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Attitudes Towards Animals and Animal Welfare

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Table of Contents

INTRODUCTION	3
METHODOLOGY	4
DEFINITIONS	5
DELIMITATIONS	6
PART 1	7
1.1. SUSTAINABILITY AND ANIMAL ETHICS	7
1.2. THE USAGE OF ANIMALS AND ANIMAL PRODUCTS	11
1.2.1. FOOD	11
CHART 1: CHANGES IN MEAT CONSUMPTION, KG PER CAPITA, 1961-2002	12
FIGURE 1: LIVESTOCK POPULATION AND PRODUCTION IN DIFFERENT PRODUCTION SYSTEMS	14
FIGURE 2: SCATTERPLOT OF MIND AND EDIBILITY RATINGS	16
1.2.2. ENTERTAINMENT	18
1.2.3. ANIMALS USED FOR FUR AND LEATHER	20
1.2.4. ANIMALS USED FOR EXPERIMENTATION	21
1.2.5. PETS	24
1.3. ANIMAL WELFARE ACTIVISTS	26
1.3.1. ANIMAL WELFARE ORGANIZATIONS	26
CHART 2: ANNUAL INCOME OF WELFARE ORGANIZATIONS IN US\$	27
1.3.2. ANIMAL RIGHT ACTIVISTS	29
1.4. THE HISTORY OF ANIMAL WELFARE AND THE PHILOSOPHY BEHIND IT	30
1.5. DIFFERENCES IN BELIEFS	41
1.6. STUDIES	44
FIGURE 3: BELIEF IN MENTAL CAPACITIES OF ANIMALS	46
PART 2	48
2.1. INTRODUCTION TO THE SURVEY	48
2.2 HYPOTHESES	49
2.3. ANIMAL WELFARE IN LATVIA	50
2.4. METHODOLOGY	51
2.5. RESULTS OF THE QUESTIONNAIRE	54
2.5.1. RESPONDENTS	54
CHART 4: MONTHLY INCOME OF THE FAMILY	55
CHART 5: MONTHLY INCOME PER PERSON	55
CHART 6: KNOWLEDGE ABOUT ANIMAL WELFARE	56
CHART 7: SOURCES OF INFORMATION	57
CHART 8: BELIEF IN ANIMALS' ABILITY TO EXPERIENCE PAIN AND MORAL SUFFERING	58
2.5.2. RESULTS ON THE HYPOTHESIS	59
CHART 9: EFFECT OF NEGATIVE INFORMATION ON THE ATTENDANCE OF THE ZOO AND THE CIRCUS	59
CHART 10: EFFECT OF THE NEGATIVE INFORMATION ON MEAT-EATING HABITS	60
FIGURE 4: THE EFFECT OF DIFFERENT FACTORS ON PEOPLE'S RESPONSE TO NEGATIVE INFORMATION	64
FIGURE 5: THE EFFECT OF DIFFERENT FACTORS ON PEOPLE'S ATTITUDES	66
2.6. DISCUSSION OF THE RESULTS	68
PART 3	73
3.1. DISCUSSION OF THE FINDINGS	73
3.2. CONCLUSION	78
3.3. SUGGESTIONS FOR FURTHER RESEARCH IN THE FIELD	78

SOURCES	80
APPENDIX 1: MEAT PER CAPITA	84
APPENDIX 2: THE INTERVIEW	90
APPENDIX 3: THE QUESTIONNAIRE	98
APPENDIX 4: CHARTS	106

Introduction

Nowadays, many organizations are affected by pressure from various non-governmental organizations and the society. The effects of pollution on the environment, chemicals used during the production process, child labor and other issues have been addressed during the last couple of years to find solutions that would allow to operate businesses in a responsible way. Solutions such as new laws, pollution quotas and close monitoring of certain types of organizations have allowed discussions about this rather sustainable way of doing business which previously had seemed harmful. Today more and more organizations involved in activities harmful to animals have been forced to respond to new laws and regulations and to find a way to explain their actions or make them less prominent.

The Cosmetics Directive that came into effect in 2013 envisaged a ban on testing completed cosmetic products and cosmetic ingredients on animals and a marketing ban to disallow in the European Union the marketing of cosmetic products and ingredients included in cosmetic products which were tested on animals. In 2013, *Dyrenes Beskyttelse* persuaded the supermarket chain *Kvickly* to stop selling cage eggs in its stores in Denmark.¹⁴

Activism in the field of animal welfare puts many organizations in an uncertain situation, because organizations have to alter their businesses practices to respond to the public pressure when new scientific information about the capabilities of animals is discovered or new evidence about how animals are treated is revealed. All in all, people are paying more attention to animal welfare, but the future response of the society to various issues concerning animal welfare is hard to predict due to its potential differentiation. For example, some people have chosen not to wear fur or leather products, but others would prefer fur or leather products because they believe it is practical or is a symbol of status. Some people believe that meat production should be limited, whereas others believe that meat is part of a very healthy diet. In spite of the growing support for animal welfare organizations, the total amount of meat consumed annually continues to rise, which puts some animals in a miserable situation, while some other animals are being taken good care of.

As pressure from the society affects companies to a high degree, the following questions will be examined in the present paper:

What are the current attitudes towards animals and animal welfare and what are the reasons behind these attitudes?

With support from the central question, the following additional question will be addressed:

To what degree new, negative information about animal welfare in different organizations affect people's meat eating and entertainment habits?

The research will be based on qualitative studies, and more in depth information will be obtained through the case study, which will examine the attitudes of people in Latvia and the effect of potentially negative information on these attitudes.

Methodology

The present paper has three parts. The aim of the first part is to discuss current opinions and research previously carried out in the field, to identify people's attitudes towards animals and to explain the most common attitudes and beliefs.

The first part is based on the research papers in the field, currently widely discussed opinions, information found on the Internet and a telephone interview of April 26, 2013 with Jan Lund Ottensen who is Vice President and Head of Laboratory Animal Science at *Novo Nordisk*. The various approaches used in the first part of the paper were selected based on the wide variety of information and the various levels of availability of information.

The telephone interview was a semi-structured interview in which questions were based on common knowledge, data available on the website of *Novo Nordisk* and information obtained at a conference held in May 2013 by *Dyrenes Beskyttelse* where the issue of experimental uses of animals was addressed. The telephone interview was recorded, transcribed (see Appendix 2) and later used in order to better understand the use of animals in pharmaceutical experiments.

The second part of the paper comprises a questionnaire that was available online. The aim of the questionnaire is to apply the obtained knowledge to a specific case

study and to examine the effect of information on people's willingness to change their attitudes and habits. The empirical research is based on quantitative data and information collected in Part 1 of the paper. The questions were developed in a way that would allow not only to draw direct conclusions, but also to analyze the data to gather more in-depth knowledge about the origins of the attitudes with consideration to appropriate design (Punch; 2005).

The country where the case study took place is Latvia, a European Union member state. The choice of the country was based on the Eurobarometer report for 2006, which rated the opinions of Latvians towards animal welfare issues as one of the least positive, thus opening an opportunity to examine reasons behind the diversity in attitudes and the potential effect of new information on these attitudes.

The questionnaire was distributed online by means of the *SolidData* online research panel. The *SolidData* panel recruits respondents by means of email and online marketing tools. In order to maintain a reliable and representative group of survey respondents, a variety of techniques is used, including regular screenings of the panel. The online panel is representative of the Latvian population. The methodology of the questionnaire is discussed in detail in the second part of the present paper.

The third part of the paper consists of a discussion that is based on both the first and the second part of the paper, and it discusses the potential importance of animal welfare in the future.

Definitions

Nowadays, in academic literature that deals with animal rights or animal welfare the term “non-human animal” is widely used to refer to all animals that are not human. In the present paper term “animal” means non-human animals. The term “animal” was chosen to set humans apart from animals rather than to emphasize the equality of humans and animals..

In the paper, a difference between the terms “animal rights” and “animal welfare” is preserved. All the other terms, if not specified, are used in the most general meaning of the word.

Delimitations

The study is based on the best representative information to the knowledge of the author of the present paper. Due to the wide availability of different types of information, information suitable for this particular paper was selected by the author and might not represent some common attitudes or views. Animal welfare is currently not commonly seen from a perspective of sustainability; therefore, the information used in the paper has not necessarily been intended for the purposes of this paper; however, it has been applied to represent a case.

It should be taken into consideration that in the paper, the material is analyzed from the perspective of animal welfare and ethics, rather than from the perspective of businesses.

The questionnaire was conducted in Latvia. Although, according to the Eurobarometer (2006), Latvians have been one of the least positive towards the importance of the welfare of farmed animals, rating 7.3 out of 7.8, the difference in attitudes has not been considerably different from the average attitudes of the other EU nations; therefore, the results of the questionnaire can represent, to some degree, the general attitudes of EU citizens.

Data was collected using the Internet; therefore, the results might represent the attitudes of people who have access to the Internet, which is generally more available in the larger cities of Latvia than in the rural areas or on animal farms.

As the main goal of the questionnaire in the present study is to assess the effect of the availability of information, particularly on the Internet, the target group of the questionnaire is considered suitable for examining the hypothesis.

Part 1

1.1. Sustainability and Animal Ethics

Nowadays many organizations that base their business on animals often justify their actions by relying on ethical theories, such as utilitarianism, virtue ethics, or even religion. These theories justify or disallow the use of animals in different, often controversial, ways, thereby allowing the companies to excuse their actions by applying suitable theories to the various situations. For example, Copenhagen Fur¹⁵, which is one of the largest fur producers, speculates on people's habit to consume meat products and has provided false information about the situation in the mink farms by claiming that very few minks are injured during the fur production process. *Dyrenes Beskyttelse*, the largest and oldest animal welfare organization in Denmark, confronted Copenhagen Fur in an open letter stating that, according to the evidence they gathered during raids on the fur farms, many minks are found injured during the fur production process.¹⁴ *Dyrenes Beskyttelse* also provided information about the life standards of minks in the wild, which proved that there is nothing ethical or responsible in fur production, except for the fact that fur is degradable and, therefore, does not pollute the environment.

The increasing pressure from different welfare organizations, NGOs and the society puts many organizations in situations where companies themselves are forced to take “voluntary” actions towards a more sustainable business. For example, Denmark has adopted a voluntary ban on growth-promoting antibiotics in the pork production system.

In present, approaches applied to animal welfare in most of the organizations are still governed by the growth paradigm of capitalism with little consideration towards animals. The current economic model works against sustainability, because according to Paula & Cavalcanti (2000), “to sustain,” means ‘to prolong the productive use of our natural resources over time, while at the same time retaining the integrity of their bases, thereby enabling their continuity’. The resources of our planet are limited, and when the resources are exceeded, money will start to affect our lives on a different level. Therefore, there should be a limit on how much we are willing to pay for material goods, when the costs of material goods are the

environment, relationships, the future and other living beings (Paula & Cavalcanti; 2000).

Some scientists believe that business practices that involve the treatment of animals will have to change, because corporate social responsibility will become even more important in the future. These changes will have to include ethical concern that has to be given to animals. According to Reiser (2013), corporations that commit themselves to acting in a socially responsible way should honour animal rights. He believes that in the future more and more businesses will commit to socially responsible practices, as it makes for good business in a world where such an approach to ethics is becoming a must have. Reiser also believes that one of the main reasons why human attitudes towards animals will change is easy access to information. Today people are becoming more aware of the situations on the “backstage” of the companies, and the more actions will be visible, the less they will be tolerated (Reiser; 2013).

To achieve a sustainable economic structure and, thereby, equality, the current system needs to be questioned. Individuals need to be active participants to shape the world we live in, as well as the future. According to Paula & Cavalcanti, “In order for a society to question adopted values, its individuals should be active agents, conscious of themselves and of others. Firstly, these individuals should be endowed with a sense of their own purpose; then they should have a sense of responsibility for their actions and the consequences that these actions provoke.”

Shearman (1990) believes that sustainability is a concept of searching for a framework rather than a definition, because it is about more than making changes in others. It is also about managing ourselves.

Not only human attitudes towards animals or a company’s self interest in corporate social responsibility will affect the attitudes of people. By 2050, the world’s population will have reached nine billion. Currently livestock farming causes 18% of the global greenhouse gas emissions contributing to climate change. Although it is certain that by 2050 more food, water and energy will be needed, it is not clear whether a sustainable intensification of the production process is possible, as it is already causing many problems in terms of animal welfare, climate change and shortages of food in the world. McCulloch (2012) proposed that instead of planning to intensify the production process, fundamentals like population growth, excessive consumption of animal products and economic policies should be addressed. A further

intensification of the production process would increase the suffering of sentient animals, which the society has deemed morally unacceptable.

Potential sustainability issues in the future are already being addressed by means of rather creative solutions. Instead of focusing on the idea of intensifying the meat production process or changing the attitudes of humans, enjoyable alternatives to meat can be offered. Nowadays, there already exist many vegetarian alternatives available in stores, offering people the option to reduce their consumption of meat products by substituting them with protein-rich alternatives. Unfortunately, despite the possibility to choose a protein-rich alternative, meat substitutes are not chosen often. This might be due to a lack of alternatives and the relatively high price of the product. According to a 2011 survey on person- and product-related factors in consumer acceptance (Hoek et al.; 2011), people are not willing to choose meat substitutes due to their unfamiliarity with the products and due to the low attractiveness of the meat substitutes compared to meat. According to the study, for people who eat meat it is often important that the taste of meat substitutes resembles the taste of meat, unlike for the people who do not eat meat or eat it rarely. This means that in order to attract heavy meat eaters to meat substitutes, it is necessary to improve the taste of meat substitute products.

Another alternative to meat is insects. People in many countries have been eating insects for centuries, yet it is still not traditional in the West, because in the Western world eating insects is associated with disgust and is perceived as a sign of primitive behaviour. It is estimated that insects form traditional diets of at least two billion people. Insects are still rich in protein, but they are reported to emit fewer greenhouse gasses and require significantly smaller amounts of water and land than cattle rearing (Huis et al.; 2013). Even though many people associate insects with disgust, *Nordic Food Lab*, a non-profit, self-governed organization established by Rene Redzepi, the head chef of *Noma*, and entrepreneur Claus Meyer, believes that by 2050 all people will eat insects. Insects have already been served in the high class restaurant *Noma* as an extraordinary dish, and the restaurant's food laboratory is currently working on developing more interesting ways to prepare insects.

Although animal use for food is one of the most challenging areas to address due to the increasing consumption of meat and population growth (FAO Statistical Yearbook; 2013), other areas where animals are used for human purposes should also be taken into consideration. For example, many animal species are endangered or have been

exterminated due to an unsustainable use of natural resources; many animals are hunted for their horns or furs, others are used for entertainment. In spite of criticism, the existence of zoos can be legitimized in many ways. For example, many endangered species are kept in zoos, while in the wild these species would go extinct. Zoos often help injured or abandoned wild animals and educate people about animals and animal welfare.

Besides entertainment, zoos also have educational and other functions. Circuses, animal fights and other ways of entertainment, on the other hand, cater to the human need for entertainment only, which can easily be substituted by alternatives. For example, Circus De Soleil have chosen to substitute animals with professional and well-trained athletes, thus reinventing the concept of circus. Transporting, training and housing animals is not only unethical and damaging to the animals themselves, it also accounts for the largest part of a circus' expenditure.

Although fur industry claims that fur products are sustainable, long lasting and biodegradable, the production of fur requires a lot of resources. The production of one kilogram of mink fur requires 11.4 mink pelts. In its lifetime, one mink consumes around 50 kilograms of feed, which includes around 30 kilograms of chicken, 15 kilograms of fish and almost 5 kilograms of wheat and other additions. Besides the feed, the production of fur requires electricity, heating and other resources. The production of one kilogram of mink fur affects climate change five times more than the production of any other textile, such as wool, cotton, polyester and others (Bijleveld et al.; 2011). Besides the impact on the environment, the production of mink furs does not take animal welfare into consideration. Minks are kept in small cages, are often injured and stressed.

Whether animal ethics will become an integral part of sustainability in the future is highly dependent on humans and their ability and willingness to adapt to the new knowledge. While some people might adapt by changing their behaviour, others will keep denying the information due to their inability to change their own actions. To understand the future of sustainability and animal ethics, the attitudes of people towards animal ethics should be examined.

1.2. The Usage of Animals and Animal Products

Today, the moral dimensions of animal use for human needs can be divided into five categories: animals bred for food; animals bred for fur and leather; animals used to facilitate or enable human recreation – for hunting, zoos, animal fighting and other forms of entertainment; animals used for experimentation, and animals used for companionship – pets.

Animal products are used in the production of candy, cosmetic products, glues and colors and in many other products, which we do not associate with animals. To understand the movement of animal liberation, one needs to be aware of how much man depends on animals in different areas of his life.

1.2.1. Food

One of the most discussed and questioned uses of animals is using animals as food. A couple of billion animals are slaughtered for food every year, and the number keeps growing. The livestock sector is socially and politically very significant, as it accounts for 40% of the agricultural GDP. More than one billion people are employed in this sector, and it constitutes a livelihood for one billion of the world's poor (FAO).

As can be seen in Chart 1., the consumption of meat and meat products keeps increasing year on year. In order to supply the demanded amount of meat in the future, if the trend continues, it will be necessary to intensify the production process. Population is estimated to have reached nine billion by 2050. This means that not only the demand for meat will continue to increase, but also, according to the current trend, the amount of meat eaten per person will increase and meat production will have to be intensified.

However, the production of meat has already been intensified, and it causes many problems, such as the greenhouse effect and the suffering of sentient animals (McCulloch; 2012).

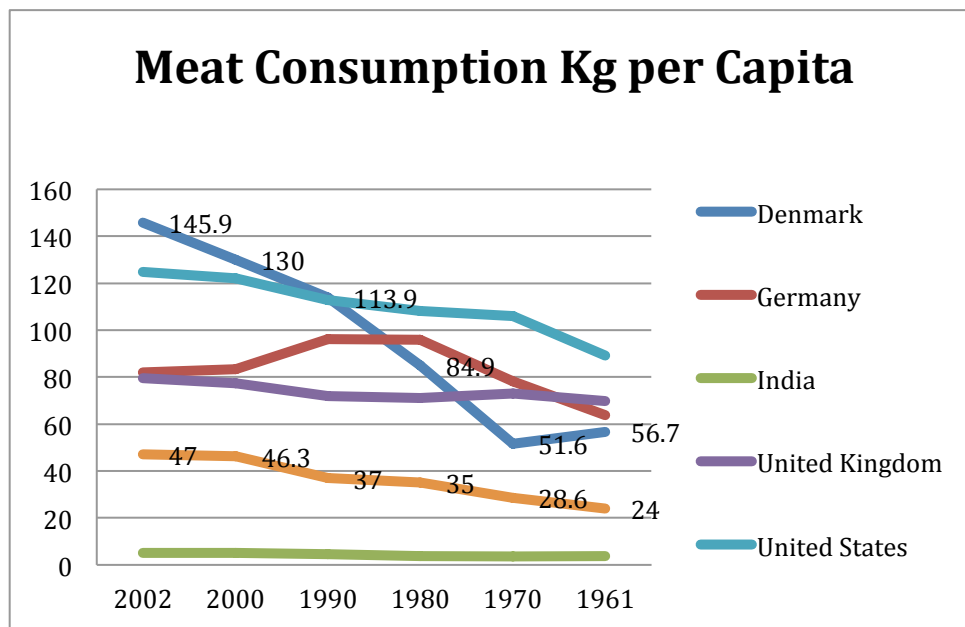


Chart 1: Changes in Meat Consumption, Kg per Capita, 1961-2002

Source: Author, based on the Food and Agriculture Organization of the United Nations (FAO), FAOSTAT on-line statistical service (FAO, Rome, 2004).

Although some data has been obtained by the FAO, the total amount of meat consumed every year is hard to estimate due to various factors involved in the process of meat production, consumption and waste disposal. However, it can be said that no matter how much waste is produced or how much meat is imported and exported, the production of meat involves slaughtering of animals, regardless if meat of the slaughtered animals is used productively. According to the Food and Agriculture Organization of the United Nations, in 2002, Denmark had the highest meat consumption per person, 145.9 kg per person annually, compared to Bhutan with the lowest meat consumption, 3 kg of meat per person (Appendix 1).

The growing consumption of meat can be explained by an overall increase in human well-being. In the past, many families could afford to buy meat only on special occasions, whereas today meat is seen as the main component of a meal and dinner is planned around the choice of meat. In spite of the fact that meat has a prestige value, some people might say, it is not an essential part of diet, as many people on an adequate vegetarian diet have proved. However, the consumption of meat enables a well balanced diet in an easier way, because many vitamins and minerals are absorbed more easily from meat (Taylor et al; 2010). Although meat can significantly contribute to a person's diet if mostly one type of crop is eaten, an excessive consumption of meat could not only increase the risk of various heart diseases, cancer and diseases

related to excessive consumption of fat (Thorogood et al.; 1994), but also might affect a person's health negatively because of the high amounts of pesticides and hormones found in the meat (Anderson and Skakkebeak; 1999).

Nowadays, to be able to meet the demand for meat, the production process is industrialized. As more animals are to be slaughtered, various types of supplements and hormones are used to increase the speed of animal development. Although pesticides are used on vegetables as well, animals, along with eating food already rich in pesticides, are given even more supplements in addition to their vegetarian diet. The industrialization process is questioned because of its impact on sentient animals and the environment. During the meat production process, animals suffer from lack of space and experience high levels of stress. For example, hens cannot spread their wings due to the small sizes of the cages and later they cannot even carry their own weight due to a rapid increase in weight caused by various growth hormones and lack of space for movement (Dyrenes Beskyttelse). Animal welfare violation causes stress for the animals, leading to a loss of feathers and cannibalism. Apart from the animal's welfare, stress, lack of movement and other factors also affect the quality of meat.

Another issue concerning sustainability is livestock and areas used for grazing. According to a FAO report, the total area occupied by grazing animals is estimated at 26 per cent of the ice-free terrestrial surface and, in addition to that, the total area dedicated to feed crop production amounts to 33 per cent of the total arable land. This situation raises the question whether meat production can be called sustainable in any way, if industrialized production or grazing contributes negatively to sustainability either by ignoring animal welfare or sustainability of land (Figure 1). As it can be seen in Figure 1, the meat that is produced in a rather industrialized way, such as pork and eggs, does not require such large grazing areas; however, as mentioned before, it affects the welfare of animals and the quality of meat.

Parameter	Livestock production system			
	Grazing	Rainfed mixed	Irrigated mixed	Landless/ industrial
Population (million head)				
Cattle and buffaloes	406.0	641.0	450.0	29.0
Sheep and goats	590.0	632.0	546.0	9.0
Production (million tonnes)				
Beef	14.6	29.3	12.9	3.9
Mutton	3.8	4.0	4.0	0.1
Pork	0.8	12.5	29.1	52.8
Poultry meat	1.2	8.0	11.7	52.8
Milk	71.5	319.2	203.7	–
Eggs	0.5	5.6	17.1	35.7

Figure 1: Livestock population and production in different production systems

Source: the Food and Agriculture Organization of the United Nations, Livestock's Long Shadow: environmental issues and options; FAO 2006

Although some scientists are trying to find a way to intensify meat production or to provide people with good quality alternatives, going ecological is not a solution, because it is not possible to satisfy the demand with ecological meat. The demand for meat and meat products in the future is expected to increase rapidly, and scientists are already doubting whether there is a solution to satisfy the demand if the trend towards increasing meat production is to stay. The reason is not only lack of grazing areas and feed, but also mostly lack of fresh water. Today people get about 20 per cent of their protein from animal-based products and it will need to drop to 5 per cent to feed the extra two billion people that, according to the Stockholm International Water Institute, are estimated to have joined the population by 2050.

