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Acceptance of animal husbandry in Germany: Drivers and different ways to cope with problems

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Abstract:

Based on a large qualitative study the paper confirms previous and provides interesting new insights into societal acceptance of current animal husbandry in Germany. Regarding perception and evaluation of animal husbandry two concepts and visual depictions are dominant. In this paper, we name them “museums husbandry” and “mass animal production” whereby the first describes a common feeling about an acceptable way of animal husbandry while the opposite holds for the latter which is perceived as a rotten system driven by greed. Omnivores feel entangled in this system and deal with the “meat paradox” by finding excuses for their behavior. Interviewees felt guilt and concern to a different extent. No one really accepted what they perceived as the current way of animal husbandry, but tolerance was quite diverse among participants. The latter implies to be willing to go on with the system because of the many benefits linked to it. Moreover, it has to be taken into account that not own experience but media and peoples’ fantasies and horror scenarios as well as their longings drive perception of animal welfare. That leads to the question to what extent potential future adjustments in animal husbandry change peoples’ perception.

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1. Introduction

Livestock farming generates the highest share in overall agricultural turnover in Germany. Along the same lines it is meat and dairy processing that account for the major part of turnover and employment in the food processing sector. The meat and dairy sector in Germany is undergoing permanent and considerable structural adjustments that are characterized by e.g. increasing size of enterprises in the whole value chain, specialization in the primary sector and globalization at the level of processing (Hemmerling and Pascher, 2017). This development has strengthened the innovativeness and competitiveness of the sector (BMEL, 2015) with higher efficiency allowing for a decline in real consumer prices over the last decades. Another consequence of this development is, however, that markets for livestock products have become increasingly complex and anonymous. Today consumer often lack knowledge about the production, processing and distribution of their meat, sausage and dairy products. The geographical as well as conceptual distance between the food system and consumers induces a sense of ‘loss in control’ of the latter with respect to processes they feel dependent on (Chen, 2008; Meijboom et al., 2006; Sapp et al., 2009). The willingness to rely, however, fades away with repeated scandals in the sector and media reports on e.g. rotten meat, dioxin, inadequate labor and horrifying animal welfare conditions (Albersmeier and Spiller, 2010; EC, 2007, EC, 2016; Kantar Emnid, 2017; WBA, 2015) putting society’s acceptance for livestock farming and processing at risk while at the same time increasing the demand for further policy intervention (Grethe, 2016; Roosen et al., 2016; WBA, 2015).

A large number of studies indicate that a considerable share of German consumers see the necessity for change, e.g. with respect to better protecting farm animals welfare (EC, 2007, EC, 2016). So far this skepticism with respect to livestock production is not reflected in the market data - overall meat consumption for human use in Germany has fluctuated around 60 kg/head between 2006 and 2016 (Els and Dittrich, 2017); it has, however, induced an intensive discussion in the public and political arena. Awareness exists that in the medium to long term social acceptance is necessary for successful livestock farming (BMEL, 2015).

Thus, the objective of the present study is to explain the framework of the discussion about animal husbandry in Germany and by that provide a platform for a better understanding of (1) citizens’ perception and acceptance of modern animal husbandry and (2) the phenomenon that is known as the attitude-behavior gap or citizen-consumer duality. The analysis is based on a large number of in-depth interviews and group discussions carried out in different parts of Germany by a team of market psychologists and prepared as well as analyzed together with market and consumer researchers.

2. Literature review

Social acceptance involves the contrasting juxtaposition of social expectations with citizen's perceived reality of farm animal husbandry. To better understand the current discussion about animal husbandry on the one hand and the situation as reflected in market data on the other hand it is necessary to know the importance consumers attach to farm animal husbandry, their perception on what are species-appropriate and what are current farm animal husbandry conditions, and their willingness to pay for product produced base on higher standards. According to the geographical focus of our study, the literature review primarily considers papers that deal with the situation in Germany but puts results into perspective by referring to studies from other countries if deemed reasonable. Especially, regarding the synopsis on studies dealing with the attitude-behavior gap the review takes a broader geographical perspective assuming that the drivers behind this phenomenon are not specific German.

