin and bones can still stay alive. Because an animal cannot live without its essential organs, offal is most clearly reminiscent of the life of an animal, and hence the animal’s similarity to humans as a living being. Moreover, offal maintains its natural appearance, and, in contrast to meat, the gastronomic vocabulary does not mask it: liver is still referred to as liver, and heart as heart.

Rural residents and gastronomes had no need to conceal the animal’s more recognizable features in food because in the zoophage orientation animals are already objectified (Vialles 1988). As Vialles (1988, paragraph 19) writes:

In this logic, the animal as a singular living being is concealed: from the onset, its existence is defined as being solely alimentary. It is “animal flesh” that is “fed” with fodder. The identification of the link between flesh and the animal does not at all imply the recognition of the animal as such, but the identification of the consumable qualities it carries—qualities that can be accessed through taking its life. The animal is therefore considered as a kind of living larder and can as such be treated well. Taking good care of the animal amounts to taking good care of one’s own food.8
It was evident in the rural women’s and gastronomes’ discussion that animals indeed appeared as living larders growing food—meat, bones, offal—in their bodies. Taking good care of animals ensures that the food from them will be of good quality.

**Connecting meat and the animal: the case of game meat**

Game meat is a special case in the meat–animal link as the hunter personally kills the animal, cuts up the carcass and prepares a meal from the meat. Hunters discussed at length the high value they give to game meat. Game meat was considered festive food that was served on special occasions. It was given only as a present and never sold:

> The meat we get [through hunting] is certainly festive food…. If I get a hare, I try to prepare it every time in a different way so that it would taste all the time better, and most of all, so that it would really taste like game…. Then it tastes good, and it’s a feast every time. (Harri, 50–59 years)

> In the beginning, because of the small amount of the kill, I had to consider which guests I could serve with the valuable top food. But when I got some kilos of meat from a moose hunt, at that point the Christmas ham changed to moose roast. (Markus, 60–69 years)

The rarity and distinct taste of game meat distinguished it from the meat of farmed animals, which was more mundane everyday food. Moreover, the high regard for game meat was also linked to the time and effort needed to catch the quarry as well as to the valuation of the hunting experience and the time spent in nature. By regarding game as festive food the hunters wanted to “show appreciation of the hunting pursuit, the way in which game meat is acquired and to all nature” (Markus). Eating game was the culmination of the hunt, which might have lasted for days. “A certain kind of festivity and a fine thing is created when you can transform the animal into a meal as a follow-up of a wonderful hunting day or week” (Leo, 50–59 years).

> In contrast to meat from farmed animals, acquiring game meat required much effort: “Often you have put in much time and effort, possibly many days” (Tomi, 20–29 years) to get the game. Moreover, the whole chain from animal into meat is visible to the hunter:

> Not only is the game caught by oneself, it is also directly from nature, and you know the whole chain when you have got it as a kill, how it's been processed, stored and prepared as food. (Emma, 30–39 years)

Across cultures, game meat tends to be valued more than meat of farmed animals (Russell 2012). Hunting tends to have prestige because catching the quarry often requires much effort, time, and skill (Russell 2012). The outcome of the hunt is not predictable, and the success of killing an animal is valued by the hunter precisely because it requires triumphing over many difficulties and failures (Marvin 2006). Hunting is frequently ritualized, as evinced by the elaborate rules that regulate it and the ceremonies and symbolism attached to it (Marvin 2006; Russell 2012). The high regard for game expressed in the hunter group indicates a ritualistic approach to game meat, which was apparent in the ways of preparing it, eating it on special occasions, sharing it with significant others, and giving it away only as a present.

Hunting involves symbolism related to the social order between humans and animals; humans win their domination over animals through their skills and technology (Marvin 2006; Russell 2012). The hunters expressed a dominating attitude toward animals. As one participant put it, “The human is at the top of the food chain as a kind of super-predator”
(Emma). While hunters come physically close to quarry animals and they need to develop a certain degree of understanding of their living habits and experiences (Marvin 2006; Russell 2012), species-based moral distance is still maintained for them as animals are rendered killable.