Not only a potential lack of meat in the future should be studied when talking about animals used for food, but also the fact that some animals are treated worse due to humans' willingness to eat meat. This action cannot be morally legitimized, because there is no proof that animals used for food are more suitable for eating than those which we choose to have as pets or consider adorable. Our cultural background and history play a significant role in shaping our way of thinking and choices. Some people think that kangaroos belong in zoos and the wild, whereas other people rear kangaroos for meat. People in Asian countries catch dogs and cats for meat, but European animal welfare organizations raise money to free cats and dogs in Asia when at the same time stray cats and dogs in Europe are euthanized.

Recently the WSPA Denmark raised money for vaccines against rabies for dogs in Bali. They claim that many dogs in Bali are killed every day, as they are believed to

have a disease, and vaccines against rabies would help to recognize healthy dogs. In their advertisement, they do not mention that many people in different regions of Indonesia hunt dogs for food, and signs that a dog is healthy can also work as a sign that the dog is suitable for consumption.

Although humans are willing to believe that some animals are not as “smart” as others, and therefore those animals are suitable for food – animals such as insects, which are not believed to be as sentient, are not widely used as food in Europe. This raises the question how people are able to eat some animals but protect others.

In a study by Bastian et al. (2012), several surveys were conducted to test the hypothesis that people do not acknowledge the idea that “food animals” have a mind to endorse meat- eating behavior and to protect culinary practices.

In the first survey, they tested whether there are reasons to think that people do not like to eat animals with minds. In this survey, 59 out of 71 respondents were young females. The average age of participants was 19.13 years. They were asked to rate 32 animals to a degree to which each animal possessed ten mental capacities, and afterwards they were asked to rate the edibility of each animal.

The results showed that eight respondents were vegetarians; therefore, they were excluded from the analysis. The rest of the results proved the hypothesis set by the authors, namely, a mind that an animal was considered to have was negatively associated with the animal’s edibility and positively with feeling bad about eating the animal and how morally wrong it would be to eat the animal.

As it can be seen in Figure 2, animals used as food in Australia were rated to be more edible and to have fewer mental capacities than animals not as commonly used as food. Dogs are rated as the most intelligent and inedible, whereas cows are rated as very edible and not as intelligent. Horses and cows were put in similar categories in many regions around the world, but in this study, horses are believed to be much less edible and more intelligent than cows.

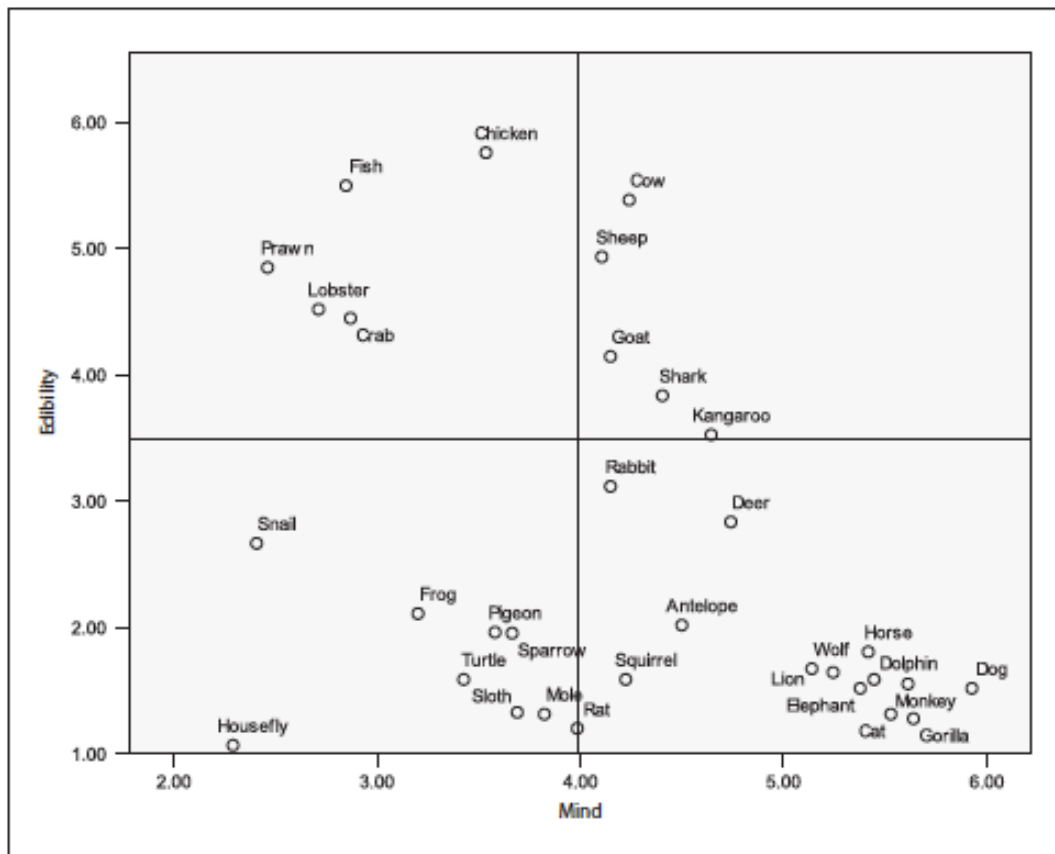


Figure 2: Scatterplot of mind and edibility ratings

Source: Bastian et al.; 2012

In a second survey, the hypothesis was that meat eaters would be more inclined to not acknowledge the idea that animals they eat might have a mind when animal suffering associated with the production of meat is made salient. In this survey, 66 meat-eating students were questioned, 43 of which were females with an average age of 19.23 years. The respondents were first shown a picture of a cow or a sheep on the grass with the following caption: “This lamb/cow will be moved to other paddocks and will spent most of its time eating grass with other lambs/cows”, and afterwards they were shown a picture of a cow or a lamb with the following caption: “This cow/lamb will be taken to an abattoir, killed, butchered and sent to supermarkets as meat products for humans”. After that, the respondents were asked to rate the extent to which each animal possessed 15 mental capacities. The results supported the hypothesis and proved that animals meant for food were assigned lower mental capabilities (Figure 2).

Later, one more survey was conducted in a similar way involving 128 respondents and proved that expectations regarding immediate consumption of meat increase the non-acknowledgement of animals' having a mind.

To summarize, according to the study, people think about food animals as less intelligent than those, which are not eaten. However, showing animals in a way that does not remind the respondent about the animals' being used for food can change the outcome and the human's preferences to eat one animal or another. This study indicates that people in general believe that animals have some moral status when they are asked about animals without associations with food, but choose to not acknowledge animals' minds when thinking about food to legitimize their meat-eating habits. As shown in Figure 2, the dog is seen as the most intelligent animal and one of the least edible ones. This might be due to cultural background and the habit of people in Australia to keep dogs as pets.

The most interesting results of this study is the position of several animals, such as horses, kangaroos and sharks. The horse, according to the study, is considered not to be as edible. This might explain the reasons behind the recent horsemeat scandal, where several beef products were found to contain horsemeat, thus causing a notable reaction and discussions among people. Horse meat content in beef products was discussed widely in Ireland, where people traditionally do not eat horses, but did not raise that much attention in other regions, such as Eastern Europe, where horses, in spite of being considered "adorable", are known to be butchered and eaten.

This indicated that cultural backgrounds should be taken into consideration when judging people's potential decisions. For example, kangaroos and sharks are seen as mostly edible in Australia, where the study was conducted, but might be seen as not as edible in Europe because of different food traditions.

It also should be taken into consideration that the respondents in this particular study were mostly young educated woman; therefore, results for groups not represented in this study might be different.

The choice to not acknowledge that some animals might have a mind would explain why humans are able to keep some animals as pets but kill other animals for food. This means that more information about animal abilities, their lifestyles and welfare, as well as information about meat's effect on humans' health could change humans' habits.

Unfortunately the people, who are less informed about animal welfare on animal farms, are also less willing to learn something new about animal welfare. According to the Eurobarometer, only 12% of people in Europe felt well informed about conditions under which animals are farmed in their countries (Special Eurobarometer; 2007).

1.2.2. Entertainment

Nowadays, many animals are used for entertainment. While some animals might be born entertainers, most are tortured to do specific tricks, held in very small cages, made to fight other animals or humans against their own choice (PETA).

Most people grew up going on regular trips to the zoo and circus. Despite the fact that animals are held captured for human amusement, it is seldom questioned. It is believed that freedom should be given to all humans unless they commit a crime, whereas animals are often “imprisoned” without a question.

Animals in circuses often perform amazing tricks, amusing people and children. Circuses would like people to believe that these tricks are performed because of positive reinforcement, such as offering an animal some treats after the right behavior. However, instead of going around with bags of treats, animal trainers often walk around with hooks and sharp spikes, forcing the animals to do tricks to avoid pain they often experience during training sessions. Today on the Internet there are many undercover videos from training sessions, where elephants and other animals are beaten with sticks and hooks and other plant-eating animals tremble, crying out in pain.¹ In-between the sessions, animals are kept in small cages or chained to the ground, without being able to move freely, play or entertain themselves. Unfortunately, people keep showing interest in circuses, and circuses are still popular in many countries. Columbia is the only country that banned animal use in circuses in 2013. The existence of a circus should not be dependent on tortured animals, as the famous *Cirque Du Soleil* proved in the past by choosing to remove animals from their program and focusing on the performance of people.

Another popular means of entertainment is zoos. Unlike animals in a circus, animals in a zoo are not expected to perform specific tricks. However, animals in most zoos are kept in small cages and, due to lack of funding, the cages are rarely rebuild or enlarged. Even in the biggest zoos, some animals are kept in cages that are too small, where, unlike humans, they cannot read books or watch television; therefore, many

animals are often too bored and depressed. When London Zoo suffered from a financial crisis in 1991 and was almost closed down, many people, including philosopher David Cooper, were delighted. Although many people would like to see zoos closed down, it would lead to most animals currently kept in zoos being killed (Bostock; 1993). While zoos are widely criticized by many people, according to Bostock, current research on animals might improve the welfare of animals in zoos, enabling to keep wild animals satisfied. Zoos also allow people to educate themselves about different kinds of animals and to learn to treat them right. According to various studies (Kellert; 1985; Bostock; 1993), experience with animals has a positive impact on people's ability to develop empathy towards other living beings. And last but not least, many zoos also take in abandoned wild animals which otherwise would have no chance of surviving in the wild.

An alternative way of using animals for entertainment is hunting. Whether hunting practices can be called entertainment depends on a hunter's moral practices and judgment (Fischer et al; 2013). Hunting can eliminate some species (like wolves) to protect other species or eliminate species, which do not have natural enemies, but whether it can be considered moral depends on a hunter's attitude and judgment. It is clear that today hunting, unlike in the old times, is rarely used to provide family with food, because hunting an animal takes a lot of effort and the costs of hunting are higher than the costs of meat in a store (Fudge; 2006). Hunting might help to eliminate the weakest members of a species. However, hunting for trophies instead of meat is very popular. In European forests, many strong deer are shot for their horns, and in Africa many animals, such as black rhinoceroses, are not even killed while their horns are cut off, leaving the animals to a slow and painful death. Despite the fact that safari is illegal in many countries, unfortunately, money and corruption allows some people to avoid common rules. On the Internet, hunting trips to Africa can be booked directly from home, deciding what animal, which country and how much to pay. Safaris are offered for hunting lions, elephants, antelopes, rhinoceroses, tigers and other animals, starting from as little as \$15 000.¹³

There are many other ways in which animals are used for entertainment, including rodeos, dog runs, animal fights, etc. While organized animal fights are considered illegal in most countries, other types of entertainment, such as rodeos, are considered cultural heritage. Despite the fact that animals in a rodeo are often believed to be tortured before the "fight" in order to make them more active, today the rules

regarding animal torture are stricter, and injured animals are supposed to be butchered in a correct way after the show.

In a nutshell, there are many ways animals are used for human amusement. Unfortunately, many animals suffer without other purposes than to entertain humans. Although entertainment is essential, there are many alternative ways to entertain humans from which animals can be excluded, as *Circus de Soleil* has already shown by their decision to invest in good athletes instead of investing in animals.

1.2.3. Animals Used for Fur and Leather

Lately there has been a lot of criticism regarding fur production. More and more celebrities and animal welfare organizations are getting involved to inform people about the fur production process and animal welfare on fur farms. Today, fur is used mostly as a status and fashion item, without any practical use, because our climate does not require wearing fur products to keep ourselves warm. Every year, millions of fur animals are bred and slaughtered only for their fur. Despite the fact that animal welfare is taken into consideration to some degree during fur production in Europe, even in Europe the animals are kept in small cages, without any consideration towards their natural needs. This is done in order to minimize costs, because larger pens are not practical. When many animals live together, they suffer from various diseases, fight each other and damage their fur. According to *Dyrenes Beskyttelse*, minks are solitary animals, and their natural territory covers at least a square kilometer.

During the fur production process, many animals are injured or experience pain. Despite the fact that many organizations claim that almost no minks are injured during the fur production process, footage taken by police on mink farms showed that more than 50% of the animals in Denmark are injured during the fur production process (*Dyrenes Beskyttelse*). In China, where animal welfare law is not enforced, fur producers were accused of beating fur animals with sticks and then skinning them alive in order to ensure better fur quality and shine, simply because no better methods are available.³

In order to understand how fur farms are legitimized, the profit from the industry should be examined. For example, one of the largest fur producers, Copenhagen Fur, in their annual report for 2012 indicates a total profit of DKK 371 000 000, which is 38 per cent higher than in 2011. In order to gain such profit, almost 14 million minks, 60,000 foxes and 76,000 chinchillas were bred for fur on farms in Denmark. Despite

the fact that the total number of farms continues to decline, the number of minks bred for fur has been steady for the last couple of years. This information is controversial to the idea that information about animal welfare during the fur production process would change people's attitudes, because lately many celebrities and animal welfare organizations have been actively informing people about fur production practices and publishing terrifying photographs and videos. It could mean that people, like they have done concerning food animals, do not acknowledge fur animals' having a mind or choose not to think about the terrifying facts behind the fur production process.

While many people are fighting against fur production, not that much is heard about leather. It could be due to the fact that leather is seen as a sub-product from the meat production process and that most animals are not only bred for leather, also for being used as food. Although an animal has already been slaughtered, the consumption of leather products directly contributes to the meat industry. Moreover, many animals are bred only for their skin to ensure a high skin and leather quality or because they are simply not used for food, such as crocodiles, snakes and other animals. According to PETA, due to the fact that leather is not labeled, we cannot make sure where the leather comes from. Most likely, it comes from developing countries, where animal welfare laws do not exist or are not enforced. PETA claims that, according to their investigation in India, workers break cows' tails and rub chili powder into the animals' eyes to make them move when they are about to collapse from exhaustion on their way to an abattoir; in the USA, many animals are skinned while still conscious. Although leather is known for its good quality and comfort, many high quality alternative materials are available today.

To sum up, animals are widely used for the human sake. In most of the cases, the usage of animals involves animal suffering, despite the fact, that in some cases intentions of human are good.

1.2.4. Animals Used for Experimentation

Animals have been and still are contributing to scientific experiments. Because of animals, people have been able to reach important conclusions about various diseases and been able to work on cures and vaccinations.

However, not all experiments have contributed to a higher cause. Many scientists have been experimenting on animals without any realistic goals, often concluding with a "further experimentation is needed". Singer (1995) in his book *Animal Liberation*

gives examples of many experiments carried out without any understandable reasons. For example, in his book, he describes an experiment where dogs were locked in glass boxes that were put outside in the sun to see how long they could stay alive in the sun.

Professor Harry F. Harlow, editor of a leading psychology journal, overlooked an experiment at the Primate Research Center in Madison, Wisconsin. In this experiment, he and his colleagues were trying to induce psychopathology in infant monkeys in various ways. For example, one of his experiments was based on the idea that depression could be induced in infant monkeys by “allowing baby monkeys to attach to cloth surrogate mothers who could become monsters”. The first monsters were cloth monkey mothers, who would eject high-pressure compressed air on demand, blowing animals skin practically off its body. Instead of letting go of their cloth mothers, monkeys clung to their monster-mothers even tighter, because it is natural for frightened infants to cling to their mothers at all costs. Unsatisfied with the results, Harlow and his colleagues built other monsters that would rock so violently that the baby monkey’s head and teeth would rattle or a monster that would eject sharp brass spikes over the entire ventral surface of its body. Although the infants were distressed and injured, they waited until the spikes receded and then returned and clung to their mothers. Unsatisfied with the results, they made a real monster monkey in a horrifying way which failed to take care of its baby or where brutal or lethal.

Apart from psychological experiments, many military experiments are carried out every year on animals to test various gases, weapons and explosives.

Furthermore, animals are also used for cosmetic testing. In order to test finished cosmetic products or ingredients, shampoos, make-up, perfumes and creams are rubbed into animals’ eyes, mouth or nose to see if an allergic or other reaction develops. Testing cosmetics on animals has been banned in Europe since 2009, and the import and sale of cosmetic products or ingredients tested on animals has been forbidden since 2013. This is a big step towards improving animal welfare in Europe; however, the effects of the ban on the cosmetic market can only be estimated.

Nowadays, all legal medical products are supposed to be tested on animals. From an interview conducted on April 26, 2013 with Jan Lund Ottensen, Vice President and Head of Laboratory Animal Science at *Novo Nordisk*, it became clear that the goal of testing on animals is to ensure product safety (Appendix 2). To ensure product safety, the government and pharmaceutical organizations need to find an optimal way to

collaborate. Nowadays all drugs should be tested on at least two species to ensure that a product is safe (Appendix 2; Q:5). As Singer (1995) states in *Animal Liberation*, if humans would not like to consider animals equal to humans, then there is no reason to believe that testing on animals can provide qualitative results which would work for humans. Already in the past, some drugs were found to react differently on different types of animals. According to Ottensen, tests on animals are like a puzzle which allows putting together several pieces in order to find the best results (Appendix 2; Q:4).

Unlike other research using animal testing, most experiments by pharmaceutical organizations carried out to ensure product safety are required by the government. As experiments on animals are very expensive, the pharmaceutical industry is not interested in using a higher number of animals; however, in order to ensure the reliability of data, a precise estimate of animals needed is required.

At *Novo Nordisk*, animal welfare plays an important role, and animal suffering is kept as low as possible. Of course, even though not all pain can be avoided, but the judgment of animal caretakers is taken into consideration to ensure that animals do not suffer unnecessarily (Appendix 2).

Many people are skeptical about the attention that the pharmaceutical industry gets, because at the same time many industries, such as animal farms, attract very little or no attention. For example, while pharmaceutical companies are pressurized to maximize the welfare of their mice, dogs and other experimental animals, other organizations that use animals are not required to have similar standards. However, according to Ottensen, such public pressure is one of the reasons why animal welfare is so important in the pharmaceutical industry.

Today, in order to minimize experimentation on animals, exchange of information between companies has been recommended. However, the specifics of the pharmaceutical industry do not allow exchanging the information due to the protection of patents. While a company invests a lot of effort and money in order to find a cure, patents protect the company by ensuring a profit (Appendix 2).

According to the most recent Sixth Report on the Statistics on the Number of Animals used for Experimental and other Scientific Purposes in the Member States of the European Union COM (2010) 511, data from 2010 shows that in Europe the most widely used animal for scientific purposes is the mouse (59.3%) and the rat (17.7%).

Only 0.08% of the animals used for experimentation are monkeys, and other mammals account for 0.05%. This could be due to the fact that larger animals are more expensive to use and train than smaller animals. According to the report, no apes have been used in the European Union for experimental purposes. The number of mice, ferrets, pigs and reptiles increased from 2005 to 2008, but the number of other rodents, dogs, other carnivores, monkeys and other mammals has decreased.

According to the report, 38.1% of the animals were used in fundamental biology studies; 22.8% were used for research and development; 14.9% of the total number of animals were used for the production and quality control of devices in human medicine, veterinary medicine and dentistry; toxicology and safety evaluation represents 8.7% of the animals used in experiments; and 12% of the animals were used for other purposes. In total, more than 12,000 000 animals were used in experiments in EU countries in 2008. While tests on animals might be required to ensure the product's safety, using alternative learning methods, such as computer programs or animal models, can lower the number of animals used in biological studies.

According to the United States Department of Agriculture, in 2009, more than 979,000 animals were used for experimentation in the USA. However, this number excludes rats and mice, which account for the largest number of experimental animals, and might exclude many more animals, because it has not been specified what exactly is meant by "all other covered species" (USDA; 2011).

1.2.5. Pets

Today many people are having pets. While some animals like dogs and cats have adapted through the years to humans, and are often enjoying human company, other animals like fishes, parrots, hamsters etc. are kept in the environment not suitable for the animal's wellbeing. It can be argued, that animal's lifespan in capture is longer than in nature, because animals are regularly fed, protected from various injuries and natural enemies however - lifespan cannot indicate the happiness of an animal.

Not only the crate animals are kept in unsuitable environments, today many cats are kept indoors, without possibility to access the outdoors. While some cats which are bred for indoors purposes and would not be able to survive the outdoors due to lack of some characteristics – for example the lack of fur or lack of instincts, many cats

currently kept in apartments for the safety purposes, would choose to go outside, if opportunity will occur.

Also many big dogs are kept in small, unsuitable apartments, where they cannot exercise or play and are seldom taken out for a walk or run. Human might forget that dog is pack animal, and for the dog it is important to have a company, therefore dog is not suitable for busy families, where people are rarely home. Despite the fact, that most of the human might love their pets, they rarely think that their pet might be happier in different circumstances.

According to report of Eurogroup for Animals, besides the unsuitable living standards for animals, many animals, which are bred for commercial purposes are often bred in non-household environment (such as a garage or shed), without possibility to access different environments, other animals or people. These kinds of animals are often sold on Internet, where buyer cannot evaluate the housing circumstances of the animal. This is often leading to behavioral and health issues later in animal's life and decisions to euthanize the pet. Even more, selective breeding of animals can end up in exaggerated conformations or inherited disorders. Exaggerated conformations are often too extreme for animal to handle (for example too short nose for proper breathing or too wrinkled skin) influencing animals welfare. Commercial breeding of animals can also cause suffering of the animal, if the animals are bred too often on the same animal without a possibility for animal to rest or recover.

According to Human Society of the United Nations, in United States in 2012 estimated number of pets sums up to 78,2 million dogs and 86,4 million of cats, while in Europe there are estimated to be 60 million owned dogs and 64 million owned cats (Eurogroup For Animals). 46% of US households own at least one dog, and 39% of households own at least one cat. This is a big number of animals, people have tamed and breed for their own interest.

Many animals are taken in irresponsibly, and later abandon on the streets or in animal shelters. For example, every year million of animals in US are abandoned or left in animal shelters. Every year 6-8 million of animals are entering the shelters, but less than 4 million of animals adopted, leaving more than 2.7 million of dogs and cats to be euthanized every year. While dogs are sometimes returned back to their owners, less than 3% of cats are being returned back to their previous owners.³

While in some countries there are strict rules regarding ownerless animals, in other countries there are many abandon animals on the streets, forming dog or cat colonies. These animals are hungry, cold and often sick. When not sterilized they continue to give birth to more animals every year. The laws regarding the ownerless animals are different, however in most of the cases animals are caught and euthanized after a while.