Relevance of FAW

The Eurobarometer 2016 (EC, 2016) found a high importance for protecting the welfare of farm animals in Germany. On a four level scale¹, 61% of respondents rated the issue as very important and another 34% as somewhat important. The results for Germany are close to the average of the EU Member States (57% very important 37% important). In the Eurobarometer 2007, the importance of animal welfare for farmed animals was measured on a 10 point scale with "1" as "not at all important" and "10" as "very important" with an average for Germany of 8.1 (EC, 2007)². Unfortunately, due to measurement differences, the results of the two surveys are not directly comparable, thus not allow making a clear statement on whether the concerns about animal welfare decreased, increased or remained at a high level.

A five-yearly repeated survey on the image of German agriculture allows some insights into the development of consumers' attitudes to animal welfare. The studies carried out in the years 2007, 2012 and 2017. They show that the share of respondents regarding it as highly desirable that German farmers treat animals responsible is with about 90% very high but also indicate that there is no clear trend (93% in 2007, 85% in 2012, 88% in 2017) (Kantar Emnid, 2017; TNS Emnid, 2007, TNS Emnid, 2012).

Perceived understanding and perspectives of appropriate husbandry conditions

Wildraut et al. (2015) analyzed consumers' perception on what are species-appropriate conditions in pig husbandry by showing consumers different videos of real pig stables and prompted them for comments and evaluation. Triggered by the videos, participants considered space, freedom of movement and the character of the stable floor (straw or slatted floor) as most relevant factors for

¹ Scale includes: not at all important, not very important, somewhat important and very important. Respondents had also the possibility to indicate that they do not know (EC, 2007).

² The percent agreeing to the different levels (1 to 10) from not at all important to very important are: 2%, 1%, 2%, 3%, 8%, 7%, 9%, 16%, 11%, and 40%. 2% indicated that they do not know.

assessing the appropriateness of the stables. Daylight, fresh air, manipulable materials, cleanness, odor and noise were mentioned as additional criteria. Regarding each criteria, participants - as a rule - assumed “the more the better”, i.e. the more space the better for the well-being of pigs. Thus, they were not able to fix the point of “enough” e.g. enough space or daylight. Only stable floor is an exception: regarding the character of the stable floors, it was straw that dominated slatted ground.

Moreover, Wildraut et al. (2015) tackled the problem of conflicting goals in animal husbandry, between e.g. a supply at reasonable prices, animal welfare and environmental requirements. The authors found that confronting participants with those conflicts leads to helplessness and to an awareness of the complexity of the topic, without, however, the willingness to develop ideas for solving the conflicts.

In their meta-analysis on 53 studies about consumer responses to labelling of husbandry practices in EU countries, the United States and Canada. Janssen et al. (2016) conclude that consumers regard outdoor access, stocking density and floor type as crucial factors for farm animal welfare. This provides some evidence that results from Germany are comparable to those of other EU countries and North America.

Perception of current animal husbandry conditions

As mentioned above studies show that over the period 2007 to 2017 about 90% of respondents in Germany find it highly desirable that farmers treat animals responsibly. However, the share of respondents believing that they indeed do decreased over the same period from 56% in 2007 to 35% in 2012 and 31% in 2017 (Kantar Emnid, 2017; TNS Emnid, 2007, TNS Emnid, 2012). Obviously, a relevant share of respondents perceives that the conditions for animals have worsened during the last ten years. Regarding different waves of the Eurobarometer, a direct comparison of results is often not possible as the wording of questions or their scales differ. The question referring to the perceived necessity of improving animal welfare had a similar wording and the same scale in the 2007 and 2017 study, thereby allowing for comparison³. In the period 2007 to 2016, the share of German respondents answering “yes certainly” to the question whether it is necessary to improve farm animal welfare in Germany increased from 43% to 55% while the share answering “yes, probably” decreased from 35% to 28% (EC, 2007, EC, 2016). These results indicate that German citizens’ perception of the farm animal welfare situation worsened over the last decade. The results are similar for the majority of other EU countries (EC, 2016).