Eating personalized animals

Contact with animals categorized as food and their personalization was given some attention in the focus groups. In the supermarket customer group, it was considered that if animals often categorized as food-producing animals, such as rabbits and hens, are kept as pets, it is no longer possible to eat them. “I can’t eat hare because I had a rabbit when I was a child” (Nina, 20–29 years). Here a participant in the organic consumer group notes the impossibility of eating an animal that she knows personally:

My brother used to keep sheep in his summer cottage, and they were slaughtered in autumn. I couldn’t eat sheep there because I remembered that I had stroked them. In general, I can eat horsemeat, but when a horse I’d looked after was put to slaughter, I couldn’t eat horse for a while, because I thought that exactly the one I know personally is there. (Pauliina, 40–49 years)

The question of eating horsemeat appeared problematic, particularly in the supermarket customer group. Finns tend to relate with horses in ambivalent ways because horses are both kept as companions and used as food (Schuurman 2012). In the supermarket customer group, some participants mentioned avoiding bologna sausage because it includes horsemeat. “They were perhaps the first ethical choices when some people started to refuse to eat the bologna sausage. They thought it includes horsemeat” (Ellen, 20–29 years). Because in the sarcophage logic animals are empathized with, there is a possibility that eating meat becomes akin to eating a fellow being—“eating of the same, the like” (Vialles 1988, paragraph 23). Animals that are known personally and treated as pets appear to people as subjects capable of various emotions and cognition, similarly to humans, and are consequently rendered inedible.

In the discourse constructed by the rural women and organic consumers, some animals appeared to hybridize the categories of food and companion animals. Because most rural participants had grown up on small farms and some kept or had kept a small number of animals, they shared stories about their experiences with farmed animals. Hens and ducks were considered quick to learn, and cows clever and able to sense the emotions of the animal keeper. Certain animal personalities were remembered for decades. Looking after animals and learning about their personalities created unease about sending them to the slaughterhouse or eating them. It was particularly difficult to send cows to slaughter because they had lived on a farm for years:

Sometimes I had to be present when the slaughter truck came … and to say to the truck driver that this cow is leaving. My mother-in-law once said that she used to cry for her cows … but after her husband died, she no longer cried for them. If you have to be capable of letting go humans, then you have to be able to let go cows as well. (Kati, 50–59 years)

However, although some animals elicited feelings of attachment and were described as friends, it was remarked that they are not only pets, but also kept for production purposes. One should remember to maintain a degree of emotional distance from animals destined to become food:
Rarely is a production animal only a pet. My mother once said that you should have animals in such numbers that you would not need to cry for them. And I know for sure that my mother really liked each of her animals…. However, an animal has been bought for production purposes and they are also bred because of it. (Anneli)

Organic consumers were highly interested in farm animal welfare and they bought organic products for ethical reasons. However, they were uncertain whether the organic standard is sufficient for animals. Consequently, some of the organic consumers preferred shorter food chains, getting game from familiar hunters, buying meat from reindeer producers, and buying products directly from organic farms. One participant had lived on an organic farm and another had raised sheep and hens for domestic consumption. While rural women took contact with farmed animals as given because of their farming background, organic consumers constructed personal contact with animal farming predominantly as a moral issue. When one has witnessed personally that the animal has lived a good life, it was more acceptable to eat that animal's products. Moreover, having been eye to eye with an animal gave an entitlement to eat its meat:

I've lived on an organic farm … and I ate meat there because I could look the animal in the eye and then on a plate. On the other hand, some people say that they can't eat meat when they know that it comes from a cow that they'd learned to milk. But in my head it works the other way round, so that in that case I can eat its meat…. From my ethical perspective, then, I can allow it to myself. (Karoliina, 40–49 years)

We used to have sheep and hens. They weren't cats and dogs, but of course it was hard to eat them the first time. However, I thought that if I can't eat this meat, then I can't eat any meat. (Erika, 30–39 years)

The participant who had raised sheep discussed the experience of eating a ram that was given a name (but not an individual name, as all rams of a certain genetic line are given the same name). Keeping the ram in a freezer and preparing a meal from him created unease, but in the end, the participant considered this “healthy”:

When Paavo was turned into meat it was somehow…. It was at first really horrible when Paavo was there in the freezer and you had to make food, and the children asked, “Mom, when are we going to eat Paavo?” But then, it was somehow really healthy that Paavo was taken from the freezer and Paavo's skin was given to a neighbor's baby. (Erika)

Proximity to animals, spatial or emotional, is assumed to create a more moral relationship with them. For some of the organic consumers, being able to face the animal “eye to eye” implied that moral cowardice was avoided: if the consumer is unable to eat this animal but continues to eat anonymous animals, her/his moral integrity is compromised. Hence, eating meat from a personally known animal appeared “healthy,” implying moral corruptness in the consumption of anonymous animal products. Organic consumers did not question the use of animals as food, and eating animals was considered a natural part of the food chain.

Although some farmed animals became more personalized, subjectified, visible, and close to the rural women and organic consumers, they still did not lose their status as food animals. However, reasserting the position of the animal as a food animal once it had acquired a degree of pet-like status was not emotionally easy. Some animals had become to some extent mournable, implying an acknowledgment of the special value of their lives (Redmalm 2015). The hybridization of the categories of food and companion animal was evident in the tendency simultaneously to perceive the animal as a unique individual and to objectify her/him as a body accumulating food (Holloway 2001).
Conclusion

This article has demonstrated diverse discourses that Finnish consumers construct concerning the meat–animal link. Because most of the gastronomes and rural women were over sixty years old, their zoophage approach stems from their experiences of the non-industrialized food culture that still prevailed in Finland in the 1940s and 1950s; meat was commonly gained from animals raised by the household or in the neighborhood (Sillanpää 2003). The agricultural background of the rural women and some of the gastronomes also shows up in their zoophage orientation. These participants had maintained their interest in preparing dishes from various parts of animals and in gaining meat from non-industrialized local farms, although the industrialization of the food system had made this more difficult. The gastronomes and rural women differed most strongly from the supermarket customers who were the youngest of the participants, accustomed to buying ready-packed meat from supermarkets and having little contact with animal farming. The gastronome and rural groups associated animal welfare and meat quality with proximate and non-industrialized farms, an orientation which involved them in the contemporary ethical omnivore discourse alongside the organic consumers.

The supermarket customers, rural women, and organic consumers expressed more emotional tensions related to killing animals for food than the gastronomes and hunters. The first three group types were female-dominated or female-only and the last two male-dominated, suggesting a gendered pattern. Men on average tend to endorse more pro-meat attitudes and express less concern for farm animal welfare than women (Rothgerber 2013). Women are more likely than men to dissociate animals from meat and to avoid thinking about the treatment of animals (Kubberød et al. 2002; Piazza et al. 2015; Rothgerber 2013). This dissociation tendency was evident in the supermarket customer group. The emotional tensions were strong, particularly in the organic and rural groups, whose participants had personally looked after animals destined to become food. Human–animal relations have been highly gendered in Finnish farms; women had the main responsibility of caring for animals until the industrialization of farming increased male participation in animal-related labor (Kaarlenkaski 2014). As caring for animals on small farms often encouraged emotional bonding with animals, the emotional difficulties of giving up animals especially concerned women (Kaarlenkaski 2012, 2014). In this study, rural women particularly valued traditional cattle tending in which animals were cared for individually. Yet these intimate cattle–human relations involved inherent tensions, as the animals were utilized for food and income (Kaarlenkaski 2014).

In the ethical omnivore discourse, the happy animal and the personal witnessing of his/her life and death appears to remove ethical dilemmas related to exploiting and killing animals for food (Linné 2016; Tiengo and Caffo 2012). In this discourse, proximity to animal farming and killing is assumed to bring out more ethical eating practices (Pedersen and Stanescu 2014). However, the concepts of proximity and connection constructed in the ethical omnivore discourse have become increasingly problematized (Gillespie 2011; Stanescu 2013). Physical proximity to animals can function alongside emotional or moral distance from them (Gillespie 2011). While animals can be identified with, they can be simultaneously constructed as distanced and, despite proximity, the species gap can remain unchallenged (Linné and Pedersen 2016).
This research suggests that challenging the physical segregation of farmed animals does not in itself necessarily imply an increased moral valuation of their lives. As evidenced by the discourse constructed by organic consumers and rural women, personalized and emotionally valued animals can still be categorized as food. Similarly, when animals are constructed as bodies carrying food, as in the zoophage discourse of gastronomes and rural women, making the link between meat and an animal does not raise problematic moral questions related to killing animals for food.