1.3. Animal Welfare Activists

1.3.1. Animal Welfare Organizations

Today there are many animal welfare and animal right organizations, focusing on different animal welfare issues. In many countries there are local organizations, focusing on animal's welfare issues in the country, educating people about animal welfare and correct treatment of animals. There are passionate people working in the animal shelters, zoos, which are trying to prolong the life of animals. Animal right and welfare organizations have succeeded in informing people about different animal welfare issues and to involve the celebrities in their campaigns and prevent the violation of animal welfare issues in many cases. For example *Dyrenes Beskyttelse* in 2013 have started the project to eliminate the production of "cage eggs". During this campaign people were informed about the welfare issues concerning hens and through social medias asked to join the group "people against cage eggs". After the project was finished, one of Denmark's leading supermarkets *Kvickly* has decided to stop selling cage eggs in the stores in Denmark.

There are many local and global organizations (PETA, WSPA, AWI, WWF etc.), fighting for animal welfare or animals rights all around the world, movements and campaigns focusing on animal testing (NAVS, CAAT, Great Ape Project etc.).

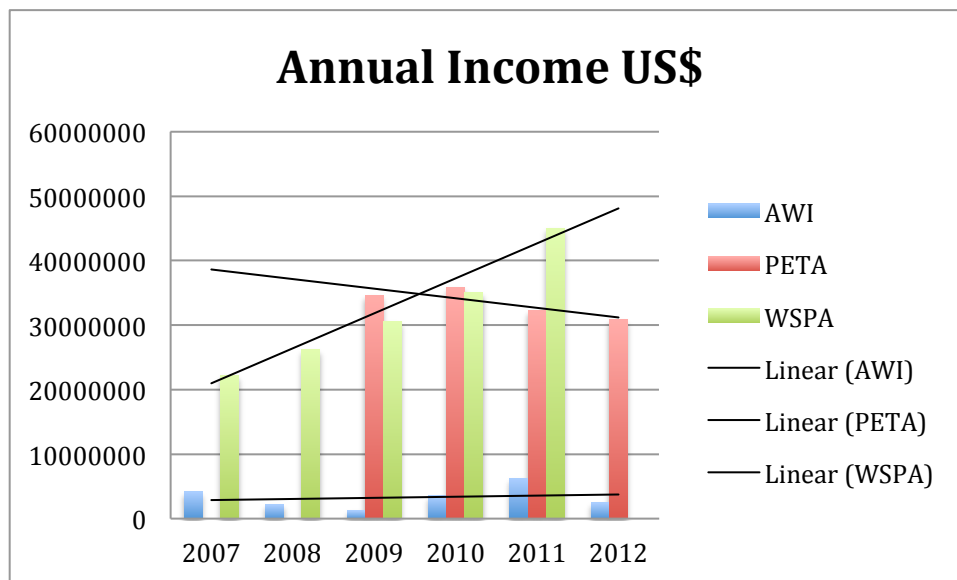


Chart 2: Annual income of Welfare Organizations in US\$

Source: Author

According to PETA¹⁰ (People for the Ethical Treatment of Animals), WSPA¹¹ International (World Society for the Protection of Animals) and AWI¹² (Animal Welfare Institute) annual reports, the annual income of animal welfare organizations accounts for several million dollars (Chart 2). These incomes are mainly based on various donation funds and investments. These numbers show, that animal welfare is supported seriously by many people and allows these organizations to not only help animals, but also change people attitudes and educate them about animal welfare.

While the income of WSPA continues to rise, the income of PETA has tendency to decrease (Chart 2). This might be explained by the wide criticism PETA receives for their job, marketing strategy and other actions. They have been widely criticized for using woman in their anti-fur action, to gain the attention of different medias. They also have been criticized for euthanizing 85% of animals under they care and supporting various animal liberation funds, which are accused of being agents of domestic terrorism (Interlandi, 2008). Despite the decrease in annual income from 2009 to 2012, the income of PETA in 2012 accounts for more than 30 million US\$. The organization spends a lot of the resources to inform people about the different violations of animal rights, for example the mistreatment of animals in different organizations like McDonalds and California Pizza Kitchen, to educate people about abuse of different animals, and to inform people about the meat production process, content of the meat products etc. In the same way as many other animal right organizations, PETA uses a lot of informative material, like pictures and videos to

persuade people to donate money to the various causes. While it might persuade some people to donate money to PETA, it can also increase the denial of those, who are not ready to face the reality.

Unlike PETA, WSPA focuses on global and local issues, because organization is operating locally in many countries. WSPA is also more transparent in their financial accounts than PETA, due to the easy availability of their financial statements. In 2012 WSPA Denmark has been advertising their campaign to vaccinate dogs in Bali and asking to donate money to WSPA. The ads were shown during the day on Danish television, with high level of cruelty towards animals. In some ads animals were synchronized to tell their sad stories and emotions, like: “I have seen my brothers being killed” etc. Today many NGO’s are speculating by the ads to influence people’s willingness to donate money. These speculations are smart neuro-scientific manipulations in order to gain the attention of people. The research by Butterfield et al. (2012) has demonstrated that people have an affinity for non-human entities that appear to have human qualities. It means that simple mannerism as adding the voice to the animal shown in ad, can influence peoples decision to donate money to the animal. Our tendency to empathize with animals increases with an increasing similarity in their appearance and behaviors to our own (Würbel; 2009).

The decision to show ads during the day WSPA have explained by their decision to save money, as ads shown during the time costs less, as most of the people are working however, it made the ads easier to access for children and people not willing to receive this information, possibly excluding their target audience. Besides that, as shown in the chart, their income continues to increase, meaning that people might respond to cruelty in ads by willingness to prevent the cruelty towards animals instead of denying the information.

AWI was formed in 1951, mainly to address the issues of animals used for experimentation, however decades to follow has expanded its scope to focus on different animals in need. Today their focus is mainly on animal factories. Being a smaller organization, AWI compared to PETA and WSPA has a more focused goal – they have decided on which animal welfare issues to focus, instead of addressing them all. This helps the organization to achieve realistic goals however attracts less money to the cause. Because of their rather focused goals, it also can attract donations by realistic and precise information and do not have to speculate so much on emotions of people, showing injured and death animals.

There are many other global organizations fighting for animal rights or animal welfare. While the large organizations are good in rising the general animal welfare issues, and has means to focus on global issues, the local smaller organizations are often not recognized for the impact on animal welfare, as they are either taken for granted or focusing on rather small cases. For example in 2013 Latvian dog shelter *Ulubele*, has saved from a death a dog, which was thrown out of the 5th floor window and had several injuries despite the high costs of the surgeries and rehabilitation needed. The organization contacted medias to raise money for the animal. Response of the people was unbelievable, in one day more than the necessary amount was donated to save the animal and donations varied from 0,2 to 900 LVL per person, showing that people care.

To sum up, animal welfare organizations are playing an important part in changing people's attitudes, despite the critics they often receive. Despite the fact, that information often published on television or Internet might cause negative reaction, it still encourages people to think about the different issues and research more, if they are interested.

1.3.2. Animal Right Activists

While many animal welfare organizations are calling their members "animal right activists", as pointed out earlier, animal welfare and animal rights are too different understandings of the attitude towards animals.

According to Oxford Dictionaries online, the term "animal rights" is explained as: "The rights of animals to live free from human exploitation and abuse".⁷

This means that in order to assess whether one is animal right activist, the purpose of the activity should be examined. While many "animal right activists" are fighting for the animals right on welfare, many extreme *animal right activist* groups exist. For example *Animal Liberation Front* has been labeled as being *domestic terrorist* by FBI⁸, and has been widely criticized for sabotaging the animal-exploitation industries, destroying the property of animal-exploitation industries etc. The members of this organizations, has been risking their life's, to free caged animals to liberate the animals.

While in their home page they suggest, that these activities are up to the person's decision, many encouraging information besides the activities to be done is available.

Their response to the question: “Isn’t extreme activism Involving breaking the law wrong?” is following:

Great men and women have demonstrated throughout history that laws can be immoral, and that we can be justified in breaking them. Those who object to law-breaking under all circumstances would have to condemn:

The Tiananmen Square demonstrators; The Boston Tea Party participants; Mahatma Gandhi and his followers; World War II resistance fighters; The Polish Solidarity Movement; Vietnam War draft card burners (...) Conversely, laws sometimes don't reflect our moral beliefs. After World War II, the allies had to hastily write new laws to fully prosecute the Nazi war criminals at Nuremburg. Dave Foreman points out that there is a distinction to be made between morality and the statutes of a government in power.

It could be argued that the principle we are talking about does not apply. Specifically, the law against destruction of property is not immoral, and we therefore should not break it. However, a related principle can be asserted. If a law is invoked to defend immoral practices, or to attempt to limit or interfere with our ability to fight an immoral situation, then justification might be claimed for breaking that law. In the final analysis, this is a personal decision for each person to make in consolation with their own conscience.

All in all one cannot be criticized for strongly believing in something, however if breaking the law can achieve something in the long term is a different question. Some might believe that changes are long and complex process, and only when accepted and understood can be taken seriously. Despite the fact, that intentions of the organizations like “Animal Liberation Front” are good, they are labelled negatively by society and media and their actions seldom contribute to a greater good.

1.4. The History of Animal Welfare and the Philosophy Behind it

Birds, wild and domestic animals and pets are our everyday reality. Yet some animals have been given some moral status, while others have been denied any. Ideas about the purpose of life and attempts to explain the world can be traced back to the ancient world. According to Stephen R. L. Clark (2012), classical and late antique

philosophy is mostly Greek philosophy, and Greek ideas are often suggested to be dualistic, meaning that souls are separated from body, as heaven is separated from Earth, establishing the belief that humans are rational souls that temporarily form a body, whereas animals only have animating souls. Stephen R. L. Clark (2012) explains it as follows: “Aristotle has once observed - plants are for animals and animals are for human beings.” This would mean that animals are here to serve humans. In the Aristotelian model, there are three kinds of soul, namely, vegetative, sensitive, and rational. Animals, humans and plants have vegetative souls, which are responsible for all natural actions. Animals and humans both have sensitive souls. The sensitive soul is a source of movement and perception, but unlike the rational soul, it cannot reason. Therefore, the rational soul is only found in humans, as only humans have faculties that make up reason, including will and intelligence (Fudge; 2006).

While the Greeks strongly believed that they could not abuse other beings, they were convinced that justice applied only to relationships between humans: “We cannot act unjustly towards creatures which cannot act justly towards us.” (Clark; 2012)

However, domestic animals were sometimes treated nicely to thank them for their service, unlike wild animals, because hunting was very important for the Greeks. They believed that fishing with nets or catching wild animals in traps was getting the job done for them. Chasing wild animals with hunting dogs was perceived to be honorable. Plato concluded, “Such hunters are truly sacred.” Even several Greek gods were associated with hunting practices, and sacrificing animals during worship of gods was a common practice.

In the worship of Dionysus, the tearing apart of a live animal was celebrated as a solemn rite; a goat or another sacrificial animal was ceremonially hunted down, limb was pulled from limb, and eaten raw by the worshippers (Cartmill; 2006).

Nowadays, some animal protection extremists (Singer; 1995; Garrett; 2012) raise the following question: if animals should be denied moral status due to their disability to communicate their feelings and thoughts, should not children before the age when they can talk also be denied human rights? The Greeks had the following answer: even though children do not have a sense of morality or the intelligence to act freely upon their will, they have a potential to develop these characteristics (Clark; 2012).

However, not all Greeks shared the same general beliefs about animals. Plato remarked that dividing the world into humans and non-humans was silly. Xenophanes

said, “If cattle or horses or lions had hands and could draw, and could sculpt like men, then the horses would draw their gods like horses, and cattle like cattle.” In Athens, Triptolemus, one of the ancient lawgivers, laid down three laws for Athenians, which were as follows: “Respect your parents, honour the gods with crops, do not harm animals.” (Clark; 2012)

Pythagoras acknowledged a dog’s howling as a complaint, as communication that places obligation on those who hear it. Pythagoras believed in metempsychosis and thought that eating meat was an abominable action, saying that the souls of all animals enter different animals after death (Clark; 2012).

In spite of his belief in metempsychosis, Pythagoras did not believe that human souls could enter the bodies of animals or vice versa, because such a belief might have caused an unwanted reaction from the society. Still, this perspective can be viewed inversely: if one believes that humans and animals are alike, to accept the idea that animals can become humans or humans can become animals in their next life would be less complicated.

Pythagoras is not the only one who raised the question about animals from a metempsychosis perspective. An excerpt from a spiritual ancient Indian text, *Bhagavad Gita* (14.14 – 15), which is believed to be more than 5,000 years old, reads as follows:

When one dies in the mode of goodness, he attains to the pure higher planets. When one dies in the mode of passion, he takes birth among those engaged in fruitive activities; and when he dies in the mode of ignorance, he takes birth in the animal kingdom.

Whether a human is a part of an “animal kingdom” is also up to personal interpretation; however, *Bhagavad Gita* does not deny the possibility for a human to reincarnate in an animal; however, it does not mention that animals might reincarnate in humans.

Today many people are concerned about their pets. Religion allows us to accept the death of their loved ones easier, but little information in religions addresses animals or discusses their potential ability to be reborn. To answer the questions not addressed by religion, people seek new ways to deal with their concerns. According to Danielle

Mackinnon, who is a spiritual coach, speaker, teacher and soul contract consultant, animals do reincarnate, but into other animals, not humans.⁹

Acknowledging that dogs have a “voice” and the ideas of Xenophanes about the perspective of horses or lions gave a new dimension to how animals were perceived. We view animals the way we do, because we use a human perspective whenever we judge animals. If one believes that animals are able to experience the same feelings as humans do, one will treat them more like humans. Conversely, if one believes that humans and animals are different, one will consequently treat them as if they were not alike.

Unlike Pythagoreans, Christian thinkers decided that human beings are worth more than animals and that domestic beasts were meant for human use, whereas wild beasts were in the service of the devil. Both Christians and Pagans saw human vices and defects as animal traits. Saint Augustine wrote, “For so excellent is a man in comparison with a beast, that’s man’s vice is beast’s nature.” (Cartmill; 1993)

According to the Bible’s first chapter of Genesis, God had originally intended that all “living creatures” should feed on plants (Cartmill; 1993), and only after the Great Flood God gave permission to eat animals: “Everything that lives and moves will be food for you. Just as I gave you the green plants, I now give you everything.” (Genesis 9:3)

Perhaps this was because soil was less productive after the flood. To protect animals from humans, God told animals to be afraid of humans and told people to have a proper respect for animals and not to eat flesh with its life, that is, flesh with blood (Genesis 9).

However, despite the fact that animals were considered immortal souls who cannot sin (Cartmill; 1993), the Bible does not deny the possibility that animals and humans could live together again in heaven: “The wolf and the lamb will feed together, and the lion will eat straw like the ox, but dust will be the serpent’s food. They will neither harm nor destroy on all my holy mountain, says the LORD.” (Isaiah 65: 25)

During the late Middle Ages, forests were transformed into exclusive aristocratic playgrounds. Due to an increase in population, forests grew fewer, smaller, and tamer. Due to excessive hunting, animals like wolves and beavers began to disappear; therefore, the right to hunt freely in Europe was monopolized by the aristocracy. The

hunting privileges were exercised to such a ridiculous extent that peasants living next to hunting areas were not allowed to own any bows or nets. Dogs' feet were injured to make sure that the dogs were not able chase any animals. These unequal hunting privileges made people of different social classes see hunting differently. For many people, hunting became associated with freedom and rebellion against the authorities, but for aristocracy it acquired an opposite meaning, as hunting become associated with upper-class status. Hunting became an obsessive pastime for many aristocrats. For example, Louis XV of France was credited with killing 10,000 red deer in his fifty-years' career (Cartmill; 1993).

In the sixteenth century doubts about the legitimacy of man's dominion began to surface. This lead to attacks on hunting at the very beginning of the northern Renaissance, in the writings of Erasmus, Montaigne and Thomas More. Erasmus ridiculed all the rituals of medieval hunt, dismissing hunting as mere butchery and hunters as empty-headed snobbish aristocrats. Beliefs that our joy to hunt reflects some innate defect in the human spirit started to appear. Even in the writings of Shakespeare and other literature the hunt became a symbol of bloody oppression (Cartmill; 1993).

In the seventeenth and eighteenth centuries, the basis of modern philosophy on animal ethics was established (Garrett, 2012). French philosopher Rene Descartes described his attempts to arrive at a new science in his book *Discourse on the Method* (1637). Along with explaining his arguments supporting the existence of God and human soul, he explained the nature of animals and the differences between animals and humans in a new way (Fudge; 2006). According to Descartes, animals are "short automata", much more splendid than artificial ones, but still machines, "But the greatest of all the prejudices we have retained from infancy is that of believing that brutes think."

Despite the fact that Rene Descartes believed that animals are conscious, he stated that animals are not self-conscious and, therefore, cannot think and convey, so he did not see animals' pain as real pain and considered it morally irrelevant. He became infamous for nailing alive animals to tables and vivisecting them in front of an audience. It was a period of experimentation, new developments and curiosity.

According to Aaron Garrett, eighteenth century experimentalist Robert Boyle stated that there is a duty to experiment on animals. Many animals were cut alive, bit by vipers, poisoned by arrows, vivisected while nailed to tables, etc. Experiments were

justified by the idea that God made animals for experiments to excite human intellectual faculties and allow them to master creation as God intended. As Rene Descartes' follower Louis Racine concluded, "If the poor creatures could feel pain, then God would be unjust, but since we know that God is just, we can safely conclude that beasts feel nothing – and so we can slaughter, hunt, and vivisect them with a clear conscience." (Cartmill; 1993)

The cruelty of the experiments raised many questions about human and animal relationships and encouraged people to think about how relationships between animals and humans were formed and whether these relationships were the same as the ones we have with rocks or plants. According to Scott D. Wilson (2010), philosophical thought on the moral stand of animals is diverse and can be generally grouped into three categories: indirect theories, direct but unequal theories, and moral equality theories.

Indirect theories deny animals moral status and equality with humans; animals are considered property of humans. If we are cruel to animals without justification, we will be more likely to be cruel to other humans (Garrett; 2012). There are many indirect theories, such as Kantian, Cartesian and Contractualist theories (Wilson; 2010). Kantian theories focus on the fact that animals cannot have a good will; however, unlike in religious theories, Kant does not say that it is simply natural to use animals as it fits humans, he provides an argument for the relevance of rationality and autonomy instead. Kant believed that things do not act autonomously, whereas people do. Philosophers often understand autonomy, which includes self-determination and volition, in the same way Kant did, that animals, and probably children, act based on desire, but fully autonomous beings act in a completely rational way. This belief explains why, according to Kantian theories, animals should be denied moral rights, but does not explain why then the severely mentally handicapped, autistic, senile, and the persistently vegetative should have moral rights.

In his book *Drawing the Line*, Steven M. Wise introduced the concept of 'practical autonomy': a being has practical autonomy and is entitled to personhood and basic liberty rights if she: 1) can desire; 2) can intentionally try to fulfill her desires; and 3) possesses as sense of self sufficiency to allow her to understand, even dimly, that it is she who wants something and it is she who is trying to get it (Wise; 2003).

According to Cartesian Theories, another reason to deny animals moral status is animals' lack of consciousness: if animals are not interested in their own wellbeing, humans should not take responsibility either. People relying on indirect theories might claim that it is perfectly acceptable to kill animals, because it is natural that the strongest eats the weakest. As it can be seen in the wild, wolves eat deer, lions eat antelopes, birds eat fish, fish eat worms, and humans eat animals. Wolves do not care whether a deer suffers when it is killed, and cats kill while playing, so it should not be wrong to eat an animal, and nothing else needs to be taken into consideration.

Despite the fact that indirect theories do not take into consideration the direct interests of animals, animals are still protected indirectly. So, if somebody's dog is harmed and it makes the person sad, then we should try not to harm the animal to prevent the person from suffering.

While indirect theories deny moral status to animals, direct but unequal theories are based on the belief that animals should have moral status; however, when the interests of humans and animals meet, the interests of humans should be treated as more important. This theory is based on the belief that most animals are sentient. Sentience refers to the capacity to experience negative or positive episodes of awareness, for example, happiness or pain. Unlike humans, animals have no rights, they are not able to act rationally, autonomously or morally; therefore, they cannot be considered equal to human beings (Wilson, 2010).

People supporting direct unequal theories might think that giving and taking someone's life is not as simple as it might seem. Animals, which kill for survival or pleasure, cannot understand that, and, because we need animals to fulfill our interests, animals cannot be equal to humans.

The third group of theories on moral status of animals to be discussed in this paper is moral equality theories. According to these theories, animals have direct moral status, which is as important as the moral status of human beings, and there is no reason to put human beings and animals into different moral categories. In 1789, Jeremy Bentham wrote the book *An Introduction to the Principles of Morals and Legislation*, which played an important role in shaping people's beliefs and thoughts regarding ethics and the moral status of animals, in which he wrote the following:

The day may come when the rest of animal creation may acquire those rights which never could have been withheld from them but by the hand of tyranny. The

French have already discovered that the blackness of the skin is no reason why a human being should be abandoned without redress to the caprice of a tormentor. It may one day come to be recognized that the number of legs, the villosity of the skin, or the termination of the os sacrum are reasons equally insufficient for abandoning a sensitive being to the same fate. What else is it that should trace the insuperable line? Is it the faculty of reason, or perhaps the faculty of discourse? But a full-grown horse or dog is beyond comparison a more rational, as well as a more conversable animal, than an infant of a day or a week or even a month old. But suppose they were otherwise, what would it avail? The question is not, Can they reason? nor Can they talk? but, Can they suffer?

Jeremy Bentham pointed out mistakes made in the past, where discrimination based on skin color was commonly accepted and not questioned by many people. He brought up the arguments widely used today about children not being able to reason to claim that some animals might be more rational than a child. As mentioned earlier, the Greeks addressed this argument and explained that children, unlike animals, have potential to develop the necessary characteristics and become rational beings. Yet it is not the argument that matters, but the fact that many views are based on specific examples, without a wider perspective. For example, some mental disorders might assign human beings a lower status than that which animals have, without potential to develop the ability to reason or talk. So, in the end the only thing we all - humans and most of the animals - have in common, according to Bentham, is the ability to suffer.

One of the most influential moral equality theory publications concerning animals and ethics today is Peter Singers' *Animal Liberation*. In this book, Peter Singer argues why animals should have morally equal status and compares the movement of Animal Liberation to other important movements in history, for example, the abolition of slavery and the fight for women's rights. He draws parallels between attitudes towards slaves before slavery was outlawed and the current attitudes of people denying animal rights.