According to Zander et al. (2013), pig production in Germany is perceived as concentrated on big farms characterized with terms like mass animal production. Citizens’ perception is that on those farms, pigs are regarded as soulless products and not as beings. Moreover, it is supposed that farmer

³ In 2007 the question was: “Do you believe that in general the welfare protection of farm animals in Germany needs to be improved?” In 2016 the question was worded as follows: “Do you believe that in general the welfare of farmed animals in Germany should be better protected than it is now?”

do not feel empathy for the animals that they are responsible for. It was assumed that pigs are kept in dark stables and that stock density is much too high. Behavioral disorders because of inappropriate living conditions were mentioned as a problem. Moreover, in the context of mass animal production prophylactic use of antibiotics was presumed. In line with a production, system that did not meet standards perceived as appropriate for animal welfare, the quality of meat was estimated as low. On the contrary, organic pig production as well as local production on small farms was perceived as positive.

Regarding milk production in Germany Christoph-Schulz et al. (2015a; b; c) arrived at comparable results. The authors point out that respondents' perception of dairy depends on the size of the farm: On big farms it is supposed that cows have insufficient space whereas in small or part-time farms the situation is believed to be better. Enhancing milk yield by concentrated feed as well as separating calves from cows and the assumed prophylactic use of veterinary drugs are explicitly criticized. In addition, this study stresses that "organically-raised" is perceived as more appropriate for the well-being of the animals. The perceived shortcomings of conventional farming are believed not to hold for the organic sector (Christoph-Schulz et al., 2015b).

Kayser et al. (2012) analyze the term "mass animal husbandry" which is often used to characterize the German meat sector. They point out that consumers regard limited space for animals as the main problem and that beef production is less criticized than poultry and pig production.

Though surveys on the perception of animal welfare lead to comparable results, the question arises how the perception of animal husbandry is connected to the situations on farms, as this is important for the necessary steps to be taken in increasing societal acceptance of animal husbandry. The relevance of this question becomes obvious from the results of the 2007 Eurobarometer on animal welfare (EC, 2007). Unlike in 2016 the 2007 survey included a question on the knowledge about animal welfare. The results reveal that the opinions above are formed despite the fact that the majority of Germans (56%) declare to know only 'a little' and 29% even say that they understand 'nothing at all' about the conditions of animal husbandry in Germany. Only 12% of the respondents claim to be informed 'a lot' (EC 2007)⁴. Wildraut et al. (2015) present some additional evidence for this phenomenon: Participants of group discussions were less scared by videos of pig stables than they had expected. Obviously, perception and evaluation of farm animal husbandry is not based on good knowledge but on something else. This problem is hardly addressed in interpreting the results of previous research.

Willingness to pay for animal welfare

⁴ Information obtained by media is the main sources on which consumers' and citizens' base their evaluation of Farm Animal Welfare (Müller and Schmitz, 2002).

Willingness to pay for a higher level of animal welfare is analyzed, either by asking people directly about the premium that they would be willing to pay or by choice experiments (see e.g. Clark et al., 2017).

In surveys initiated by the German Federal Ministry of Food and Agriculture respondents were asked about their willingness to pay for a higher animal welfare standard. In the survey carried out in 2015 94% of the respondents indicated that they were willing to pay more, this share was with 88% in the 2016 survey somewhat lower. Based on the assumption that the price of one kilo of meat is 10 €, the additional average willingness to pay amounted to 6.50€ in 2015 and to 3.60 in 2016 (BMEL, 2017). Zühlsdorf et al. (2016) analyzed the impact of the label of the German animal welfare organization. Depending on the package size the authors found an additional willingness to pay between 38% (500 gram package) and 58% (250 gram package). To our best knowledge, there exist no paper applying choice experiments to estimate consumers' willingness to pay for the attribute animal welfare that refer to Germany⁵.