While challenging the dissociation strategy can encourage omnivores to consider the moral impacts of their meat-eating, the objectification of animals also needs to be challenged in those situations when omnivores embrace the zoophage orientation. People’s desire for closeness with animals includes a potential for change when the typical framings of farmed animals and the mechanisms of othering are deconstructed (Linné and Pedersen 2016). For instance, visits to animal sanctuaries can encourage people to reflect more deeply what kinds of relations they can form with other animals outside the realm of commodification (Linné and Pedersen 2016). When people have more opportunities to create connectedness with animals outside the realm of food production, this can encourage them to recognize animals as individuals that are more than the consumable qualities they are seen to hold and who can diverge in unexpected ways from the stereotypic image of the species (Donaldson and Kymlicka 2015).

Notes

1. Vialles takes the term from the ancient Greek word for a stone coffin, sarcophagus (Fr. sarcophage), meaning flesh-eater (Gr. σαρκοφάγος from σάρξ, sarx, “flesh,” and φαγεῖν, phagein, “to eat”). In her analogy, just as limestone sarcophagi were thought to consume the flesh of corpses deposited in them, so in the sarcophage logic animal flesh is consumed subconsciously.
3. Two participants in the organic group did not eat meat, but consumed fish, and one identified herself as vegetarian, but mentioned eating meat on certain occasions when she considered it ethically acceptable.
4. Fourteen women replied to the focus group call, and nine were invited to participate. Because we used several recruiting channels, which included both female and male audiences, and because the group discussion was scheduled soon after the closing of the focus group call, we decided not to do further recruiting to attract male participants. In Finland, women are more interested in organic foods and buy them more frequently than men (Saarnivaara 2015), and this may explain why women showed more interest in participating in the research.
5. The age distribution of the rural women and gastronomes is similar to that of the Martha Organization and the Chaîne des Rôtisseurs Finlande: more than 70 percent of their members are aged fifty and over (Chaîne des Rôtisseurs 2015; e-mail from Anna-Maija Palosuo, the Martha Organization, March 15, 2017). The age and gender distribution of the hunters was typical of their reference group; 43 percent of Finnish hunters are forty-one to sixty years old and 95 percent are men (Toivonen 2009). However, the hunters were notably more educated than Finnish hunters on average (Toivonen 2009). Better educated people tend to buy organic foods more frequently than people with less education (Saarnivaara 2015), which may explain why the organic consumers were well-educated.
6. Persons of Finnish background and speaking domestic languages as their first language comprise 94 percent of Finland’s population (Statistics Finland 2017). In the research project, no special effort to reach various ethnic groups was made by the study design and recruiting channels. For instance, participation in the focus group discussion required proficient Finnish-
language skills. Consequently, this study does not examine how the growing multiculturalism in Finland is reflected in Finns’ attitudes to meat and animals.

7. Barn-raised hens have more space and more opportunities to perform species-specific behaviors than caged hens, although high densities can impair movement (Lay et al. 2011). In foie gras production, force feeding cause distress, pain, and injuries to birds, and birds also suffer from impaired health and mobility because of an enlarged liver and obesity (AVMA 2014).

8. English translation by Jonas Simola. The original French text is available online in Terrain at http://terrain.revues.org/2932.


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References


Public attitudes form an important driving force that shapes the situation of animals in society. Therefore, it is important to understand these attitudes and the factors that influence their development. Drawing on sociological animal studies, this thesis examines Finnish attitudes and perceptions regarding animals used in food production. It also explores the meanings consumers associate with the use of animals for food in their everyday food practices.