An excerpt from a speech at the feminist convention in 1850's by black feminist Sojourner Truth illustrates this:

They talk about this thing in the head; what do they call it? ("Intellect," whispered someone nearby.) That's it. What's that got to do with women's rights or

Negroes' rights? If my cup won't hold but a pint and yours holds a quart, wouldn't you be mean not to let me have my little half- measure full? (Singer; 1995)

Peter Singer argues that other philosophers have gone through too much trouble developing arguments to show that animals do not have rights, as they have claimed that to have rights a being must be autonomous or must be a member of a community, or must have the ability to respect the rights of others, or must possess a sense of justice. He argues that all these ideas are irrelevant, and in the same way as Jeremy Bentham did, he states that suffering should be taken into consideration when granting or denying animals their moral status:

If being suffers there can be no moral justification for refusing to take that suffering in consideration, no matter what a nature of being, the principles of equality requires that its suffering be counted equally with the like suffering – insofar as rough comparison can be made – of any other being. If a being is not capable of suffering, or of experience of enjoyment or happiness, there is nothing to be taken into account. So the limit of sentience (...) is the only defensible boundary of concern for the interests of others. To mark this boundary by some other characteristic like intelligence or rationality would be to mark it in an arbitrary manner. Why not choose some other characteristic, like skin color? (Singer; 1995)

Moral equality theories are not accepted and supported easily, because the belief that humans and animals are alike would prohibit the traditional use of animals or products made from animals for the purposes they have been used until now.

However Peter Singer (1995) explains that moral equality does not mean that humans should necessary give up eating meat. If animals have been living a good life and are killed painlessly, the killing of an animal can be justified if the animal is not self-conscious. However, such an act only applies to the animal if it has no actual interest in living tomorrow. The killing of such an animal would reduce the overall goodness in the world; therefore, instead of the killed animal; a new animal should be brought into the world. Even though it would theoretically be possible to achieve such a standard, the price of meat would increase rapidly, because factory animals cannot lead a good life the way they are treated today, and the planet's capacity is already questioned. Therefore, the consumption of meat should be reduced.

All three groups of theories are based on different views on ethics. According to modern animal welfare legislation, which is based on deontological and utilitarian ethics involving anthropocentric, sentience, and biocentric views, animals should be protected from suffering and lasting harm not for the benefit of us, humans, as in earlier anthropocentric belief systems, but in their own interest (Würbel; 2009).

Utilitarianism defines the good as “whatever that brings about the greatest total happiness”. (Warburton; 2004) One of the advantages of utilitarianism as mentioned in indirect theories and in direct but unequal theories is that it recognizes animals as a part of the “happiness” system, if not always directly then through the eyes of animal lovers. For example, if owning an animal brings you joy and good emotions, then the animal is contributing to the “happiness” system. If people suffer because an animal suffers, it again contributes negatively to the total “happiness” system; therefore, suffering should be stopped.

This explains the duality of human concern about animals, despite the fact that the consumption of meat products continues to increase; we also donate more money to animal shelters taking care of dogs, cats and other adorable animals. This is due to the fact that saving the “more loved animals” brings greater happiness than taking care of the animals that we do not consider nice does. A decision to eat meat might be considered moral if the possibility to eat meat and all the happiness related to meat eating (family time, dinner, quality of food) would bring greater happiness than slaughtering an animal.

It is hard to estimate the total happiness if some party is suffering during the process. However, we should take into consideration that morality is relative and also dependent on the well being of humans.

Unlike Utilitarianism, the deontological view suggests that some actions are absolutely right or wrong regardless of the results that follow them (Warburton; 2004). Kantian ethics is based on the deontological view. According to Immanuel Kant, we must acknowledge that if a person does not act out of a sense of duty, but acts purely from their feelings, the action cannot be described as a moral one. According to Kant, we cannot protect one animal but kill another, because we feel so. Duties cannot be questioned depending on the situation.

According to the anthropocentric view, all human beings have a higher moral standing than all other animals, but most contemporary views on animal protection are

sentientist in nature (Würbel; 2009). They are based on the assumption that some animals are capable of experiencing the feelings of suffering and well-being. Lately it has been common to apply zoocentric and biocentric views when talking about animals. These two views allow us to apply ethical criteria that previously were applied to human ethics only, namely, “the integrity of form and function” and “dignity of the creature”. While integrity might be applied to all living organisms, dignity is described as a state of being worthy of honor and respect. Dignity is automatically applied to all humans and is the basis of human rights. Switzerland is the only country that has introduced dignity in relation to endangered species -specific animal species (Würbel; 2009). It is natural that dignity cannot be applied to animals without some restriction, because as moral equality theories imply, slaughtering a human would be consequently equal to slaughtering an animal. However, dignity, at least on some levels, can and should be applied to animal welfare.

The most extreme perspective - the biocentric view - implies that harvesting vegetables or killing animals represents the same ethical assault to the living organism (Würbel; 2009). There is no clear answer regarding what is wrong and what is bad, it is more about what it feels like to do one thing or another, and that is the opposite of Kantian ethics. In reality an example of biocentric view can be seen practiced in Jainist religion. Jainism prescribes a path of non-violence towards all living beings and emphasizes the spiritual equality of all forms of life. Extremists of this religion make sure that no animals or plants are harmed.

According to the biocentric perspective, we are sorry about killing an animal, because our mind relates our own experience to the imagined situation, unlike about harvesting a vegetable, since the animal's gestures, voice and facial expressions are easier to be related to.

Our tendency to empathize with animals increases with an increasing similarity in their appearance and behaviors to our own (Würbel, H. 2009). Therefore, empathy towards mammals is stronger than empathy towards fish or insects. It is argued that empathy towards animals is based on selfish reasons. Because we are able to relate to (some) animals, it is hard to watch animals suffering. To avoid feeling bad, humans are interested in protecting animals from suffering. The highest level of ethical conduct to achieve is “to develop and demonstrate compassion for others”; therefore, growing numbers of organizations fighting for animal rights are natural in countries with a high

standard of living, but not so much in economically weak countries where the standard of living for humans is low.

It is difficult to understand the subjective experience of an animal; therefore, establishing fair rules for animal welfare and well-being will always be a great challenge. Several ethical theories take animals into consideration, but as long as there are no definite laws about what is acceptable, ethics can be questioned. Emotions are an important part of animal protection; therefore, many animal protection organizations are speculating on our emotions rather than on our sense of duty. Whether it is acceptable or not is an individual matter. As long as some results are achieved and at least some animals are helped, no harm is done. However, whether it is moral to help some animals but harm others is another question.

1.5. Differences in Beliefs

Different interpretations of ethical views and people's personal interest to use animals and animal products for different purposes make understanding the development of animal welfare challenging. People might believe that animals exist for human happiness and that they are not self-conscious. However, many experiments on animals and analysis of animal behavior have proven that some animals are self-conscious or more conscious than it was believed in the past. As Wise (2002) has stated in his book *Drawing the Line*, if some animals are able to develop extraordinary abilities, then the consciousness of a species should be judged based on the best abilities of the individuals belonging to the species rather than on preconceived ideas about the animal's abilities or cultural habits. If individuals are able to develop some abilities, then other animals of the same species have the same potential.

The highest moral state to achieve would be to feel a willingness to help animals for their own sake rather than for the sake of people. Many people would like to help animals because of their ability to empathize with animals or because of their sense of right and wrong; however, empathy could be not the only reason for activism in the field of animal liberation.

Based on study by Jenia Meng (2008), memes (traditions, religion, political ideology, education) and genes (empathy, position in social hierarchy and genetic similarities to the animals) are two fundamental attitudes towards animals. While

memes can be learned or at least changes to some degree, genes are more complicated to change.

According to Coplan and Goldie (2011), an important part of understanding what other people will feel, think or do to respond to others in an ethical way is empathy. Coplan and Goldie define empathy as a complex imaginative process in which an observer simulates another person's situated psychological states (both cognitive and affective) while maintaining clear self/other differentiation. Thus empathy can be understood as one or more of several loosely related processes or mental states:

- a) Feeling what someone else feels;
- b) Caring about someone else;
- c) Being emotionally affected by someone else's emotional experience but not necessarily experiencing the same emotions;
- d) Imagining oneself in another's situation;
- e) Making inferences about another's mental states;
- f) Imagining being another in that other's situation;
- g) Some combination of the processes described in points a to f.

Even more, empathy now is reinstated as a focal constituent in aesthetics in relation to human engagement with works of art and fictional characters. No matter how empathy is described, it is proven that some people are more emphatic than others. However, the reasons why we experience or do not experience empathy are very diverse and are still being studied.

In the past, businesses were very simple and based on an actual need of a person or a family. People knew what they needed and where they could get it. In every city, there was a baker, butcher, shoemaker, etc. Nowadays, many of the things we buy we do not really need, or we do not need these things until we have been informed about them. Business has become a complex science. Competition, product placement and advertisements have become an important part of the business world. All this has become reality due to complex research - studies focused on people and their responses rather on the business itself.

The research has gone so far that now we are aware that there are many things we choose not because they simply attract attention but because our brains are more responsive to different manipulations than we know, as it has been proven in neuroscience studies. Even though the research has a long way to go, many of people's

responses and actions can be predicted by using simple methods, such as electroencephalography and galvanic skin response (Glimcher et al.; 2009). During the last decade, the effect of marketing on people and the ethics of many marketing practices have been questioned due to fact that companies have the resources and the means to research human brain and its responses to different stimuli on a level that is way beyond our awareness. Many companies are trying to sell their products by stimulating our visual, audial and tactile senses; others go beyond that and use emotions and feelings as a part of conducting their business. Some neuroscientific manipulations have been forbidden by law to protect consumers, but many of them are still used every day to stimulate our need for a product or service.

While businesses selling tangible products focus on our senses and the willingness to have something, non-profit organizations manipulate based on our feeling of empathy. The more empathic a person is, the harder it will be for the person to deal with pressure from various NGOs.

The different views on animal ethics are not only based on logical assumptions about the abilities of the animal, but are also strongly based on people's self-interest. Acknowledging the idea that animals are conscious would require changing habits that people are not willing to or interested in changing, because otherwise people's current actions could not be morally legitimized. Some people might strongly believe that animals are not self-conscious or that animals are not able to feel pain, while others would simply choose to block out all the unacceptable information in order to continue their current lifestyles.

In 2006, the Directorate-General for Health and Consumer Protection conducted a survey in the European Union on the attitudes of EU citizens towards animal welfare. Although the title was "attitudes towards animal welfare", the questionnaire dealt strictly with animal farming, as the study was conducted by a health and consumer protection organization. This can be seen as a study of great importance, because more than 27,000 people were questioned in 25 EU countries. It also showed positive attitudes towards farmed animal welfare, as people in general agreed that the welfare of farmed animals should be protected and improved in the future and that the same requirements should apply to food imported from outside of the EU.

According to the results of the European Commission survey *Special Eurobarometer* conducted by the Directorate-General for Health and Consumer

Protection, the main reasons for buying food products produced in a more animal-friendly way are as follows: these products are healthier (51%), better quality products (48%), they come from healthier animals (43%), they taste better (34%), they are better for the environment (17%), and only 23 per cent of the respondents believed that it is important that the products originate from happier animals. This means that most people's base willingness to protect animal welfare is based on self-interest rather than on compassion and empathy.

There might be more reasons other than the belief that these products are healthier. Due to the industrialization process and an increasing demand for meat products, various growth hormones and antibiotics are used to stimulate the production process of meat, which makes meat more and more unhealthy. This applies to various groups of animals: mammals, fish, and other.

Furthermore, some other people might believe that meat produced in pain and misery has a bad energy value or that stress hormones produced in animals before slaughtering affect the quality of meat and eggs. Meat production as a secondary food source demands a large volume of food resources damages the environment and contributes to global warming. And last but not least, some people believe that eating too much meat is unhealthy because it increases the risk of various heart diseases.

To protect animal welfare based on self-interest might not seem ethical, but in the end positive results are achieved for both humans and animals. Self-interest can be applied to other situations rather than just to the meat industry. For example, homeless cats and dogs should be eliminated, because they spread various diseases; more shelters should be built to house stray cats and dogs; stricter punishment for animal abuse should be introduced to stimulate good behavior; and testing of cosmetic products on animals should be reconsidered, because cosmetic products might interact differently with human skin due to biological differences between animals and humans.

1.6. Studies

The various studies to examine human attitudes towards animals have been conducted, and many follow up studies to examine the reasons behind the attitudes. While the studies focusing in attitudes only have proven that people have different opinions regarding the animal and animal usage, the studies, which were examining reasons behind those attitudes, are not that conclusive.

In the study by Knight et al. (2004) 96 participants completed the questionnaire on attitudes towards animal use, where personal characteristics were tested (belief in animal mind; age; gender; experience with animals, vegetarianism, political stance, living area) to understand the attitudes towards the animals. This study tested several hypotheses: Females (1), people with more experience with animals (2), participants with higher belief in animal mind (3) will be less supportive of animal use - while older people will be more supportive in animal use, as would non vegetarians compared to vegetarians (6), right wing compared to left wing (7), those who grew up in rural areas compared to those from urban areas (8). Finally - females would present higher levels of “belief in animal mind” than males.

The results showed that participants have very different views on animal use, however only “belief in animal mind” was a consistent and powerful predictor of these together with gender and vegetarianism. Even though females in general were more against animal use, the difference between male and female attitudes was not as strong as previously believed. This might be due to the specifics of study, because in other studies testing the attitudes of males and females towards animals, the males scored significantly lower score on positive attitudes towards animals than females did (Meng; 2009 & Henry; 2004).

“Belief in animal mind” can be related to the discussions of the sentience of animals in animal ethic theories, however according to Peter Singer (1995) in discussion of animal rights, animal mind should not play significant role – rather animals ability to suffer. Animal’s ability to suffer is discussed in the study by Herzog and Galvin (1995), where they assessed people’s willingness to assess mental capacities to animals – consciousness, emotions, suffering, ability to reason, self-awareness, intelligence, pain and affection towards humans (Figure 3). Pain and suffering were the most basic states in that they were perceived as being more characteristic of animals generally than more “advanced” states such as ability to experience emotions or reason (Herzog & Galvin; 1995).

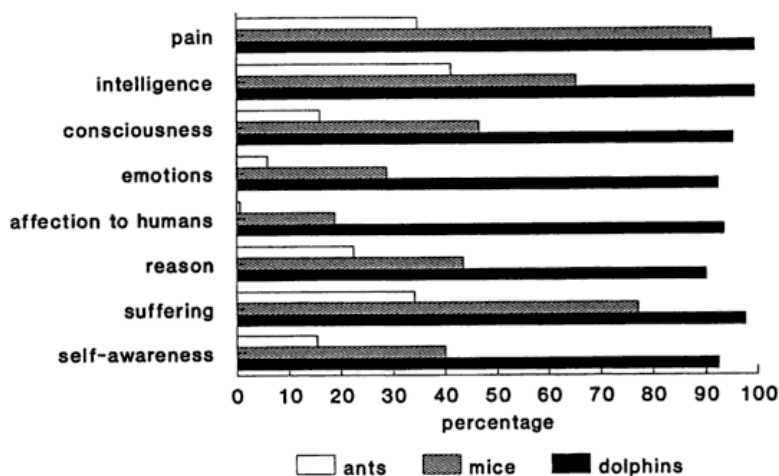


Figure 3: Belief in Mental Capacities of Animals

Source: Herzog & Galving; 1995

If sentient animals, like dolphins and even mice and ants can suffer and experience pain, than how are the people legitimizing their consumption of meat or cruelty towards animals? This might be explained in the same way as cruelty of humans towards humans is explained. Some human are simply capable of doing cruel things to other human and animal. In the study by Kavanagh et al. (2013) evidence was found that individuals belonging higher on assessment of dark triad (narcissism, Machiavellianism, psychopathy) are also crueler to animals. In other study people, who have observed the cruelty to animals or have self-participated in acts of the cruelty towards animals reported themselves higher on delinquency scale (Henry; 2004). Besides being cruel to animals, studies in the field of neuroscience have proven, that people should not necessary be directly cruel to animals as they are capable to block out the information, they are not willing to see, in order to protect them selves from suffering, disgust or other negative emotions (Glimcher et al; 2009). This was also proven in study mentioned earlier by Bastian et al. (2012), where people were found to deny mind to animals they are willing to use for food.

There is evidence in studies that children's attitudes towards animals are largely based on their experience and familiarity towards animals, thus the more education about animals and experience with animals person receives, the more positive attitudes they develop towards animals (Kellert; 1984). It means that owning a pet or visiting the zoo, can contribute positively on children attitudes toward animal in the future. In the study by Knight et al (2004) no significant correlation between owning a pet, and having positive attitude towards animals was found, the author suggested that relations

to the pets should be investigated in order to understand the impact of animals on humans attitude.

In 2009 Jenia Meng has conducted the universal study on attitudes towards animals. According to her research, most of the studies conducted earlier on human attitudes were too local or based on animal welfare in EU, which only represents 12% of the world's population. She criticized people for assuming that animal welfare and happiness of animals are often assumed to be equal. The study was distributed online to students of various universities around the world. In total 4514 questionnaires were received from 12 nations. Her main findings included that animal welfare and reverence towards animals are two very different attitudes towards animal, concluding that societies can have high animal welfare, but no animal rights due to low reverence and other way around. If society has low animal welfare, but high reverence, animals have more rights. According to her findings, the four types of animal protection: animal welfare; new welfarism; reverence for animals; animal rights explain 32% of variation in overall attitudes towards animals. In her study she found out that female in general have more positive attitudes towards animals, and additionally to other studies, she found out that people in higher levels of social hierarchy tend to have lower reverence towards animals. She concluded that memes (traditions, religion, political ideology, education) and genes (empathy, position in social hierarchy, genetic similarities to the animals) are the two fundamental origins of attitudes towards animals.

While her study might prove that there is difference between animal welfare and reverence of animals, it does not mean that these two attitudes should necessary be seen separately, when attitudes towards animals are examined. If person has higher reverence towards animal, the higher welfare of animals will be expected, unless the difference in attitudes between food animals and pets is paying significant role.

To sum up, people in general have a tendency to believe that animals can suffer (Herzog & Galvin; 1995) and that animals have mind (Knight et al; 2004). To legitimize their need to eat meat people tend to deny that animals have mind (Bastian et al; 2012). While the different opinions are common, there is no clear understanding of origin of these attitudes. While in many studies gender was a strong predictor on these attitudes, in the study by Knight et al. (2004) gender did show the significant

influence of people's attitudes. Also the reasons behind attitudes of animals' abilities to suffer or to have the mind are unclear. Do people believe that animals have mind, due to their positive attitude towards animal, or other way around.

Despite the fact that there is considerable amount of studies done to understand the attitudes of human towards animal, there have not been tested the application of these studies to every days situations- for example in convincing the people to change their entertainment of meat eating habits. Therefore the influence of these attitudes on person's choices should be examined and new potential explanatory factors of these attitudes should be investigated. Part two describes a case study conducted in Latvia, where the impact of new negative information on peoples attitudes was investigated.

Part 2

Part two of the paper consists of the case study based on online questionnaire distributed in Latvia.

2.1. Introduction to the Survey

Although many studies have examined attitudes towards animals, these studies are not widely used to influence or predict people's decisions or stimulate their responsiveness to various animal welfare issues. It might be due to a lack of understanding how do people form these attitudes, as many studies have tried to examine attitudes; however, no definitive results have been reached. As it can be seen from the profits of various animal rights organizations, people are willing to donate money to animal protection organizations. However, it is not clear whether the transparency of different organizations could force people to make different choices or to change their meat-eating and entertainment habits. As various organizations are forced to respond to pressure from the community, whether animal welfare will become a part of companies' corporate social responsibility depends on people's attitudes. Several changes have occurred due to pressure on various organizations. As mentioned before, *Dyrenes Beskyttelse* has succeeded in their campaign against cage eggs, and PETA has succeeded in closing down Washington University's cat laboratory, where cats were used for intubating training exercises. According to Jan Lund Ottensen (Appendix 2), experimental laboratories are forced to maintain high standards due to public pressure. In 2011, the Chinese government banned the traditional Dog-Eating festival hosted by the Chinese township of Qianxi in the

Zhejiang Province due to the inhumane ways the dogs were treated and killed⁴. There are many examples of action taken to improve animal welfare, which means that there are people who believe that the suffering of animals is unnecessary and should be eliminated. To change people's attitudes, the origins of those attitudes, people's knowledge on different welfare issues and people's responsiveness to information should be examined together with their current attitudes and the relationships between their attitudes and various factors.

2.2 Hypotheses

The studies analyzed in the current paper have examined the attitudes of people towards animals and have tried to determine the reasons behind these attitudes, however no studies were conducted to investigate whether these attitudes can be used to change the habits of people. In order to understand whether meat eating and entertainment habits of people can be changed by the transparency of different organizations the main hypothesis tested in this survey is as follows:

New, negative information about the actual situation in animal welfare can influence people's habits and decisions.

The hypothesis is based on an article whose author is convinced that easy access to information and public pressure will force different organizations that violate animal welfare principles to change the way they treat animals in order to be corporately sustainable (Reiser; 2013). As public pressure is largely based on people's actions, opinions and choices, the effect of negative information on decisions that people make will be assessed.

In order to explain the reasons behind people's willingness to change their habits, the effect of different factors on people's willingness to change their habits will be assessed. The author of the present study is going to look at the following four aspects, labeled with letters: A) the impact of negative information on the attendance of the circus; B) the impact of negative information on the attendance of the zoo; C) the impact of negative information on meat consumption habits; D) the impact of negative information on willingness to help; by collating them with the following factors:

1) a person's attitude towards animals; 2) the ability to kill an animal; 3) the acceptability of animals suffering in various organizations; 4) belief in animals' ability to experience pain; 5) belief in animals' ability to experience moral suffering; 6) trust in information given by various welfare organizations; 7) gender; 8) age; 9) income;

10) the frequency of going to the a) zoo and b) the circus; 11) current knowledge about animal welfare issues in various organizations.

The analysis of the factors influencing the habits of people will help to understand how decisions of people are formed, what kind of factors are central towards decisions to change these attitudes. As information affects people differently, the analysis of the questionnaire will help to determine the group of people affected most by new, negative information.

An additional analysis of the data will be carried out to see if people's attitudes in Latvia are affected by the same factors as discussed earlier in the various studies and if new additional factors accounting for the attitudes of the respondents can be found.

To predict people's attitudes, the following contributing factors will be examined: 1) age; 2) gender; 3) number of people in the family; 4) income; 5) education; 6) ownership of a pet; 7) relationship with the pet; 8) attendance of the circus and the zoo; 9) the level of knowledge; 10) frequency of eating meat; 11) willingness to compare an animal with themselves; 12) belief in animal's ability to experience pain; 13) belief in animal's ability to suffer morally and 14) capability of killing.

2.3. Animal Welfare in Latvia

The survey is going to be conducted in the Republic of Latvia, a EU country located in the Baltic region in Northern Europe. It is bordered by Estonia, Lithuania, Russia and Belarus. The population is slightly more than two million. The Latvian currency is the Lat (LVL), which is approximately 11 DKK. Minimal monthly salary in Latvia is LVL 200⁶, and this is used as a basis for assessment of minimal income per person in the questionnaire.

Animal welfare in Latvia is specific due to how animals are farmed. Even though Latvia, like many other countries, has industrialized chicken farms, for example, *Ķekavas vista*, most of the other livestock animals are bred privately and later butchered at home or sold to butchers, who are responsible for distributing meat further. Due to the small size of the farms, most animals are taken out on pasture and people take proper care of them due to the relatively high price of the animals in comparison to the owner's income. The dairy industry operates in a similar way, milk is collected daily from the farmers by Latvian milk companies, which later sell this

milk in stores in Latvia. Although in general it is believed that livestock animals in Latvia are treated well, several cases of mistreated livestock animals have been investigated in the past. Therefore, to assess attitudes towards industrialized animal suffering on animal farms, attitudes towards the suffering of chicken will be evaluated in this questionnaire.