Attitude-behavior Gap

One would assume that people's high interest in and willingness to pay for better animal husbandry conditions is reflected in the markets. In reality, however, the market for products with higher animal-welfare standards still resembles not more than a niche. This discrepancy between stated and revealed preferences is referred to in the literature as attitude-behavior gap or citizen consumer duality. The Scientific Advisory Board to the German Federal Minister of Food and Agriculture addresses several reasons that explain why consumers do not walk their talk (WBA, 2015). In particular, the board mentions a lack of credibility of the meat sector with regard to labelling, insufficient engagement of retailers and a high premium for animal welfare meat that exceeds consumers' willingness to pay. The price gap is ascribed to the fact that just valuable cuts can be marketed with a price premium and thus additional costs of higher standards have to be allocated to a small share of the carcasses. Moreover, the Advisory Board sees the market for animal welfare products confronted with the infant industry problem, which leads to high production costs and impedes the development of market volumes that enable to realize economies of scale.

While the Advisory Board focusses on costs and market forces, several authors address psychological barriers and mechanisms that help consumers to deal with the conflict between preferences for animal welfare and consumption of meat that was produced not in line with those preferences: In this respect Zander et al. (2013) notices that consumers might realize the conflict of not purchasing in line with their preferences for animal welfare and that they explain it in interviews e.g. with mindlessness of and concentration on meat and not on the animal that it originates from. Also other papers discuss the ways

⁵ We checked AgEcon Search, Web of Science and Google Scholar using the following search terms: *Willingness-to-pay, meat, Germany, German, choice experiment, conjoint, animal husbandry, animal welfare, Zahlungsbereitschaft, Fleisch, Deutschland*

in which people cope with the dissonances that arises in the context of eating meat. Loughnan et al. (2014) refer to this as the “meat paradox” that is the paradox that most people care about and eat animals. They analyzed how people negotiate the “meat paradox”. They conclude that “attributing animals lesser minds and reducing their perceived capacity to suffer is a powerful means of resolving the meat paradox” (Loughnan et al., 2014, p. 106). Loughnan et al. (2014) showed that the attribution of minds to animals as a barrier for eating meat is dependent on previous meat consumption while. Bastian et al. (2012) found a connection to expected meat consumption.

Based on the moral disengagement theory, Graça et al. (2014) found four groups of mechanisms that help people to cope with the conflict of consuming meat even though it is harmful for the environment, health and animals: (1) stressing benefits of meat production and consumption and denying realistic alternatives (2) shifting responsibility to other actors that have an influence on the value chain (3) disregarding the negative consequences and (4) avoiding discussions and information about harmful consequences. The strategies are characterized as self-protection mechanisms that help people to stick to their behavior even in light of negative impact.

Similar mechanisms are described by Bastian and Loughnan (2016). They identify obscuring personal responsibility by considering their behavior as “natural, normal, and necessary” so that immoral behavior is not so much a choice but a given requirement. This is close to Joy (2011) who regards the perception of meat as “natural, normal, necessary and nice” as one of the major barriers for changes in meat consumption. Piazza et al. (2015) provided empirical evidence for the relevance of the 4Ns in the context of rationalizing meat consumption. Besides that Bastian and Loughnan (2016) state, that developing behavioral habits and by that reducing conscious reflection is another way to protect oneself from the burden of dissonances. Moreover, they argue that if those habits are widespread in families, groups, cultures or populations the pressure to reflect on them is reduced even more. Furthermore, upcoming dissonant feelings can be reduced if the food is dissolved from the animal by the way it is prepared and by integrating meat into habits like the Sunday roast or the thanksgiving turkey. In summary, Bastian and Loughnan (2016) compare the effect of dissonance reducing personal and cultural mechanisms to a veil that can become transparent and does not perfectly protect from dissonances. Hence, the mechanisms mentioned above do not solve the meat paradox but the help not to feel the dissonances in certain situations.