Most of the attention is given to homeless cats in Riga and other big cities. The problem has spiraled out of control, as no definite solution has been found. The best solution, according to the Riga City animal shelter, would be to sterilize the cats and return them back to the streets, as otherwise the available space on the street would be taken over by other cats or newly abandoned animals.

In 2013, several people were reported to have been bitten by dogs, causing rumors that there are stray dogs in Riga. However, no stray dogs were found during the investigation. Unfortunately, many dogs outside of the cities are kept chained outside the houses without a possibility to move freely. Despite the fact that there are rules about a minimum length required for the chain or requirements for animal housing, no investigations to control the laws has been carried out in this area.

The questions about people's attitudes towards animals used for entertainment purposes are based on the fact that there is a zoo and a circus in Riga. The zoo is open every day, but the circus has a limited number of shows; therefore, the circus could be attended less often. The Riga Circus has various animals on their programme, including elephants, bears and tigers⁵.

None of the popular animal welfare organizations operate in Latvia, but there are several local organizations that mostly focus on companion animals, for example, dog and cat shelters.

2.4. Methodology

The hypotheses of the present study are based on the studies previously conducted in the field, which have been discussed earlier in this paper, and on general assumptions about animals and animal welfare.

The first part of the questionnaire comprises 25 questions (Appendix 3). This part contains general information about the respondent (age; gender; number of people in

the family; monthly income after tax; region and education). The respondents are adults (aged over 18).

Then, the respondent's habits concerning going to the circus and to the zoo, and eating meat will be assessed and the extent of their knowledge about housing conditions in different institutions will be examined. After that, the effect of potentially negative information about animal welfare on their willingness to go to the circus and the zoo and to eat meat will be assessed by asking if the respondent would change their habit of going to the circus and the zoo and the habit of eating meat if they were provided with negative information.

In order to assess the respondent's current knowledge about animal welfare, not only will they be asked how well-informed they feel about the housing conditions of animals in the following organizations, but also whether they had heard about the following animal welfare organizations. However, among the answers to this question there is one non-existent animal welfare organization to test the respondent's ability to answer sincerely and truthfully.

In order to assess the reasons behind people's choice how to respond to negative information about animal welfare, the respondent's trust in information published by various welfare organizations will be assessed. Later on, the effect of distrust on their willingness to change their habits after negative information has been obtained will be examined.

Furthermore, in the first part, the respondent's belief in various animals' ability to suffer and experience pain will be examined, as it might affect willingness to respond to information and it is a rather interesting piece of information to assess to see whether affection towards some animals is greater than that towards others.

As pain is very difficult to assess, the respondents will be asked how they would rate the animal's ability to suffer. Due to the belief that the question is too complicated to answer for the random respondent, several commonly used opinions will be provided, as well as chance to supply their own answer.

In the second part of the questionnaire, the respondents will have to rate the extent to which they would feel bothered (1=not bothered; 5=bothered very much) to think about someone engaging in various acts of behavior towards animals, for example, having sexual contact with an animal or leaving an animal without water or food. To

assess respondent's attitudes towards animals, the 26-item Attitudes Towards the Treatment of Animals Scale (ATTAS) by Henry (2004) was used, but four questions were removed from the ATTAS scale, as it involves the person in a question in a way that is too direct, for example, "Have you ever intentionally killed an animal that was owned by yourself or by some one else for no good reason" (Henry; 2004). These questions do not suit the questionnaire for the assessment of people's attitudes, because they might be too personal or embarrassing for the respondent. Instead of these four questions, Question 22 in Part 1 (Appendix 3) assesses people's potential ability to kill an animal for various reasons. To evaluate the general attitude of the respondent, the average value of the attitudes will be calculated, and this information will be later used when analyzing respondents' answers.

To enable the respondent to express their opinions about animal welfare in general, the questionnaire ends with an open, but voluntary question, which is as follows: "Please express your opinion whether animal welfare issues should be addressed on the national level and why".

The results of the questionnaire will be divided into several categories. First results will be read directly from the questionnaire, but the reasons behind these results will be analyzed with the help of IBM SPSS software using Correlation Test, One-Way ANOVA or Independent Samples -T Test, depending on the type of data. Correlations will be determined by Pearson correlation in those cases when data follows normal distribution; in those where it does not, Spearman's test will be used. Due to the specifics of the results, several manipulations will be done in order to make the results suitable for analysis in SPSS. The income of the family will be divided by the number of people in the family and new groups of income will be established. Relationship with the pet will be evaluated in three categories, namely, bad and neutral; good; very good, as relatively few people report poor relationships with their pets.

To analyze in greater depth the level of knowledge of animal welfare issues in various organizations, a sum of the results for each respondent will be calculated, which will provide a general score for knowledge.

From the questions where the effect of negative information on a respondent's attendance of the zoo and the circus is assessed, the answer "I do not know" will be excluded from further correlation tests.

In the question where respondents were asked to assess the impact of potential negative information on their meat eating habits, answers “I would consume less chicken meat” and “I would choose meat which is more expensive but has been produced in better conditions” will be evaluated as “having some impact”.

The question where the effect of negative information on respondent’s willingness to help an animal is assessed will be transformed into two variables, having or not having an effect, as different opinions do not make sense in this analysis.

From the question where the level of trust in information published by welfare organizations is assessed answers “I have not obtained such information” will be excluded.

In order to understand the respondent’s attitude towards animal suffering in various organizations, a sum of the attitudes towards various organizations will be obtained, the same manipulation will also be done to data assessing attitudes about an animal’s ability to feel pain or suffer morally.

As it has already been mentioned earlier, the second part of the questionnaire where the attitudes of respondents towards different negative actions towards animals will be assessed a sum of these answers will be calculated.

In the last open question, the opinions of respondents will be grouped into categories to explain most common attitudes towards the need to address animal welfare issues on the national level.

2.5. Results of the Questionnaire

2.5.1. Respondents

Two hundred respondents completed (n=200) the questionnaire, out of which 55.5 per cent (95% CI= 48.6-62.2%; n=111) were female and 44.5 per cent (95% CI=37.8-51.4%, n=89) were male. The average age of the respondents was 41.8 years, ranging from 18 to 64 (Chart 3; Appendix 4).

35.5 per cent (95% CI=29.2-42.4) of the respondents come from Riga or the Riga vicinity, 25.5 per cent (95% CI=17.7–29.3%) from the Vidzeme Region, 20.0 per cent (95% CI=15–26%) from Kurzeme, 11.5 per cent (95% CI=8–16.7%) from Zemgale, and 7.5 per cent (95% CI=4.6 – 12%) from Latgale.

61.5 per cent (95% CI = 54.6 – 68%) of the respondents have a higher or incomplete higher education, 35.0 per cent (95% CI=28.7–41.8%) - secondary or secondary-vocational, and the remaining 3.5 per cent (95% CI=2.9–4.2%) have primary education, which equals to nine years of school.

Respondents were asked to state the monthly income of the family after all the taxes were paid. As it can be seen in Chart 4 and 5, after adjusting the monthly income of the family to the number of family members, the situation changed dramatically, as only 31 per cent (95% CI=29.5–32.6%; n=62) of the respondents live on more than the official minimum salary and get more than LVL 200 per person per month which is considered minimum monthly salary before tax.

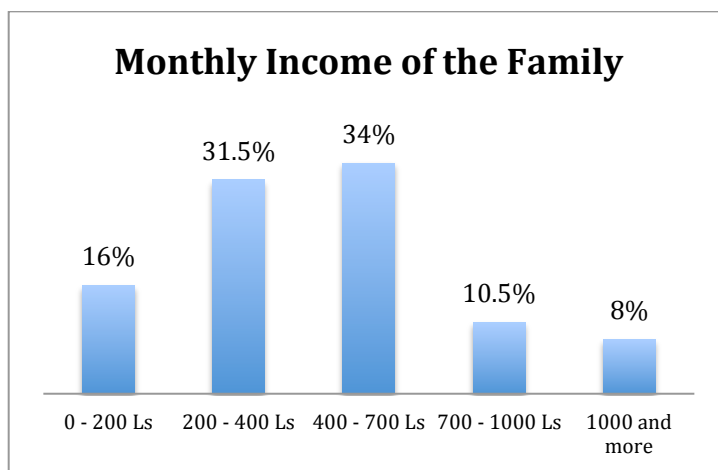


Chart 4: Monthly income of the family

Source: Author`s questionnaire

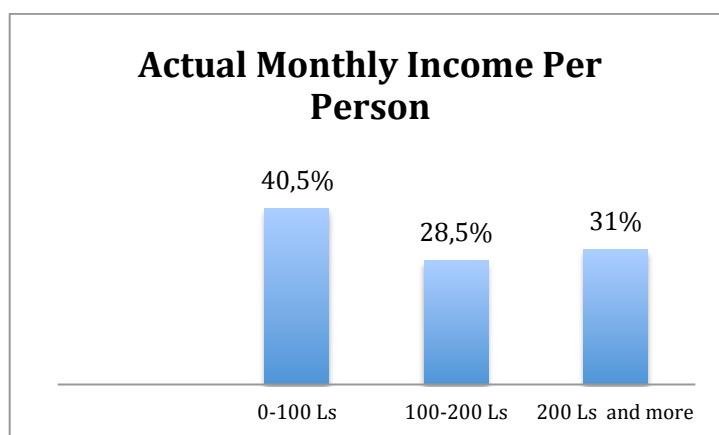


Chart 5: Monthly Income Per Person

Source: Author`s questionnaire

82.0 per cent (95% CI=76.0–86.7%) of the respondents have had a pet for a period longer than two years, whereas 9.0 per cent (95% CI=5,8–13,8%) have had a pet for a period shorter than two years and only nine per cent (95% CI=5.8-13.8%) and 18 participants (95% CI=5.8-13.8%) have never had a pet.

In reply to the question that asks the respondent to describe relationship with the pet (n=182), 64.3 per cent (95% CI=57,1-70.9%) rated their relationship as very good, 28.6 per cent (95% CI=22.5-35.6%) rated it as good, and only seven per cent (95% CI=4.2-11.8%) rated the relationship with the pet as neutral or bad.

In general, the respondents are not very active circus or zoo goers, as only 26.0 per cent (95% CI= 20.4-32.5%) of the respondents go to the zoo a minimum once a year, and 7.5 per cent (95% CI=7.1-7.9%) of the respondents go to the circus once a year. This might be explained by the relatively high average age of the respondents, as most people go to the circus or the zoo while their children are young.

The level of how well-informed people are about the welfare of animals in various organizations varies by organization (Chart 6). The average level of knowledge about the welfare of animals in different organizations lies in the range between average and bad (1- very bad; 2 –bad; 3 – average; 4 – well; 5 – very well). The respondents felt best informed about animal welfare in organizations such as zoos and animal shelters, but less informed in the case of such organizations as circuses, experimental laboratories and fur farms.

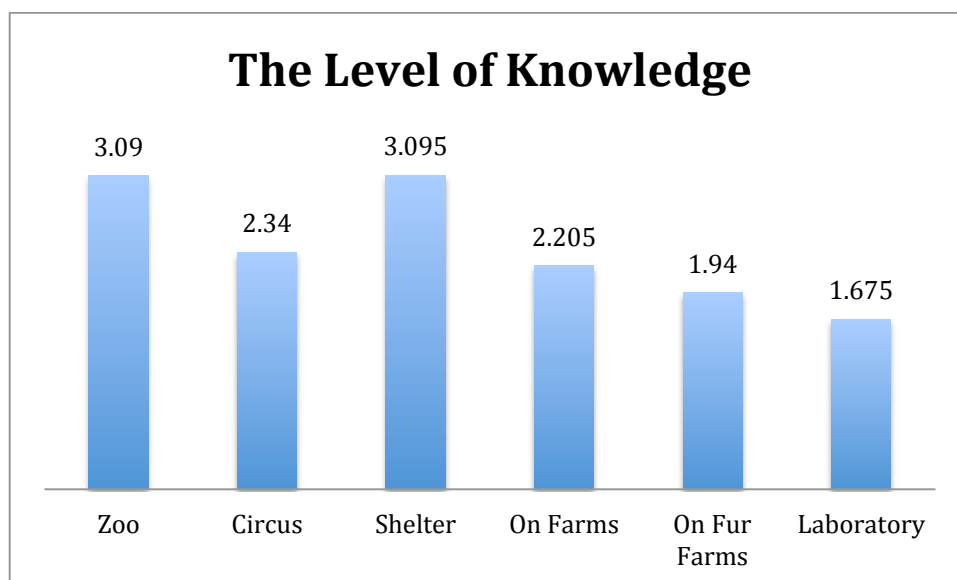


Chart 6: Knowledge About Animal Welfare

Source: Author's questionnaire

When examining the sources of various information about animal welfare, it was determined that 28.4 per cent (95% CI=26.0-31.0%) obtained most of their information about animal welfare in different organizations from TV and 17.0 per cent (95% CI=15.0-19.2%) on the Internet, whereas 28.2 per cent (95% CI=25.7-30.8%) have not obtained any information about animal welfare in various institutions (Chart 7). At school and from animal welfare organizations people have obtained the smallest amount of information. This might be due to the low activity of various welfare organizations in Latvia and the average age of the respondents.

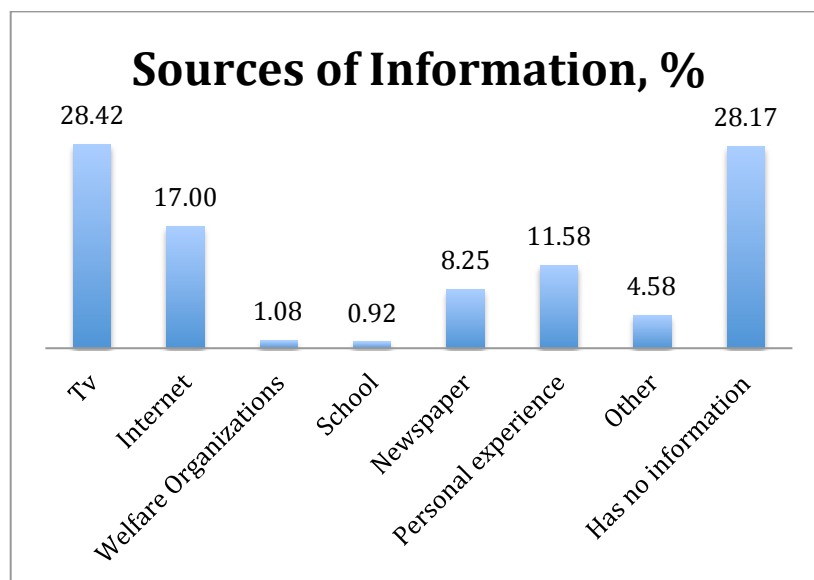


Chart 7: Sources of Information

Source: Author's questionnaire

People are least informed about animal welfare in experimental laboratories, as more than 57 per cent of the respondents reported having no information about animal welfare in experimental laboratories, but claimed that they have expanded their knowledge about animal shelters and zoos from personal experience while visiting zoos or animal shelters. It might be explained by the accessibility of the zoo and shelters to different groups of people.

Information about animal welfare was not obtained from animal welfare organizations, which is a logical result of the relatively limited knowledge about such international animal organizations as *PETA*, *WWF* and *WSPA*. Only 28.4 per cent (95% CI=26.9-39.8%) of the respondents have heard about *PETA*, 25.5 per cent (95% CI=23.6-36.1%) of the respondents have heard about *WWF* and 3.4 per cent (95% CI=2-7.6%) of the respondents have heard about *WSPA*. Only one person chose the

option “TWAR”, a non-existent organization, which proves that people in general have tried to answer truthfully.

Part 2 of the questionnaire examined the respondents’ attitudes towards animals. People in general have rather positive attitudes towards animals (mean value 3, 68) when they were requested to rate the level of how bothered they feel (1 – not bothered at all; 5 – bothered very much) when someone is involved in various harmful acts against animals.

The questionnaire also examined the capability of the respondents to kill an animal. The mean of all the answers is 2.3, which corresponds to the position of answers “rather not” to “maybe”. This means that most of the respondents would not be capable of killing an animal. However, the answers depend on the type of animal under consideration. 86.0 per cent (95% CI=80.5-90.1%) of the respondents felt that they would not be able to kill a stray dog, 77.5 per cent (95% CI=71.2-82.7%) might consider killing fish and 44.0 per cent (95% CI=37-50.1%) might consider killing chicken.

The respondents provided different answers regarding animals’ ability to experience pain or suffer (Chart 8).

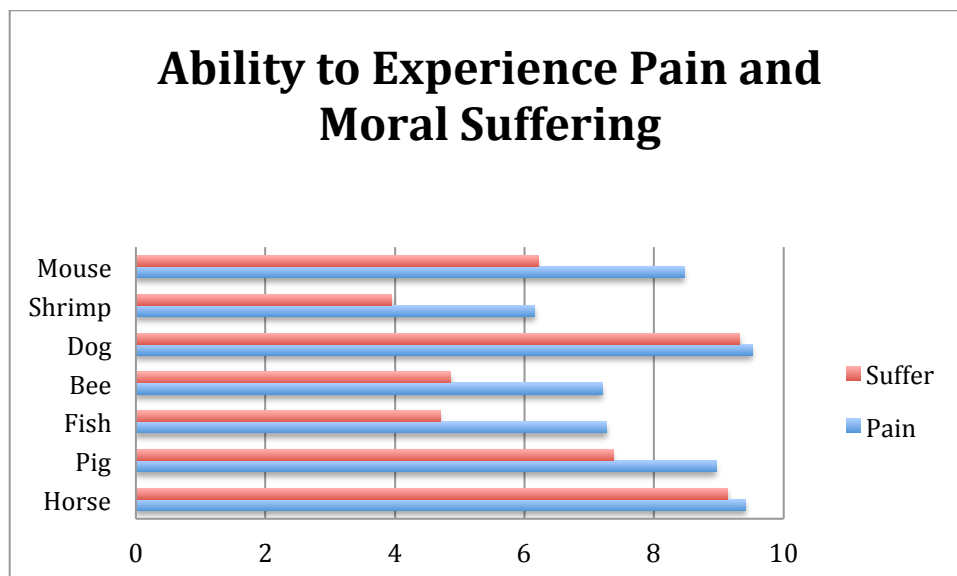


Chart 8: Belief in Animals’ Ability to Experience Pain and Moral Suffering

Source: Author’s questionnaire

As it can be seen in Chart 8, the respondents in general believe in animals' capability of experiencing pain and the ability to morally suffer. However, the perceived animals' ability to experience moral suffering typically is rated lower than the belief that animals can experience pain. According to the results, people believe that dogs and horses can suffer and experience pain; whereas pigs and mice, for example, can experience pain, but cannot morally suffer on the same level as dogs or horses can.

When the respondents were asked to explain how the suffering of an animal should be examined, most of the respondents, or 29.0 per cent (95% CI 24-34.6%; n=276), answered that they would rely on their own feelings in a similar situation. 27.9 per cent (95% CI 22.9-33.4%) of the respondents would trust an expert's opinion and 27.2 per cent (95% CI=22.3-32.7%) would rely on the animal's reaction, but around 14 per cent would trust findings from scientific research.

2.5.2. Results on the Hypothesis

The main purpose of the questionnaire was to test whether new negative information about animal welfare in different organizations, such as circus, zoo, animal shelters and chicken farms, could affect a person's habits of going to the entertainment institution (circus, zoo) and increase their willingness to help (for example, a shelter) or lower the amount of meat consumed by the person.

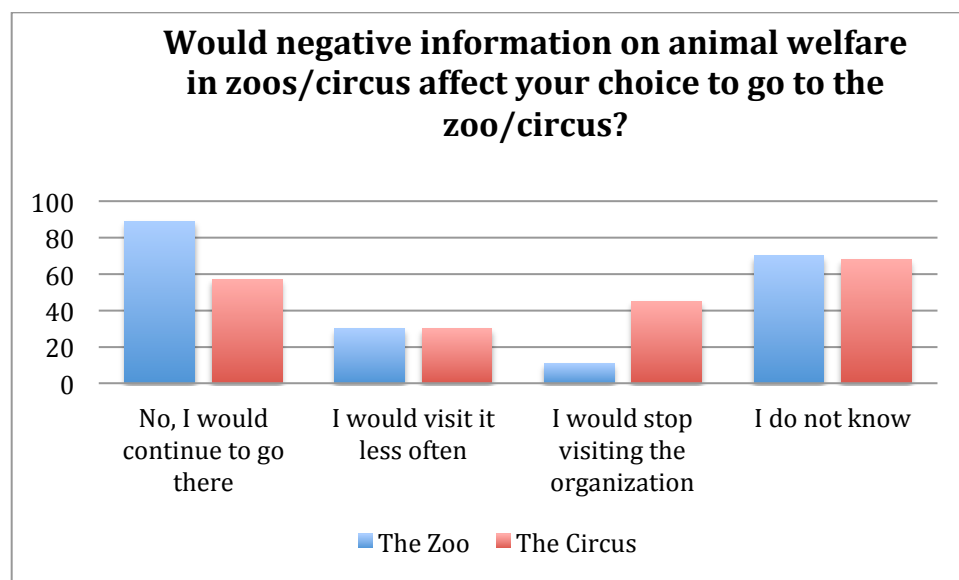


Chart 9: Effect of Negative Information on the Attendance of the Zoo and the Circus

Source: Author's questionnaire

Merely 20.5 per cent (95% CI=15.5-26.6%) of the respondents would be affected by negative information about zoos and would choose to go to a zoo less often or would stop going to the zoo (Chart 9). 37.0 per cent (30.0-43.8%) would go to the circus less often or stop going to the circus. The effect of negative information about circuses seems to be stronger: more people would be willing to stop going to the circus entirely, whereas not so many would choose to give up going to the zoo in spite of potential negative information.

The situation is quite different for chicken consumption: 27.1 per cent of the respondents (95% CI=22.2-34.6%) would be affected by negative information and would decide to either consume less chicken meat or to stop consuming chicken meat altogether. Over 30 per cent (95% CI= 24.1-36.7) would choose meat that has been produced under better conditions but costs more. Only 41.2 per cent (95% CI=34.4–47.9%) of the respondents would not be affected by negative information about chicken farms.