Kunst and Hohle (2016) focus on the dissociation process and found that reducing the meat-animal link by the way food is presented prepared or talked about increases the willingness to eat. Finally, Grauerholz (2007) analyzed the way the dissonance is reduced in commercialism that aims at selling food or drink. She concludes, “animals were literally transformed into meat, and there was virtually no resemblance to any actual animal” (Grauerholz, 2007, p. 347) Obviously the need to dissolve the link between animals and meat finds an equivalent in the way that meat is offered by meat companies and retailers.

3. Methods and Study Design

To get a better understanding of the discussion about the acceptance of modern animal welfare we tried not only to look at the way that animal husbandry is negotiated and described. We wanted to address unconscious drivers that are more difficult to explain by interviewees and more difficult to capture by interviewers. Therefore, psychologists with extensive experience in qualitative research carried out the interviews. The interviews were analyzed in the team of psychologists together with an expert for the meat value chain. This procedure reduces individual biases that may be based on personal entanglement or on the limits of an individual researcher regarding perception and interpretation. Moreover, integrating knowledge on the meat value chain serves to match the analysis of the interviews with market data and market performance. This is especially relevant in the context of the attitude-behavior gap.

Sample description

The results are based on 60 in-depth interviews and 7 group discussions (2 groups with 9 participants, 2 groups with 8 participants and another 3 groups with 6, 7 or 10 participants each). Interviews were carried out in different regions in order to capture aspects that might be influenced by different regional circumstances. The reasons for choosing the respective regions are the following: Berlin was selected as the center of the German vegetarian/vegan movement (one group discussion, four one-to-one in depth interviews), Cologne (one group discussion) and Bochum (four one-to-one in depth interviews) as big cities in the west of Germany, Oldenburg as a city in the center of the German pig, poultry and egg production area (four one-to-one in depth interviews), Kempten as a city in the alpine upland located in a holiday destination with intensive milk production (four one-to-one in depth interviews), Göttingen which is located in the center and Erfurt that is located in the east of Germany, two regions with low relevance of animal husbandry (four one-to-one in depth interviews each). While Berlin, Cologne and Bochum are big cities, Oldenburg, Kempten, Erfurt and Göttingen are medium sized cities surrounded by rural areas. 20 in depth interviews and two group discussions were conducted with vegetarians and vegans.

Commercial market research institutes recruited participants and field research was carried out between September 2015 and December 2015. In total, we had 117 participants. 68 are females and 48 males with an average age of 40.2 years. Participants were recruited by telling them that the interviews / discussions were about agriculture and nutrition. Animal welfare or animal husbandry was not explicitly mentioned.

4. Results

Evaluation and acceptance of animal husbandry systems:

Amongst the interviewees, we found almost no personal experience with modern animal husbandry. Even the interviewees out of regions with high farm animal density have hardly ever visited a stable. The perception of animal husbandry is rather driven by the media and otherwise by systemic (dis)trust.⁶ Against this background, there was a variety of estimates of the actual situation.

In the context of perception and evaluation of animal husbandry two concepts and visual depictions are dominant. In this paper, we name them “museums husbandry” and “mass animal production” whereby the first describes a common feeling about an acceptable way of animal husbandry while the opposite holds for the latter. However, acceptability does not hold for the strict vegan position that denies the use of animals or animal products for human consumption in general. Still also for vegans museums husbandry seems a less cruel way to keep and make use of animals.

Museums husbandry:

Museums husbandry is characterized by the perception that farmers care for the animals and value them as individual (non-human) beings. The power of the concept is based on its perceived simplicity and on the fact that it is seen to be close to nature. It is driven by (sentimental) movies, advertisement and childhood memories. Even some vegetarians would eat meat produced in a museums husbandry environment. Farms in Austria and Switzerland are regarded as closer to this ideal and thus more appropriate for animal husbandry than farms in Germany.

The acceptance of museum husbandry is not driven by knowledge. Museums husbandry is rather a picture book image that help people to imagine an ideal world. It is not as husbandry was in the old times but it is as husbandry is supposed to have been in the old times. Moreover, participants just enlighten the positive aspects of that picture.

Museums husbandry is regarded as a fair deal between animals and humans. A fair deal means granting animals dignity and fair treatment, reducing the number of animals per farmer, and as well the use of meat as something special. So museums husbandry is not only restricted to the way animals are kept, it also refers to the consumption of meat. A scarce use of meat during the week and a roast on Sunday is an idea that often arises in the context of valuating meat. Meat gets a role in upgrading Sundays compared to the rest of the week and this often appears as an appropriate and appreciating use of meat

Even though museums husbandry mainly refers to the good old times, some meat marketing chains are perceived close to it:

⁶ Still the question remains whether systemic trust is driven by the urge to reduce the dissonance between attitudes towards animal husbandry and meat consumption or whether meat consumption is dependent on systemic trust.

- Farmers' direct marketing. Direct marketing as marketing without any intermediates is perceived as highly transparent and credible. There is no unknown member in the value chain. A similar concept that even integrates consumers is "Solidarische Landwirtschaft" (solidarity agriculture).
- Organic production. For many interviewees organic is a synonym for environmental sound and animal friendly production.
- Buying meat at butcher's shop or at the meat counter in supermarkets. This distribution channel benefits from trust. It is often told that it is assumed that butchers take care for animal welfare or that the higher price is supposed to include a better treatment of the animals. In addition, buying at butchers is perceived as more trustworthy as it is a personal sale in contrast to an anonymous sale of prepacked meat and sausages.

Museum husbandry gives room for warm feelings of security. Museum husbandry corresponds to a longing for living conditions that are not complicated, but instead clear and manageable. In this regard it is an antithesis to the efforts and pains that are experienced in the context of the current cultural and economic system that is perceived as diverse and challenging.

Mass animal farming:

Mass animal production means mass production with no relevance of the individual (non-human) being. It is connected to ideas of darkness and bad air in the stables with slatted ground as well as an unworthy treatment of animal including cruelty. Pictures of mass animal production spoil the appetite. There is a strong feeling that a system providing plentiful of meat for low prices is out of order. Abundance of meat is seen as breaking the ethical fair deal with animals.

Mass animal production seems to represent greed of a society that does not show respect for weak (non-human) beings. "Greed for profit" is a term often used in the context of mass animal production in order to characterize the overall objective of the system that is not fenced by ethical considerations.

Another aspect mentioned in the context of mass animal production is the quick growth of the animals that is regarded as beyond natural and ethical limits. Quick growth underlines the assumed driver of the system, the greed for profit. It is not the animal that is in the focus but just their rapid and cost efficient growth.

In many interviews the perception of animal husbandry is not clearly separated from other steps of the value chain. The interviewees often spread to the whole food processing and distribution sector and questions transparency, credibility and honesty. They even activate discomfort connected with modern societies in general. In this regard, animal husbandry and meat production is a beacon representing the rotten aspects of modern society and the feelings connected with these aspects. Similar to that transparency is a big issue. The whole system appears as highly impenetrable. Mass animal production

allows for scaring imaginations that spread over from the farm, to the whole meat value chain and even to other sectors.

In addition, imaginations of factory farming can blur the boundaries between animals and humans.

- Mass animal production is often described as “concentration camp farming”.
- Animal husbandry is compared to slavery where animals have no right for a life worth living and only exist to serve for human consumption.

Animal husbandry allows for scaring imaginations and invites for developing conspiracy theories. Due to the lack of knowledge imaginations, thoughts and theories are not bound by personal experience. In line with that, perception of mass animal production needs not to be a comprehensive and consistent concept, but a composition of different and inconsistent fragments.

Antibiotics are regarded as integral part of a rotten and greedy system. In this respect, the use antibiotics is closely connected to husbandry systems that are perceived as animal inappropriate. Moreover, antibiotics are an issue that is perceived to have a direct influence on human health. Those substances that helped to fight illness and diseases threaten to become ineffective. By eating meat one does not become strong any more but incorporates defenselessness. This aspect demonstrates the personal relevance participants perceived with respect to husbandry systems.