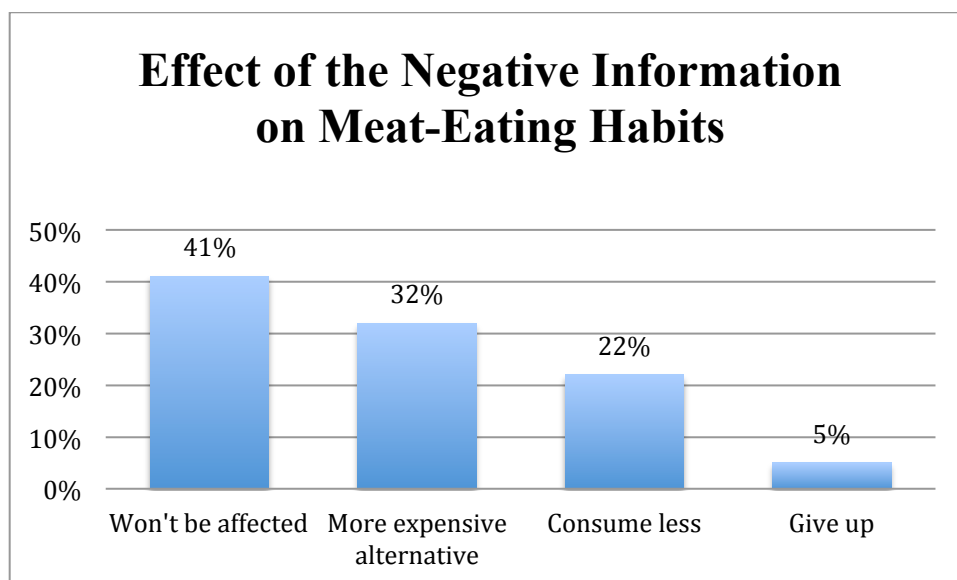


Chart 10: Effect of the Negative Information on Meat-Eating Habits

Source: Author's Questionnaire

The respondents reported a rather high level of willingness to help animals, for example in animal shelters when faced with negative information, as 67 per cent of the respondents (95% CI =60.2–73.1%) answered that negative information published by animal welfare organizations stimulates their willingness to help. However, fewer respondents - 66 per cent, respectively (95% CI=59.1-72.2%), have ever helped an animal in need.

As the results show, a negative information has a significant effect on people's willingness to help. In order to understand the differentiation in terms of effect, the author set out to examine whether any correlations exist between people's responses to negative information and other factors, such as 1) the person's attitude towards animals; 2) capability of killing an animal; 3) acceptability of animals suffering in various organizations; 4) belief in animals' capability to experience pain; 5) belief in animals' ability to experience moral suffering; 6) trust in information given by various welfare organizations; 7) gender; 8) age; 9) income; 10) attendance of the zoo and circus; 11) the level of knowledge about the situation in current organizations.

A correlation between a person's attitude towards animals and willingness to go to zoos or circuses less often was not found. However, a correlation between people's willingness to eat meat after potential negative information was identified, and the average attitude towards animals, according to the Spearman's test, is weak, monotonic and positive (0.292; $p < 0.01$), which means that positive attitudes towards animals correlates with people's willingness to give up eating meat or change their meat eating habits. The mean attitude of people willing to help animals after learning negative information was 3.838, whereas the attitude of those who would choose to ignore information or would not be affected was 3.332: the mean value of the difference according to the T Test was -0.5066 ($p < 0.001$)

Capability of killing an animal has no effect on people's willingness to go to zoos and circuses when negative information has been obtained. However, a weak negative correlation of -0.227 ($p = 0.01$) between a person's capability of killing and the willingness to change their meat eating habits was found in a Pearson test. This means that people who are capable of killing are also less affected by negative information published by animal welfare organizations (Chart 5; Appendix 4).

In a test where people's capability of killing was compared to their willingness to help animals the average values were 2.9831 and 2,1290 respectively, with a mean difference of 0.85405, according to a T Test ($p < 0.01$), which indicates that there is a negative correlation between people's ability to kill and their willingness to help an animal.

Acceptability of cruelty towards animals by various organizations also affected a respondent's willingness to give up eating meat in a negative way, as a weak negative

correlation was found (-0.247 ; $p < 0.01$). No effect on the attendance of the circus or the zoo was found; however, some negative correlation between respondent's willingness to help and how acceptable animal cruelty is to them was found, as the average value (Acceptability of suffering) amounted to 2.12 in those who are willing to help and 1.61 in those who are not willing to help ($p < 0.01$).

No correlation between respondent's willingness to change their zoo, circus going habits or their willingness to change their meat consumption habits and belief in animals' ability to experience pain was found, but a minor link between belief in animals' ability to experience pain and willingness to help animals was found. According to a T Test, the mean value difference was -0.775 ($p = 0.023$), with an average value of 7.59 in those who are not willing to help and an average value of 8.37 in those who are willing to help an animal after negative information has been obtained.

No correlation was found between respondent's willingness to change their zoo going habits or meat consumption habits and respondent's belief in animals' ability to morally suffer. A correlation between animals' ability to suffer and respondent's willingness to help was not found either. However, a weak negative correlation was found (-0.262 ; $p = 0.02$) between animals' ability to suffer and respondent's willingness to go to the circus after they have been provided with negative information.

No correlation was found between trust in information provided by various animal welfare organizations and willingness to change circus or zoo going frequency, willingness to consume less meat or help animals after obtaining negative information.

The effect of negative information on people's willingness to consume meat differs by gender. According to a T Test, the average value for willingness to help reached 1.8 in women and 1.57 in men ($p = 0.03$), which indicates that women are affected more by negative information in terms of their decision to eat meat than men are. A similar effect on respondents' willingness to help an animal after being provided with negative information was found: the average value for willing to help an animal was 1.63 in men and 1.8 in women ($p = 0.01$). No correlation was found between gender and the effect of negative information on people's habits of going to the zoo or the circus.

In general, no correlation was found between respondent's age and their potential reaction to negative information, with the exception of the circus: a weak negative correlation (-0.246 ; $p = 0.05$) was found between people's age and willingness to go to

the circus after negative information about animal welfare. This shows that younger people's circus going habits are less affected by negative information.

Monthly income per person after tax has no effect on the respondent's willingness to change their habits after receiving negative information about animal welfare.

The frequency of circus and zoo visits has no effect on respondents' willingness to change their circus and zoo going habits after obtaining potential negative information. However, a moderately strong positive correlation was found between the frequency of meat consumption and the effect of negative information on meat eating habits (0.336; $p < 0.001$). This means that people who eat meat often are less affected by knowledge about animal suffering on animal farms than those who eat meat rarely (Chart 4; Appendix 4).

To assess whether the people who are better informed about the situation in animal welfare in different organizations are more responsive to new negative information, these two factors were correlated. No correlation was found, which means that people's level of knowledge does not affect their response to new negative information.

To sum up, despite the fact that several correlations were found between various factors and people's willingness to react to new negative information, the correlations are rather weak (Figure 4).

	Attendance of the circus	Attendance of the zoo	Meat eating	Willingness to help
Attitude	no	no	0.292; p<0.001	3.83 Vs 3.32
Capability of killing	no	no	(-)0.227; p=0.01	2.98 Vs 2.12
Acceptability of suffering	no	no	(-) 0.247; p<0.001	2.12 Vs 1.61
Belief in ability to experience pain	no	no	no	8.37 vs 7.59
Belief in ability to experience suffering	(-)0.262; p=0.02	no	no	no
Trust in information	no	no	no	no
Gender	no	no	1.57 Vs 1.8; p=0.03	1.8 Vs 1.63 (woman/man)
Age	(-)0.246; p=0.05	no	no	no
Income	no	no	no	no
Attendance of the zoo and the circus and frequency of eating meat	no	no	0.336; p<0.001	-
Knowledge about animal welfare	no	no	no	no

Figure 4: The Effect of Different Factors on People's Response to Negative Information

Source: Author

No factors were identified that would explain the respondents' willingness to go to the zoo less often when new negative information was obtained.

Age and belief in animal suffering might have an effect on the respondents' response to negative information about the circus, as older people would be more willing to change their circus going habits if they obtained negative information. People who believe in animals' ability to suffer would also be more responsive to negative information about the circus.

There were several factors determining people's willingness to help animals, when negative information about animals for example in shelters was obtained. People with

more positive attitudes towards animals, lower ability to kill, lower acceptability of animal suffering in various organizations, belief in animals' capability of experiencing pain, and women in general would be more responsive to negative information about hurt animals.

There were several factors determining people's willingness to change their meat eating habits after obtaining negative information about the situation on chicken farms. People with more positive attitudes towards animals, lower ability to kill, lower acceptance of animal suffering in various organizations, women, and people who eat less meat would be more responsive to negative information about animal welfare on chicken farms.

Although attitudes have only shown an effect on the change in meat eating habits and willingness to help the animals in a shelter, attitudes towards animals are the basis for predicting the person's response to animals.

For this, the author looked for correlations between attitude and the following factors: 1) age; 2) gender; 3) number of people in the family; 4) income; 5) education; 6) ownership of a pet; 7) relationship with the pet; 8) attendance of the circus and the zoo; 9) the level of knowledge; 10) frequency of eating meat; 11) willingness to compare an animal with themselves; 12) belief in animals' ability to experience pain; 13) belief in animals' ability to morally suffer and 14) capability of killing.

Attitude and:	Correlation:
1) Age	0.215; p=0.02
2) Gender (woman/man)	T test mean dif. 0.5817; p<0.001
3) Number of people in the family	(-) 0.14; p=0.49
4) Income	no
5) Education	no
6) Ownership of the pet	0.222; p=0.02
7) Relationship with the pet	no
8a) Attendance of the circus	no
8b) Attendance of the zoo	no
9) The level of knowledge about animal welfare	0.139; p=0.05
10) Frequency of meat consumption	0.328; p<0.001 (Spearman)
11) Willingness to compare the suffering of an animal with personal experience	T test mean dif. 0.4056; p<0.001
12) Belief in animals ability to experience pain	no
13) Belief in animals` ability to morally suffer	0.236; p=0.01
14) Capability of killing	(-)0.493; p<0.001

Figure 5: The Effect of Different Factors on People`s Attitudes

Source: Author

As it can be seen in the Figure 5, several correlations between attitude towards animals and other factors were found. Elderly people, women, pet owners and people who eat less meat will have more positive attitudes towards animals. A weak correlation between the knowledge about animal welfare and attitudes towards animals was found. A weak negative correlation between the number of people in the family and attitudes towards animals was also found. People who are willing to compare an animal`s suffering to their own experience in a similar situation were found to have more positive attitudes towards animals. A moderately strong correlation was found between the capability of killing and attitude towards animals. Although the belief in animals` ability to feel pain did not correlate with attitudes of the respondents, a correlation was found between the belief in animals` ability to suffer morally and the attitudes of the respondents.

The Open question

At the end of the questionnaire, the respondents had a chance to answer the following question: Please express your opinion whether animal welfare issues should be addressed on a national level and why. 137 replies were collected.

The replies can be divided into categories according to the information expressed. Approximately twenty of the respondents gave a negative answer to the question. The reasons for their opinions are mainly based on the idea that the Latvian state should take care of the demographic situation in the country and its citizens first and should not waste money on animals. Some of the respondents who answered in the negative explained their opinion with a lack of interest in animals, whereas others believed that in comparison to other countries, people in Latvia take good care of animals.

A majority of the respondents (over 100) gave a positive answer to the question. It is very different to explain this answer, because some people mentioned a problem with stray cats and dogs in the country. People either feel pity towards these animals or believe that stray cats and dogs are dangerous to people. Obligatory tattooing or chipping of cats and dogs was suggested, as well as funding more animal shelters and animal hospitals in the country. Other respondents suggested that more attention should be given to animal farms outside of the cities, as, in their opinion, animals suffer more on these farms from starvation and bad treatment, because currently no animal protection laws are being enforced.

Some other respondents believe that this issue should be addressed for the sake of animals themselves, because people are too cruel and ruthless towards animals, who are able to feel pain. Animals should be helped, so that “we would not be apathetic and dull, could sympathize with them”, “because animals are alive and deserve a good attitude”, and “because animals are citizens of this country too”.

Some respondents think that there is a general lack of the information in the country concerning animal welfare issues, that education of people should start as early as at school and rather than placing all the responsibility on the country people should take responsibility for the animals they have adopted.

Several respondents also suggested that the person’s ability to have and to keep an animal should be evaluated before the animal is sold to the person or the family, as many people are too irresponsible and unable to make the right decisions.

Many of the respondents' opinions voice harsh criticism and frustration towards the state, for example:

"This country does not take care of its people, of the sick and the old, of children, it takes even less care of the animals. There is nothing to expect from this country, no reason to ask, because I do not see the point."

"In our country, the people responsible for these issues do not understand anything about animals. Even this questionnaire is too populist, almost like "let's give animals some ice cream and set them free"; animal welfare cannot be discussed in public."

"I believe our country cares more about animals than it cares about children".

2.6. Discussion of the Results

The results of the questionnaire have allowed to draw some interesting conclusions, as new negative information has some effect on people's willingness to change their meat eating and entertainment habits. Even though the results of the questionnaire are uncertain, because it is hard to estimate the effect of some information on your habits in a realistic manner, assumptions about the future are often based on different experiences and on expectations about the information.

According to the results, not all the respondents believe that negative information about circuses, zoos or animal farms would affect their habits of going to the zoo and circus or eating less meat; however, over half of the respondents are either uncertain about the effect of information on their actions or believe that potential negative information might change their entertainment and meat eating habits. Uncertainty could lead to either a change of habits or no change. By choosing the answer "I do not know" people show that there is a possibility that some kind of information might affect their decisions.

As it was reported earlier, 22 per cent of the respondents would entirely stop going to the circus, but only slightly more than five per cent would entirely stop going to the zoo, if they received negative information about animal welfare in these institutions. Different ways how people see the circus and the zoo might be the reason of this. Circus can be substituted with many other types of entertainment, whereas the zoo provides a different experience with animals that cannot be obtained in many places. Willingness to go to the zoo could also be used to improve the wellbeing of animals in

the zoos rather than just closing down the institution, as people are not ready to give up the zoo experience in spite of potentially negative information. However, over 60 per cent of the respondents are willing to help animals if they receive negative information about animal welfare; this means that zoos could be transformed into places where animal welfare plays an important role.

Unlike the zoo, the circus was less important to the respondents, as it is generally less attended, and fewer people would continue going there, if they received negative information about circuses. Testing for correlations between respondents age and willingness to stop going to the circus showed that elderly people and people who believe that animals are able to suffer are less willing to go to the circus. The results can also be explained by relatively little amount of information about animal welfare in circuses: only about 10 per cent of the respondents felt well-informed about animal welfare in circuses; more than half of the respondents had no or very little information about animal welfare in circuses; therefore, more information about animal welfare in circuses could dramatically change people's habits.

Habits of going to the circus and the zoo might be affected by peoples' estimations about animal welfare in these institutions or their own interest, and animal suffering in a circus or in a zoo might be seen as something that is not a direct responsibility of the person. On the other hand, as far as meat consumption patterns are concerned, negative information was found to have a significant effect on meat eating habits. Personal attitudes of the respondents towards meat could be a reason behind this, as it is impossible to deny that meat comes from animals that suffered to some degree.

More than half of the respondents would be affected by negative information about animals (hens) suffering on animal farms. Despite the fact that only less than 30 per cent of the respondents would choose to eat less meat or give up eating meat entirely, approximately 20 per cent would choose meat from better sources even if it were more expensive. The results of the questionnaire have shown that general attitudes towards animals play an important role in the respondents' willingness to change their meat eating habits if they knew that animals were treated badly during the meat production process.

The level of acceptability of animal suffering in different organizations, higher frequency of meat eating and the capability of killing an animal have shown a negative effect on the respondents' readiness to change their meat eating habits. This might be

explained by the fact that people who have seen an animal being killed or would be able to participate in the act of killing are less delusional about where meat comes from. A readiness to kill an animal for food indicates that food plays a major role in behavior and beliefs. However, as it has been discussed earlier, animal welfare and animal rights are two different things. Although the act of killing might make a person more accepting of the use of animals for various uses, animal welfare and killing an animal is clearly not same thing. Painless killing is an integral part of animal welfare, while mistreatment of the animal is not. Capability of killing an animal could explain why the extent of willingness to change meat-eating habits is lower than it is in those people who feel less capable of killing an animal. This, however, does not necessary imply that a person has a lower level of morality than those who simply expect that meat will be available to them. As the questionnaire was distributed online and people who live on farms and have livestock often have little or no access to the questionnaire, the real number of people who are capable of killing an animal might be much higher.

When asked how information on animal welfare affects their willingness to help, more than 67 per cent of the respondents answered that potentially negative information would stimulate their willingness to help the animals. Correlations were found between willingness to help and the following factors: general attitude towards animals, capability of killing an animal, gender, belief in animals' ability to experience pain and moral suffering, and the acceptability of animal suffering at the hands of various organizations.

When asked where they obtained most of their information about animal welfare, the respondents indicated TV as the primary source of information. There is a possibility to choose a source of information on the Internet, unlike on television, where the available information is very limited and often commercialized. If people typically see happy animals on animal farms in the advertisements of meat products, their perception of the situation on animal farms can be very different from reality, especially when general knowledge about the situation on animal farms is very limited, as has been reported. To inform people about a range of issues, showing only good quality TV shows, such as those on *Animal Planet* or *Discovery* channels, is insufficient, as this information does not reach the same number of people as short advertisements or simpler shows might do.

Television as a primary source of information might also account for the willingness of animal welfare organizations to publish negative information about

animal welfare on television and add voices to animal footage, as that might help people to relate to the animals or change their perception. In this study, a weak significant correlation was found between people's willingness to compare animals' ability to experience pain with their own feelings and people's attitude towards animals (with a mean difference of 0.4056); therefore, the ability to relate to an animal can also boost the person's response to negative information, even though this kind of advertisements and shows might seem amoral at first sight. These findings also indicate that animated films for children in which animals are anthropomorphized can have a positive effect on people's attitudes towards animals.

People's attitudes towards animals have been a significant predictive element for various actions. An examination of attitudes towards animals showed that people in general would feel bothered if someone were involved in negative activities with animals. A correlation was found between several factors and attitudes towards animals. Elderly people, females and pet owners typically would feel more positive towards animals, in this way ascertaining the findings of various studies which examined attitudes towards animals. Pet ownership and attitudes have a weak but significant correlation (0.222; $p=0.02$). A study by Knight et al. (2004) did not find any significant correlations between owning a pet and having positive attitudes towards animals, and the authors suggested that the relationship between the pet and the owner should be examined in more detail to explain the effect of pet ownership on the person's attitude. The present study found a significant correlation between owning a pet and being more positive towards animals; however, an examination of the relationship between the human and the pet did not show any significant differences in attitudes. This might be because most of the respondents rated their relationships with their pets as very good or good and very few respondents rated them as neutral or bad.

Another correlation was found in this study, a weak negative one between the respondents' attitudes towards animals and the number of people in the family. The reason for this correlation might be the fact that people who have more family members do not engage in equally close individual relationships with their pets as those who see their pet as an equal member of the family. The relationship with a particular animal would not necessarily show attitudes towards animals in general; therefore, to examine the effect of relationships with pets on the attitudes towards animals in general, a much larger group of people should be surveyed.

Even though the average value of the attitudes indicates that the respondents have positive attitudes towards animals (average 3.83 out of 5), the present study found some explanations why people have a less positive attitude towards animals, as the respondents who eat meat more frequently and are capable of killing an animal have significantly lower attitude values than those who do not eat meat as frequently and could not imagine themselves killing an animal.

It might be said that the more a person is used to eating meat, the less the person will be willing to give it up. As a study by Bastian et al. (2012) has shown, people do not acknowledge a mind in food animals in order to legitimize their willingness to consume animal products. Although, according to the results of the study, the respondents believe that most animals are capable of experiencing pain, the belief in moral suffering differs, as the respondents rated animals' capability of morally suffering in the following order: dogs, horses, pigs, mice, bees, fish, and shrimp. Pigs were rated with a significantly lower value than horses, and fish were rated with lower values than bees. The lower the degree to which an animal is thought to be able to experience moral suffering, the less one should feel bothered about negative actions towards the animal, or about the person's own willingness to eat meat.

It is hard to say whether the capability of killing an animal influences people's attitudes or vice versa or how much the attitudes of people who are not capable of killing an animal, but are used to eating meat, would change if they were forced to go kill an animal themselves, as previous studies (Henry, 2004) have shown that attitudes of people involved in negative actions towards animals are typically worse. As the range of attitudes is based on different types of questions, including questions about livestock animals, the author suggests that further studies are necessary to examine whether there is a significant difference between people's attitudes towards different animals and their capability of killing. It might be the case that livestock animals are simply seen as an entity separate from companion animals, as the results of the respondents' belief in animals' ability to morally suffer and experience pain have shown. This means that additional attention should be paid to farmed animals and workers' attitude towards animals on animal farms, as attitudes towards animals in general might exclude food animals.

A weak correlation was found between the levels of knowledge about animal welfare and attitudes towards animals. Although it is hard to conclude which factor influences which, acknowledgement of animals' ability to suffer can also boost

positive attitudes towards animals, therefore, more information can and will influence people's current habits and attitudes towards animals.

Several respondents voiced a need for information in their answers to the last question of the questionnaire (i.e., "Please express your opinion whether animal welfare issues should be addressed on national level and why"). As the overall results showed, lack of information is a serious problem, as knowledge about animal welfare is typically limited. The less knowledge a person has, the more easily this person can be manipulated by different organizations into believing that animal welfare issues do not need to be addressed. As our brains are willing to not acknowledge negative information, it is much harder to communicate negative information to us than it is to communicate positive information. This peculiarity should be taken into consideration when making choices as to how to inform people about various animal welfare issues, because one should include enough arguments and facts into the message that is communicated to make the story believable.

Part 3

3.1. Discussion of the Findings

As it has been pointed out in several sections of this paper, there is a reason to believe that people are starting to show more concern for animals, and there is a high likelihood that this concern will develop, thus forcing many organizations to be more responsible in their actions towards animals.

As the history of animal welfare shows, attitudes towards animals vary to a great extent from one epoch to another and are highly dependent on attitudes and concerns people have in that time period. Nowadays, people's attitudes also depend on current concerns. By means of various studies on animals, convincing data about animals' abilities and habits has been collected which makes people admit that one cannot judge what position animals have in the world based on simple assumptions, religion or selfish interests, as Louis Racine did in the past. He also said, "If the poor creatures could feel pain, then God would be unjust, but since we know that God is just, we can safely conclude that beasts feel nothing – and so we can slaughter, hunt, and vivisect them with a clear conscience" (Cartmill; 1993).

Nowadays, animals are used to further the interests of people in multiple ways: for food, for entertainment purposes, as companions, also to produce various materials, fur and leather, etc. All these uses have made people very dependent on animals, which make it impossible to imagine life without animals.

Even though most people would agree that we should take good care of our pets and more dog and cat shelters should be built, the current legislation about the treatment of animals is often questionable. Although many countries have deemed animal abuse illegal, no real punishment is enforced and the legal norms vary from country to country. As a few respondents suggested in the questionnaire, more stringent rules and control over people's attitudes towards animals should be introduced.

For example, sex with animals is considered illegal in many countries, but in Denmark and Sweden it is allowed to use animals for sex; halal is the traditional way of butchering animals in the Muslim world, but Karen Hækkerup, Denmark's incumbent minister for food, agriculture and fisheries, has raised the question whether it should be allowed to butcher animals in this way, regardless of the large number of Muslims who live in Denmark. As there are differences between the laws of various countries and sometimes laws are not being enforced, people are able to interpret the law in various ways. For example, in the USA, killing a dog and destroying a couch are considered similar kinds of assault on a person (Wise; 2003). Some people might argue whether law enforcement might help to change people's habits. We have laws prohibiting killing humans; why should such irresponsibility towards pets and other animals be allowed? One of the answers might be as follows; stricter provisions aimed at protecting animals will also call into question the use of animals for food. However, as has been discussed previously in the paper, to avoid the potential issue of animals becoming equal with humans, the concept of animal dignity should be introduced into current laws and regulations, at least to some extent.

Some animals are taken care of, while the welfare of others keeps deteriorating rapidly due to an increase in demand for meat. However, this issue is widely discussed not only for moral, but also mainly for practical reasons, as there are estimates that in the future possibly there will not be enough food to feed all the people, so better alternatives to meat and meat products have to be found.

The results of the questionnaire show that even though people in Latvia who consume more meat are less willing to change their meat consumption habits and have

worse attitudes towards animals, general interest in the welfare of chickens is high. Although chickens are often seen as less intelligent animals in comparison to such farm animals as cows or pigs, knowledge of the situation on chicken farms would have a significant effect on people's willingness to either consume less meat or to choose a more expensive alternative. These findings are important, because they show that even farm animals are of great importance to people, as they are willing to change their habits to ensure proper treatment of farm animals. The results of the questionnaire indicate that there is not enough information about the housing conditions of farmed animals, intellectual capacity of some animals that are currently used for food. This might be the reason why people are able to not acknowledge a mind in food animals (Bastian et al.; 2012) and why meat consumption keeps increasing.

An appropriate method how to address these issues should be introduced. Nowadays, the prices of meat products are kept low thanks to the industrialization process. However, multiple studies have shown that excess consumption of meat can affect people's health in a negative way, which means that people are not able to assess how much meat should really be consumed. Several countries have introduced a "sugar and oil" tax in order to control the consumption of unhealthy products. More expensive meat originating from a better source could also be a solution not only how to curb the excessive consumption of meat, how to encourage people to eat more vegetables, but also how to achieve a higher standard for animal welfare on animal farms.

As it has previously been discussed in the present paper, there are concerns whether "sustainable meat production" can be achieved, as the interpretations of this term make it controversial to understand. Sustainable production would strive towards minimal effects on the environment, but corporate social responsibility in practice should strive to produce meat while being highly responsible towards animals, people and the environment, which means that the production of ecological meat would be the opposite of caring for the environment, as it involves more resources, which are already limited. A potential population of nine billion people by 2050 might seem frightening to many people. Food supply and sustainability issues should be solved not only by providing alternative protein sources or producing meat in laboratories, but, for example, changing people's eating habits and making them understand that meat cannot be produced under the current conditions, not only because of animal suffering, but also because of the quality of meat and various food supplements given to the

animals. This means that it depends in some way on the availability of information whether pressure on different organizations will be high in the future. Various animal welfare organizations have succeeded in informing people about different issues concerning animals, but unfortunately this information has not reached all the interested parties because of the limited resources of these organizations, current areas of operations and the belief of some people that the work these organizations do is controversial. Governments could strive for a higher level of knowledge instead, educate citizens about various aspects of animal use, and collaborate with the companies that currently do this job. Unfortunately, answers to the open question in the questionnaire indicated that people in Latvia do not expect much from the government, as one of the opinions showed, “(...) Our government does not care about the people. The lower the life expectancy, the less they should pay in various benefits to old people (...)”, but overall the respondents agreed that current animal welfare issues should be addressed. Many people focused on the welfare issues of companion animals, but also surprisingly many voiced concerns about livestock animals, which means that although people would not like to give up meat eating entirely, they still care that meat should be produced in a way that is least harmful to animals, and currently this way is a non-industrialized one.

Meat is not the only product that animals are used for, as animals are widely used for entertainment purposes, for example, hunting, rodeos, zoos and circuses, which are very popular. The results of the questionnaire show that there is considerable lack of information about animal welfare in these organizations. As the human mind is positive (Glimcher et al.; 2009), lack of knowledge allows people to hope for the best situation possible. For example, to assume that animals involved in rodeos, for example, bulls, have a less advanced mind than other animals (Bastian et al.; 2012) or elephants learned to stand on a ball or do other tricks as a result of positive reinforcement. Therefore, more information would be necessary to change people's opinions, as people in general care about animals and are willing to help when negative information about animal welfare is revealed to them.

Opinions on animal use in experimentation vary, as Latvian people in general are informed very little about experimentation on animals in the pharmaceutical industry or in other industries. The results of the questionnaire revealed that around 90 per cent of the respondents are informed very little about experimentation on animals within these industries. Although in most cases people would like to think in a positive way

about animal welfare in various organizations, their views on experimentation within the pharmaceutical industry might be extremely exaggerated due to the horrifying stories in the media about behavioral experiments on animals. According to the interview with Mr. Ottensen, the requirements for testing on animals in the pharmaceutical industry are not based on the interests of the company, but mostly on the safety requirements of the country, and this should be communicated clearly to those who are willing to listen.

Although many studies have been carried out in the field of people's attitudes towards animals and animal welfare, their findings have not been applied towards a greater sustainability of various organizations or towards changes in laws or governmental decisions. The reason for this might be the fact that most of the studies address different issues, but a realistic summary with suggestions how to apply the findings in practice has not been written. This might have resulted from a lack of initiative on the part of the governments to take animal welfare issues seriously, as it is various non-governmental organizations and enthusiastic people who get most of the improvements in animal welfare. The work of these organizations is often questioned and criticized, leaving people with doubts about the truthfulness of the information; therefore, governmental organizations should collaborate with these organizations to achieve the best effect possible.

To sum up, more information in the field of animal welfare would most likely affect people's attitudes towards animals. Currently people have different attitudes towards animals. According to questionnaire, even the attitudes of people in Latvia who were previously found to be least interested in animal welfare are positive, which means that people would be interested to opt for better conditions for the animals if the implemented changes were acceptable to them. This means that whether animal welfare will become an integral part in people's values depends on the flow of information and the efforts of governmental and non-governmental organizations to educate people about various issues.

3.2. Conclusion

Nowadays, people's attitudes towards animals vary to a large extent, with attitudes that are positive in general, but more positive towards companion animals and less positive towards livestock animals. Bastian et al. concluded in their study in 2012 that this difference in attitudes stems from people's willingness to not acknowledge that food animals might have minds; but the author of the present paper concludes that people are willing to care about all kinds of animals, but most of them are very poorly informed about the welfare of food and experimental animals in various organizations.

Lack of information might also be the reason why food animals are generally treated worse than other types of animals. The present study showed that even though people believe that most animals can experience pain, food animals are believed to experience less moral suffering than other types of animals. The study also showed that people would compare the suffering of animals to their own experience under similar circumstances; therefore, availability of more information might improve people's understanding of animal welfare.

The study found that there are additional factors that account for the variety in people's attitudes towards animals, namely, age, gender, vegetarianism and the capability of killing an animal. Women and the elderly are more positive towards animals, and so are people who eat less meat and believe in animals' capability of suffering. People's capability of killing an animal had a significant moderately strong correlation with attitudes towards animals; the same factors also affect people's willingness to change their entertainment and meat eating habits.

According to the findings of the present paper, concerns for animals will continue to grow; however, the extent to which concern will grow depends very much on the availability and legitimacy of information. The more information about animal welfare issues in different organizations is available, the more pressure the organizations will experience to improve their conduct regarding animal welfare.

3.3. Suggestions for Further Research in the Field

The findings of the paper show that in spite of the increasing meat consumption year on year and the various assumptions about people's negative attitudes towards food animals, people are willing to change their meat eating, entertainment and other habits in order to create a better environment for animals. To have a better understanding of how attitudes arise and are affected by various variables, instead of

asking how well-informed people feel about animal welfare in different organizations, it would be more valuable to obtain answers to the question how well, in your opinion, animals are treated in different organizations. Answers to this particular question would show the reasons behind attitudes towards animals and would allow the researchers to clarify whether people are willing to assume that the conditions are better than they currently are because people do not have enough information.

The range of different attitudes towards animals should also be examined in more detail to find out whether attitudes towards livestock animals are worse than attitudes towards companion animals, because the results of the questionnaire in this study showed that although attitudes vary, people disapprove of the poor conditions on chicken farms disregarding the fact that this kind of animals is used for food, but at the same time, people tend not to acknowledge that “meat animals” might be able to morally suffer and experience pain.

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Appendix 1: Meat per Capita

	2002	2000	1990	1980	1970	1961
<p>• Source: Food and Agriculture Organization of the United Nations (FAO), FAOSTAT on-line statistical service (FAO, Rome, 2004). Available online at: http://apps.fao.org</p>						
<p>• Meat consumption per capita refers to the total meat retained for use in country per person per year. Total meat includes meat from animals slaughtered in countries, irrespective of their origin, and comprises horsemeat, poultry, and meat from all other domestic or wild animals such as camels, rabbits, reindeer, and game animals</p>						
<p>• Per capita calculations were conducted by WRI using FAO data on meat production and trade, and using U.N. data on population. Meat consumption was calculated using a trade balance approach - total production plus imports, minus exports</p>						
Albania	38.2	29.5	17.8	15.6	14.6	15.3
Algeria	18.3	18.9	17.8	11.1	8.3	11.7
American Samoa	24.9	54.1	125.9	142.4	79.3	100.8
Angola	19	17.4	15.1	15.4	11.2	6.8
Antigua and Barbuda	56	72.2	94.9	51.6	33.4	19.2
Argentina	97.6	104.3	100.6	114.4	110.4	103.6
Armenia	27.7	27.4	..	..	..	..
Austria	94.1	113.9	103.7	94.7	76.1	65.6
Azerbaijan	15.9	16.1	..	..	..	..
Bahamas, The	123.6	151.7	100.2	110.7	97	68.4
Bahrain	70.7	63.6	74.8	58.9	18	15.4
Bangladesh	3.1	3.1	2.8	2.4	3.7	3.2
Barbados	88.7	92.6	104.8	82.6	63.6	34.7
Belarus	58.6	59.7	..	..	..	..
Belgium	86.1	88.2	..	..	..	..
Belize	74.7	55.3	58.4	38.9	33.3	20.6
Benin	16.2	16.4	11.2	12.1	10.1	8.6
Bhutan	3	3.4	4.2	4.1	3.8	3.3
Bolivia	50	48.5	39.8	41.4	29.3	25.9
Bosnia and Herzegovina	21.4	15.5	..	..	..	..
Botswana	27.3	23.6	31.2	15.6	39.1	28.9

Brazil	82.4	81	50.2	41.7	30.8	27.8
Brunei	56.4	57.3	48.4	38.9	22.9	16.9
Bulgaria	69.4	61.8	81.4	60.3	40.3	32.3
Burkina Faso	11.2	11.4	11.1	7.7	10.4	8.3
Burma (Myanmar)	10.7	9.3	6.1	7.4	7.2	4.9
Burundi	3.5	3.6	5.4	5.4	4.5	3
Cambodia	13.9	15	11.9	3.7	10.8	4.9
Cameroon	14.4	14.8	15.3	13.6	13.4	11.6
Canada	108.1	107.1	95.9	100.9	96.5	81.7
Cape Verde	26.3	24.3	15.8	6.8	4.7	3.4
Cote d'Ivoire (Ivory Coast)	11.3	10.9	14	15.7	15.7	13.5
Central African Rep	28	27.6	21.7	15.5	12.4	10.9
Chad	14.3	14.5	17	13.2	10.3	12
Chile	66.4	67.2	38.7	32	34.1	30.2
China	52.4	49.9	25.8	14.6	9	3.8
Colombia	33.9	33.6	34	28.2	23.9	25.4
Comoros	7.6	6.2	6	8.5	6.7	5
Congo (Brazzaville)	13.3	13.1	12	12.3	12.8	12
Congo, Dem Rep	4.8	4.9	6.5	6.4	9.1	11.2
Costa Rica	40.4	42.4	40.8	30.2	20.6	23.2
Croatia	49.9	45.7	..	..	..	..
Cuba	32.2	29.9	38.8	33.2	35.1	30
Cyprus	131.3	133.7	106.6	66.8	62.1	28.5
Czech Rep	77.3	76.9	..	..	..	..
Denmark	145.9	130	113.9	84.9	51.6	56.7
Djibouti	17.1	18.2	14.1	23.4	25.4	30.9
Dominica	67.1	73.3	60.7	27.7	28.4	18.4
Dominican Rep	37.8	41.5	29.5	24.7	15.6	15.7
Ecuador	45	39.2	24.7	20.8	18.8	17.9
Egypt	22.5	23.5	15.4	13	10.7	10.8
El Salvador	21.4	21.8	13.9	12.7	9.7	12.9
Estonia	67.4	61.3	..	..	..	..
Ethiopia	7.9	7.9	12.3	14.7	18.5	19.8
Faeroe Islands	86.4	87	74.3	67.9	49.9	18
Fiji	39.1	45.7	44	28.7	18.7	13.3
Finland	67.4	65.1	62.3	58.5	45	34.7

Former Serbia and Montenegro	77.6	89.7	..	..	..	..
France	101.1	100.4	99.8	101.6	86.4	77.7
French Guiana	13.2	14	84.7	70.5	53.9	34
French Polynesia	112.2	107.3	99.2	66.6	73.3	33.4
Gabon	46	45.1	43	51.8	48.7	39.6
Gambia	5.2	6.4	7.9	9.4	12.1	10.5
Georgia	26	29.1	..	..	..	..
Germany	82.1	83.5	96.1	95.9	78.1	63.8
Ghana	9.9	9.5	10.3	10.4	10.3	10.6
Greece	78.7	88.5	75.4	67.8	50	21.9
Greenland	113.8	70.1	71.8	83.4	45	20.4
Grenada	97	95.7	59.2	34.1	24.2	10.9
Guadeloupe	12.7	12.9	75	66.4	31.2	17.9
Guam	52.6	54.2	79.8	105.2	61.2	37.7
Guatemala	23.8	22.1	14.9	13.4	12.3	14
Guinea	6.5	6.3	4.7	4.7	4.7	5.1
Guinea-Bissau	13	13.9	14.2	14.3	14.6	14
Guyana	31.8	35.9	9.7	19.2	18.9	13.1
Haiti	15.3	14	8.3	11.8	12.2	10.4
Honduras	24.7	24.1	14.9	13.1	11.7	13
Hungary	100.7	94.5	108.6	104.1	84.4	73
Iceland	84.8	81	64.2	68.4	64.2	85.8
India	5.2	5	4.6	3.7	3.6	3.7
Indonesia	8.3	8.3	8	4.5	3.6	3.5
Iran	23.1	23.7	19.7	20.8	14.4	14.4
Ireland	106.3	98.4	117.5	74.7	71.7	55.5
Israel	97.1	93.6	56.4	51.6	49.3	30
Italy	90.4	89.6	86.1	75	53.9	30.5
Jamaica	56.8	54.8	44.3	37.7	28.8	17.1
Japan	43.9	44.7	38.8	30.6	17.8	7.6
Jordan	29.8	32.6	31	23.3	14.3	12.4
Kazakhstan	44.8	41.8	..	..	..	..
Kenya	14.3	14.5	15	17.4	16.4	18.6
Korea, North	10.8	9	15.8	13.5	9	7.4
Korea, South	48	45.9	25.2	12.9	5.3	4.1
Kuwait	60.2	64.9	32.3	64	38.1	48.7
Kyrgyzstan	39	40.4	..	..	..	..

Lao People's Dem Rep	15	13.8	10.9	9.6	11.9	8.8
Latvia	45.7	37.3	..	..	..	..
Lebanon	63.1	60.7	36.3	38.8	23.8	22.4
Lesotho	15.4	15.4	18.6	18.4	17.9	18.8
Liberia	7.9	8.4	9.2	10.3	9.7	10.8
Libya	28.6	28.1	30.8	52.9	26.3	10.7
Lithuania	49.5	50.6	..	..	..	..
Luxembourg	141.7	146.8	..	..	..	..
Macedonia, FYR	35.4	30	..	..	..	..
Madagascar	17.6	18	20.9	22.3	23.4	25.1
Malawi	5.1	5.2	4.5	5.1	5.1	3.5
Malaysia	50.9	48.3	38.8	23.2	15.7	13
Maldives	16.6	12.5	5.9	3.8	4	4
Mali	19	16.5	18.2	17.4	19.9	15.8
Malta	86.9	78.6	71.1	68.3	52.7	34.7
Martinique	13.9	14	74.3	60.5	37.6	29.4
Mauritania	29.9	29.1	30.9	31.6	31.3	31.3
Mexico	58.6	55.2	35.8	37.5	24.4	25.4
Moldova, Rep	22.7	19	..	..	..	..
Mongolia	108.8	117.3	101.3	112.6	120. 7	153
Morocco	20.6	19.8	18.4	12.4	13.1	13.8
Mozambique	5.6	5.4	6.3	5.8	6.2	4.9
Namibia	34	43	27.8	42.7	41.4	36.5
Nepal	10	10.1	10	8.6	6.7	6.1
Netherlands	89.3	86	85.3	72.6	59.7	45
Netherlands Antilles	73.3	84.7	71.5	109.1	84.1	64.1
New Caledonia	76.6	71	70.2	68.8	86.1	58
New Zealand	142.1	122.3	130	141.6	114. 7	113.5
Nicaragua	14.9	15.9	12.2	18.4	23.1	17.9
Niger	11.2	12.4	13	17.5	17.9	16
Nigeria	8.6	8.3	8.7	11.7	8.6	7.9
Norway	61.7	60.6	49.7	52.8	39.8	37.8
Oman	49.8	30.8	33.7	29	6.9	6.6
Pakistan	12.3	12.1	11.9	8.8	7.5	7.3
Panama	54.5	57.7	43	39.4	31.8	26.6

Papua New Guinea	73	71.8	78.7	75.7	73.9	69.2
Paraguay	70.3	73.1	55.1	67.2	66.6	72.5
Peru	34.5	32.2	23.6	20.4	21.4	22
Philippines	31.1	26.8	18.1	16.6	15.3	12.3
Poland	78.1	70.9	75.4	78	57	51
Portugal	91.1	92.8	64.6	46.3	32.3	20.6
Qatar	90.5	75.5	67.3	91.3	38.4	48.9
Reunion	46.8	48.9	72.9	52.9	32	23.6
Romania	54.5	47.1	77.5	67.9	42	30.3
Russia	51	39	..	..	..	..
Rwanda	4.4	4.3	4.6	5.1	3.9	4
Saint Kitts and Nevis	99.3	146.1	87.1	46.1	28.9	17.6
Samoa	82.6	79.5	73.9	42.7	31.6	28.4
Saudi Arabia	44.6	46.9	41.9	41.2	10.5	9.3
Senegal	17.7	17.8	15.2	11.6	15.3	13
Seychelles	51.1	53.9	40	28.9	11	5.6
Sierra Leone	6.1	5	5.1	5.1	4.7	4.3
Singapore	71.1	73.2	76.8	71.9	49	32.3
Slovakia	67.4	66.9	..	..	..	..
Slovenia	88	98.6	..	..	..	..
South Africa	39	42.4	40.8	35.6	33.2	32.9
Spain	118.6	112.4	92.1	71.5	47.2	21.8
Sri Lanka	6.6	5.6	3.3	3.6	4.5	4
St. Lucia	124.1	103.6	70.1	46.5	35.5	16.2
St. Vincent/Grenadines	79.1	59.4	60.3	32.8	16	8.7
Sudan	21	20.9	16.5	23.1	21	19.6
Swaziland	34.2	21.8	24.8	32.8	31.1	33.8
Sweden	76.1	70.1	58.7	63.5	52.9	50.4
Switzerland	72.9	70.6	80.7	84.5	70.3	55.4
Syria	21.2	21.2	17.4	19.2	11.1	10.4
Tajikistan	8.7	9.2	..	..	..	..
Tanzania	10	9.6	10.3	9.5	10.8	10.1
Thailand	27.9	24.4	21.7	18.9	18.4	15.3
Togo	8.5	8.5	8.7	7.4	7.9	8.6
Trinidad and Tobago	57.8	43.4	30.3	39.8	28.1	24.7
Tunisia	25.5	26.2	19.4	15.6	10.6	12.3
Turkey	19.3	20.4	20.2	14.7	15.7	16.5
Uganda	11.7	11.3	12	11.7	11.9	13.1
Ukraine	32.3	30.7	..	..	..	..

United Arab Emirates	74.4	75.7	72.9	96.2	56.2	77.3
United Kingdom	79.6	77.5	71.8	71	73	69.8
United States	124.8	122	112.8	108.1	105.9	89.2
Uruguay	98.6	105.8	81.3	101.5	123.6	115
Uzbekistan	20.7	20.9	..	..	..	..
Vanuatu	32.6	33	31.3	40.4	43.4	40.3
Venezuela	56.6	50.9	37.7	47	32.6	27.9
Vietnam	28.6	24.4	16.1	9.4	10.1	10.9
Virgin Islands	6.6	6.6	6.5	101.2	163.5	96.4
Yemen	14.7	12.9	11.5	13.6	6.5	9
Zambia	11.9	12	11.6	13.8	15.6	15.4
Zimbabwe	15.2	13.2	12.7	13.2	13.1	16.4

Appendix 2

Interview with Jan Lund Ottensen, Vice President and Head of Animal Science Laboratory of Novo Nordisk

1) Could you tell me a bit about the laboratory and about what is going on in the laboratory at the moment?

Yes, basically... we have experimental animals to ensure human safety. This means that before anything can be marketed, you need to demonstrate to the authorities that you have a safe product to administer to patients. Of course, research and studies will be needed as well in order to demonstrate that the new compound works the way it is supposed to work; to ensure that there are no side effects and to determine what dose is needed before you take the new compound to the first patient. So, this is a major objective of experiments conducted on animals.

2) I read on the Novo Nordisk website that the potential new drugs should be tested on animals. Does this mean that all drugs should be tested on animals or are there any which could ...just be directly given to humans?

I don't think that you would be able to have a drug administered to patients that you would be able to get to the market without using any animals. Having said that, of course there are a lot of tests that do not involve animals and that can give you a part of the picture whether this compound is safe and whether this compound is working. So, of course whenever it is possible you would use alternatives to animals, and if not alternatives, then use studies without animals from the beginning, so you would not even have to replace them at the end! But I do not think that you would be able to place products into the market without experiments on animals. I do not think that authorities would accept that, especially now!

3) But why do you think it is so, is it because of the stricter rules or the stricter requirements?

No! I do not think it is because of the stricter rules; these are the rules that more or less have always been there. But, of course, the authorities have their own main goal, and this would be the goal of the company as well that we have to ensure human safety and we cannot release something in the market without testing on animals and then to find

out that it is harmful to patients, so this is what the goal of animal testing is - to ensure human safety.

4) Do you believe that animals represent humans that well...that animals react to drugs the same way as humans do?

No, not necessarily! I mean, animals are animals and they are not humans, so, at the end of the day when it is used in the patients, you will finally see if it works as intended or not, but I do think that laboratory animals will provide answers to some of the questions, so it is not that one single type of animal will give all the answers, but it will give the different pieces of the puzzle that will ensure a higher possibility that it is a safe drug. But a single experimental animal cannot give you all the answers regarding how the drug will function in patients, but it can give you a safety margin that you believe proves it to be safe to this or that extent.

5) When you have decided on a study, what kind of rules do you need to apply or go through, or do you need to apply to certain authorities?

Yes, to be able to market something, you need the approval from ... And it is not that you have to have a specific list that you need to do this and that in a study on mice or this and that in a study on dogs, it really depends on what kind of pharmaceutical you are talking about. It is a requirement, though, that you need to test on different species: rat and not-rat species. You cannot just say that you tested something on mice and rats. It is because of the previous history when things were tested on rats and problems were not discovered, therefore, they demand now that you have to test on different species, but at the research base, majority of the animals used will be mice and rats, and it is only when you have tested various doses of the compound and are confident that the dose works in the intended way that you go on to test it on another species.

6) So is it up to an individual scientist or the company to decide how many animals you really need for the test or..?

Yes, you could say that. It is up to the company to submit a proposal to the authorities describing what kind of test you have planned, and then it is up to the authorities to say if they agree or whether more animals are needed before this can happen. This is not like cooking using a recipe which states that you need ten of these or five of those; you will submit a proposal to the authorities!

7) So, the tests are done to make sure that the authorities will approve the drug? Do the authorities put pressure on the company to do the tests, or is it another way round?

I think it can vary from company to company and also from drug to drug. When we approach the authorities, of course we believe that we have tested it in the best possible way, but it might be that the authorities have other ideas...but when we talk about experimental animals it can just as well be when we talk about trials on human populations before it is allowed to market a drug, so that would be a discussion about whether the authorities gather information to check whether it was tested properly or not.

8) What degree of freedom do individual scientists have to decide how many animals will be used or needed for the experiment?

It is like with all kinds of science, you need to use the right number of animals. If it has been suggested to test a drug on groups of mice and the researcher plans six mice per dose, but if you use statistical analysis and it turns out that you needed eight mice in each group, then these six mice would just have been wasted. It is a matter of doing statistical analysis in order to estimate the number of animals needed or ensure that the study is substantial enough, so you can actually look at it afterwards and base a decision based on it. You cannot just say that you need this or that number of animals, you need to calculate it based on what kind of compound you have.

9) So, it is decided based on the type of experiment?

Yes, all research is based on a decision looking from protocol to protocol as to how many animals will be needed to answer the question you have set out in the protocol. And then statistical analysis needs to be done in order to come up with a relevant number of animals needed for the experiment, so you cannot just say that instead of six mice we will only use four. At the end of the day, if your experiment does not have statistical significance, then it is a waste of animals.

10) On the Novo Nordisk website it has been stated that when employees see animals suffering or something goes wrong, they have the right to stop the experiment at any time. How is the level of pain assessed?

Well, it is assessed during the experiment. When an animal is in pain, it is like when a human is in pain; it is normally pretty obvious to see, even though they cannot talk in the same way as people can. Animal caretakers at *Novo Nordisk* have considerable

experience, so I would never question it if a caretaker came up to me and said that the animal was in pain, so for that reason we have to put it down in order to prevent further suffering. I would take their word for it that it is the right decision.

11) But there is some kind of pain which is considered acceptable, right?

It goes hand in hand with animal experimentation that the pain that an animal experiences from inserting the needle is considered acceptable in an experiment. And all the animal experiments need to be approved by an authority before we are allowed to do so, so you have to send in an application saying that you will do such and such experiment and we expect to use so and so many animals in this type of experiment. And then the authorities will go through the applications and engage in a discussion with us and ask whether we have thought about what kind of painkillers would be used for this experiment and so on, and then you will get an approval for that specific type of experiment. It is not that the company gets permission to do animal experimentation; you need to have lists of all the different kinds of procedures you want to do.

12) Different tests need different animals. When you test a drug, are you trying to find ill animals or are they made ill? What is done?

It depends on the specific purpose of the project. Majority of the animals are not ill and they are not made ill. They are used to determine concentration and other properties of the compounds, so normal healthy animals are used. Afterwards, blood samples are analyzed. And, of course, it will also be tested whether the compound works to cure the disease in the diseased animals. If humans have a serious disease and need a cure, we have to test whether the cure works, so animals with a similar condition are needed. We find animals that are ill for natural reasons or their health is experimentally modified into a disease mode. So I have to repeat, at the end of the day, it is all done to cure patients with chronic conditions in a safe manner, therefore, we have to go through this.

13) What happens to the animals after the testing, are they all put down or maybe some are set free?

Well, 95 per cent of the animals used are mice and rats, and we do not have the option of setting them free, so they are put down. Some of them will be put down in order to see the effect of the drug on different organs. At the end of the day. I would say that all

the animals are put down. But, for instance, our dogs are used for several years; I mean, you can use them again a week later or month later if it is a matter of just determining the amount of the compound or how long it works, so we keep those animals for several years, and we also spend a lot of time training the animals before using them. However, at the end of the day, they will be put down.

14) Do some animals have more privileges than others? For example, are dogs treated in a nicer way than mice?

No, I do not think so. And, by the way, in accordance with Danish legislation, it is not allowed.. You have to use species that would give you the highest likelihood of an answer to your question, and if it is the dog, than you have to use dogs rather than mice. I make sure that employees take as good care of rats and mice as they would of dogs. I know that the general population would probably feel more affectionate towards dogs, but my employees treat mice and rats equally well and want them to have adequate quality of life.

15) Do you have any monkeys?

Here at *Novo Nordisk*? No.

16) On your website where you report the number of animals used in experiments, why are the chickens and fish in areas separate from some other animals?

Most of the chickens we use are eggs. In accordance with the law about experimental animals, eggs belong to the sub-category “experimental animal – chicken”.

17) On the Novo Nordisk website I read that you say that there is no requirement for an ethical council in Denmark, but you have one yourself at Novo Nordisk?

Yes, yes. It needs to be changed now, because starting from this year; Danish law requires that companies must have ethical review committees. We have had an ethics committee for several years, because we think that it raises awareness and we can see that it improves the quality of protocols, so people sit down and discuss whether this or that is ok, or whether we can do it with fewer disturbances for the animals, so a larger group of people than just those who wrote the protocol decide on that. So this is why we have had it for several years, but since February 2013, it has also been incorporated into Danish legislation.

18) So you are well prepared for that!

Yes, we have been preparing for several years. However, even if it were not a legal requirement, we would still continue to do this.

19) Do you think that it is important to minimize the number of experimental animals?

I think it is important to use the RIGHT number of animals. I do not like the idea of minimizing the number, but for reasons I have explained previously, because if you use too few animals and then cannot rely on your results, then you have in fact wasted those few animals that you did use. So the right number of animals should be used, based on calculations of what is needed for that specific experiment. Having said that, we of course have to use as few animals as possible. Using experimental animals is very very expensive, so when you see that the number of animals used in research has gone up, it means that we have invested in more research projects than previously. Estimating the numbers, I would say that we have managed to reduce the number of animals needed in a single experiment, but in total we do more experiments.

20) You said that it is important to use the right number of animals, so statistically significant studies would need a large number; are you aiming for 100%? How to decide when it is enough?

As I have said, we have statisticians who keep an eye on what is being done, and there are protocols. We also have discussions whether the right kind of analysis has been carried out, therefore, we are rather confident that the right number of animals is used. We are also very focused on 3 R's: reduction, replacement, and refinement. It is a crucial principle for us.

21) Do you believe that pressure from the general public has something to contribute? Would you reduce the number of animals because of public pressure?

No, I do not think that public pressure will have anything to do with how many animals we are using, because I honestly believe that we make all the effort to determine the right number of animals, but, of course, having said that, I acknowledge that there are people who are critical of using experimental animals and who will keep putting pressure on companies like ours and also on other uses of experimental animals. It will always make companies check whether the right thing is done or something could be done better for animals we use, for example, whether conditions could be improved. And I believe that animal welfare organizations have done a tremendous job throughout the years. I am not saying that improvements are made because of it, but I

do believe that constant pressure from the outside world is part of the reason, why we have to do it the right way, and I think it is a good thing.

22) Do you think that in the end the costumer really cares how many animals are used for experimentation? Don't you think that they are interested in increasing the number of animals?

Of course I cannot be sure what costumers think about that, but I do not think that patients with chronic illnesses think that much about how many animals have been used in order to produce a drug. But society as such, including all the patients, would have something to say about that.

23) But we live in tough world, we have to take care of our kind first, for example, a cat eats a mouse and we eat other animals. Why is the pressure on such companies as Novo Nordisk so strong, while at the same time the humankind is still so bad in many other areas?

Actually, I think that many of the organizations that are critical of using experimental animals are equally critical of people using animals for other purposes for example, as pets or as food; they just care about animals. Welfare organizations are not specifically after experimental animals, they support animals as such, and, of course, there also are a few organizations that focus more on experimental animals. I believe that in these organizations people also think about other kinds of animals, not only about experimental animals.

24) Do you believe that the ban on cosmetic testing could also affect the pharmaceutical industry?

Personally, I believe that those are two different things. I believe that you have all the cosmetic ingredients needed to make your mascara or powders and so on, and then you just have to mix them together. However, in the meantime there still are patients out there who are not receiving the right treatment because at the moment we do not have the right treatment, so I do not think that you can just set out a year from which testing on animals is banned; however, I believe that it was the right thing to do with the cosmetics industry. There already are so many things to choose from in cosmetics, therefore, I do not think it is the same with the pharmaceutical industry. There still are many drugs that do not exist for an entire list of different diseases that can only be treated rather than completely cured.

25) Do you believe that better information exchange among different companies would help reduce testing on animals?

Honestly, I do not think that it would have the same effect as it had on the cosmetics industry, where they use the same kind of ingredients in different kinds of compounds. Of course, it would help if you exchanged information among companies, but in the pharmaceutical industry we can only do it if we are protected by patents. We cannot work with the same types of compounds as our competitors, because only one of companies will eventually get the patent. Therefore, in this case, being able to exchange data on a compound which the other party would not be using anyway, will not help. The only data that might be used would be placebo data or.. I think this is different situation due to patent protection in the pharmaceutical industry.

26) Do you think that it is a good thing that patents are more important than the suffering of animals?

I do not disagree that it can be put that way but I would put it differently. If you did not have protection, you would not have the drug. It would take so many years and so much effort to find new compounds. If you did not have patent protection, another company without a single dollar or anything might just produce it, and we would not have that. This is the only way the pharmaceutical industry is able to work with regard to new medicine.

Appendix 3: The Questionnaire

Introduction: The aim of this survey is to explore people's attitudes towards animals and to study the effect of information availability on people's habits. In this survey, the term "animal" means a warm-blooded animal. The survey is estimated to take time approximately 10-15 minutes.

1) Age:

2) Sex: M / F

3) Number of people in the family:

4) What is your family's average monthly income after tax?

- a) LVL 0 – 200
- b) LVL 200 - 400
- c) LVL 400 - 700
- d) LVL 700 - 1000
- e) LVL 1000 and above

5) Place of residence:

- a) Riga or Riga vicinity
- b) Vidzeme
- c) Kurzeme
- d) Zemgale
- e) Latgale

6) Education:

- a) Primary
- b) Secondary or secondary-vocational
- c) Incomplete higher
- d) Higher

7) Does your family have or has had a pet/pets?

- a) No
- b) Yes, for less than one year
- c) Yes, for one to two years

d) Yes, for more than two years

8) How would you describe your relationship with your pet/pets?

- 1) Very poor
- 2) Poor
- 3) Neutral
- 4) Good
- 5) Very good

9) How often do you go to the zoo?

- a) Several times a year
- b) Approximately once a year
- c) Less often than once a year

10) How often do you go to the circus?

- a) Several times a year
- b) Approximately once a year
- c) Less often than every five years

11) How well-informed do you feel about the housing conditions of animals in the following institutions? (1 - very poor, 2 - bad, 3 - average, 4 - good, 5 - very good)

- a) Zoo
- b) Circus
- c) Animal shelters
- d) Chicken farms
- e) Fur farms
- f) Animal experimentation laboratories

12) In your opinion, where exactly did you obtain the largest volume of information on housing conditions in the following institutions? (a) television b) Internet c) animal welfare organizations d) school e) press f) personal experience; g) other e) I have not obtained any information)

- a) Zoo
- b) Circus

- c) Chicken farms
- d) Animal shelters
- e) Fur farms
- f) Animal - laboratory experiments
- g) I have not obtained any information

13) Have you heard about the following animal welfare organizations (several possible answers):

- a) PETA
- b) WSPA
- c) TWARE
- d) WWF
- e) I have not heard about any of these

14) Have you ever helped a suffering animal, for example, by donating money to animal shelters, sharing information, providing animals with food or otherwise?
Yes / No

15) Would negative information on animal welfare in zoos affect your choice to go to the zoo?

- a) No, I would continue going to the zoo
- b) Yes, I would visit it less often
- c) I would stop visiting the zoo
- d) I do not know

16) Would negative information on animal welfare in circuses affect your choice to go to the circus?

- a) No, I would continue visiting the circus
- b) Yes, I would visit it less often
- c) I would stop visiting the circus
- d) I do not know

17) How often do you consume meat or meat products?

- a) Daily
- b) Several times a week

- c) Several times a month
- d) Never

18) How would negative information about how animals are kept on chicken farms affect your choice to consume meat or meat products?

- a) I would continue to consume chicken meat as I am used to
- b) I would choose meat which is more expensive but has been produced in better conditions
- c) I would consume less chicken meat
- d) I would give up eating chicken meat

19) How does information published by animal shelters and animal welfare organizations about animal suffering affect your willingness to help?

- a) It makes me angry
- b) It makes me ignore the situation
- c) It does not bother me
- d) It makes me more willing to help animals

20) To what extent do you trust information about the conditions that animals are kept in published by animal welfare organizations? (1 – I do not trust the information, 2 – I practically do not trust the information, 3 – I treat it with criticism, 4 – I trust the information, 5 – I fully trust the information, I have not obtained such information)

21) How acceptable for you is animal suffering in the following institutions? (1 – very unacceptable, 2 – unacceptable, 3 – neutral, 4 – acceptable, 5 – very acceptable)

- a) At the zoo
- b) At the circus
- c) At an animals' shelter
- d) In an experimentation laboratory
- e) On a fur farm

f) On a chicken farm

22) How would you rate the level of an animal's ability to suffer?

- a) I would compare it to how I would feel in a similar situation
- b) I would trust a professional's opinion
- c) I would assess the animal's reaction
- d) I would rely on scientific research about the animal's biological features
- e) Other _____

23) Please rate the following animals' ability to feel physical pain from 1-10, where 1 – is not able to feel anything, whereas 10 - definitely feel suffering:

- a) Horse
- b) Pig
- c) Fish
- d) Bee
- e) Dog
- f) Shrimp
- g) Mouse

24) Please rate the following animals' ability to experience moral suffering from 1-10, where 1 - is not able to feel anything whereas 10 - definitely able to experience moral suffering:

- a) Horse
- b) Pig
- c) Fish
- d) Bee
- e) Dog
- f) Shrimp
- g) Mouse

25) Would you be capable of killing: 1 - no, 2 - rather not, 3 - possibly yes 4 - rather yes, 5 - yes:

- a) Kittens to control the cat population
- b) A stray dog in your neighbourhood
- c) A fatally wounded deer to minimize its suffering
- d) A cow, for food
- e) A chicken, for food
- f) A fish, for food,
- g) A mole to preserve the lawn
- e) A snake in the woods

26) Please evaluate from 1 (would not bother) to 5 (would bother a lot):

1) How much would it bother you to think about someone intentionally killing a domestic stock animal (horse, cow, pig) other than for food or to help the animal because the animal was hurt, old, or sick?

2. How much would it bother you to think about someone intentionally killing a wild animal (deer, rabbit, squirrel) other than for food, while hunting, or to help the animal because the animal was hurt or sick?

3. How much would it bother you to think about someone intentionally killing a companion animal (pet dog, cat, rabbit) other than to help the animal because the animal was hurt, old or sick?

4. How much would it bother you to think about someone intentionally killing a domestic stock animal or wild animal for food?

5. How much would it bother you to think about someone intentionally killing a wild animal while hunting?

6. How much would it bother you to think about someone intentionally killing an animal because the animal was hurt, old, or sick (euthanasia)?

7. How much would it bother you to think about someone intentionally killing (euthanizing) a companion animal or domestic stock animal because the owner is unable to care for the animal (the person is moving out of state and cannot take the animal to the new home)?

8. How much would it bother you to think about someone intentionally hurting a domestic stock animal (horse, cow, pig) other than for training, branding?
9. How much would it bother you to think about someone intentionally hurting a wild animal (deer, rabbit, squirrel)?
10. How much would it bother you to think about someone intentionally hurting a companion animal (pet dog, cat, rabbit) other than for training?
11. How much would it bother you to think about someone having sexual contact with an animal?
12. How much would it bother you to think about someone using mice/birds/reptiles in research that results in serious injury, illness, or death of the animal?
13. How much would it bother you to think about someone using mice/birds/reptiles in research that does NOT result in serious injury, illness, or death of the animal?
14. How much would it bother you to think about someone using dogs or cats in research that results in serious injury, illness, or death of the animal?
15. How much would it bother you to think about someone using dogs or cats in research that does NOT result in serious injury, illness, or death of the animal?
16. How much would it bother you to think about someone using primates (monkeys, chimpanzees) in research that results in serious injury, illness, or death of the animal?
17. How much would it bother you to think about someone using primates (monkeys, chimpanzees) in research that does NOT result in serious injury, illness, or death of the animal?
18. How much would it bother you to think about someone failing to provide medical care for a domestic stock animal who is clearly injured or ill?
19. How much would it bother you to think about someone failing to provide medical care for a companion animal who is clearly injured or ill?
20. How much would it bother you to think about someone failing to provide domestic stock animals or companion animals with food or water for 24 hours?

21. How much would it bother you to think about someone leaving domestic stock animals outside without shelter for 24 hours?

22. How much would it bother you to think about someone leaving companion animals outside without shelter for 24 hours?

23. How much would it bother you to think about someone leaving a companion animal in a locked car with the windows cracked with an outside temperature of 21°C for one hour?

24. How much would it bother you to think about someone intentionally hurting a domestic stock animal for the purposes of training the animal (hitting the animal to encourage it to behave in a particular manner)?

25. How much would it bother you to think about someone intentionally hurting a companion animal for the purposes of training the animal (using a shock collar to train a dog)?

26. How much would it bother you to think about someone intentionally encouraging or causing animals to fight one another (dog fighting, cock fighting, etc.)?

27) Please express your opinion whether animal welfare issues should be addressed on the national level and why, (Voluntary question).

Appendix 4: Charts

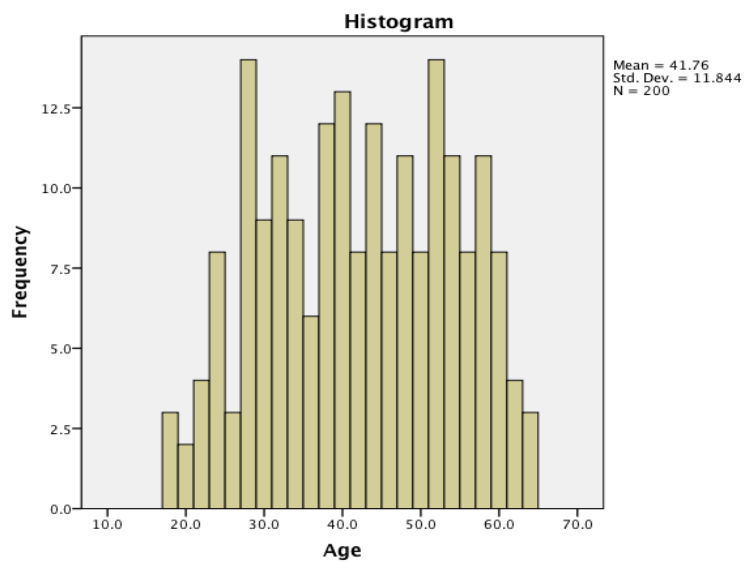


Chart 3: The variation of age

Source: Author's questionnaire

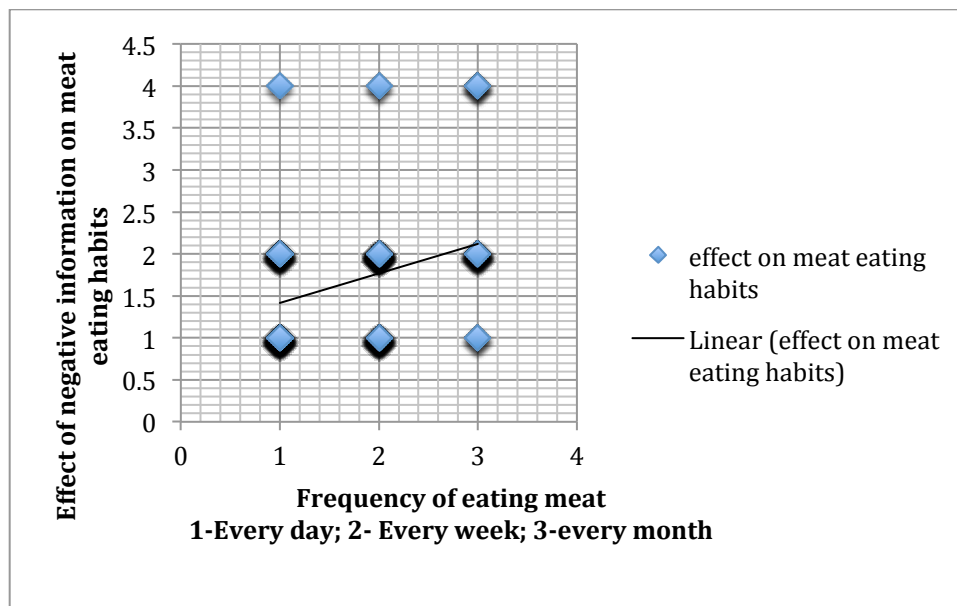


Chart 4: Effect of Negative Information on Meat Eating Habits

Source: Author's questionnaire

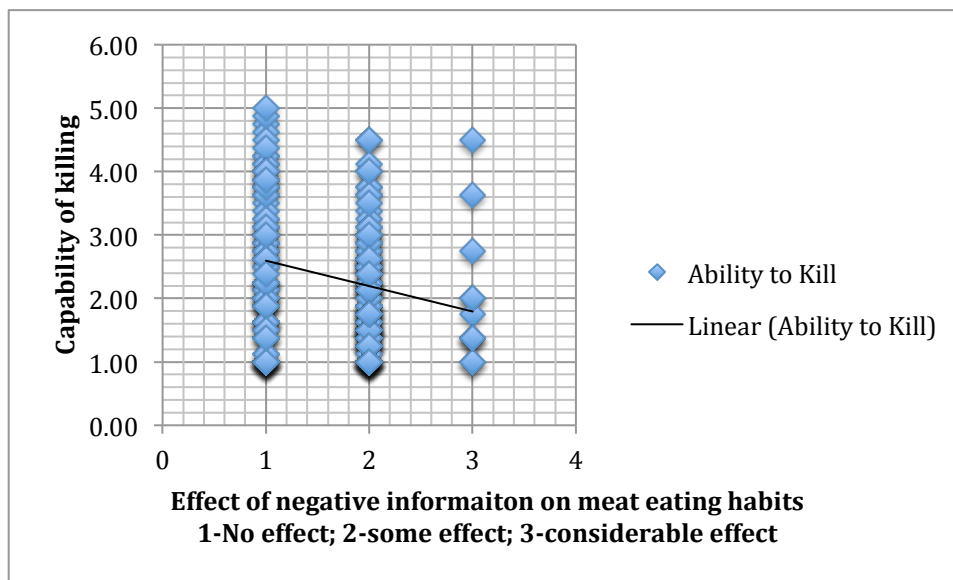


Chart 5: *Effect of Negative Information on Meat Eating Habits*

Source: Author's questionnaire