Perception of meat quality

The evaluation of meat quality is closely related to the production system. While the quality of meat from mass animal production is regarded as low, quality of museums husbandry is supposed to be high. Many interviewees tell that meat stemming from small farms, where animals are supposed to be cared for, has a better taste.

The same holds for meat bought from butchers or at meat counters in supermarkets. In contrast, meat from discounter and prepacked meat is supposed to have low quality. Therefore, the distribution channel is taken as a relevant indicator for the origin of the meat (husbandry system), its quality and taste.

Correspondingly, high prices are regarded as an indicator for the good treatment of animals. It is not exact knowledge about cost, it is rather the assumption that fair treatment leads to costs and as a consequence to higher prices. In contrast, low prices are perceived as too low for treating animals well and producing high quality meat.

In spite of a lack of knowledge, transparency and willingness to extensively examine animal production systems was observed as low in many interviews. Instead price level and distribution channel were relevant indicators for the extent to which meat is supposed to be produced in line with animal welfare requirements.

Especially the interviews with vegetarians and vegans reveal that it is not (only) the physical but rather the psychological quality that counts. Mass animal production is imagined in nightmarish pictures and experienced as a personal threat. Correspondingly eating meat is experienced as an act of incorporation of that rotten system. However, these narrations are not restricted to vegetarians and vegans, even omnivores describe mass animal production and eating meat originating in that system correspondingly.

Between greed and discipline

The concepts of mass animal production and museums husbandry correspond to and reflect a psychological conflict caused by the ubiquitous availability and affordability of meat. Abundance of food devaluates it and, consequently, the idea of “less is more” becomes attractive. Within the imagination of meat consumption in the early days, the Sunday roast plays an outstanding role. Many interviewees imagine that there was no meat during the week but that the Sunday as the special day of the week was celebrated with a roast at lunch. Within this idea, meat has a highlighting function and the pleasure of eating meat is dependent on the meatless meals during the week. On the contrary frequent meat consumption reduces the pleasure of eating meat. Hence, the fascination of meat consumption patterns in the old days demonstrates a need for restoring the value of meat and for discipline in an affluent society.

In this regard, the contrast between mass animal production and museums husbandry represents the personal experienced tension between greed and discipline. On the one hand people can and do benefit from abundant supply but they feel uncomfortable with a system that leads to irresponsible behavior, uncontrollability and helplessness on the other hand.

Dealing with the conflict

The interviews reveal that vegetarians/vegans often were enthusiastic to talk about animal husbandry and farm animal welfare and some of them knew a lot about hot spots in modern animal husbandry. On the contrary, most omnivores have a high unwillingness to speak about this topic. The topic addresses personal entanglement in a system that often is evaluated as not in line with attitudes about animal welfare and therefore directly questions personal integrity. The conflict between personal behavior and moral standards become obvious in many interviews.

In everyday life, it is complicated to deal with the conflict of mass animal production on the one side and ethics and personal integrity on the other. Participants either excuse their behavior or report several strategies to deal with the conflict:

- Abandoning meat or even all animal products. Vegetarians/vegans solve the conflict in this way. While the vegan way is a fundamental one, vegetarians were still accused of being half-hearted as they make use of the mass animal production system by consuming milk and eggs.

- Consuming less meat and by that disciplining oneself.
- Buying organic, at butchers or on directly farms. Organic productions as well as the distribution channels are connected with the perception of better taste that results from a fairer treatment of animals. Often interviewees realize that they do not control the treatment of animals themselves but that they assume that it is guaranteed by organizations that allow the use of the organic label or by butchers.
- Paying higher for meat. Paying more for meat is closely related to buying organic or at butchers. Moreover, high prices are perceived as a help to value meat and to withstand the temptation of making use of a system supposed to be based on unfair animal treatment.
- Believing in the system. Systemic trust referring to control of food safety and animal welfare standards is another strategy to cope with the conflict between buying and eating behavior versus ethical attitudes. In the interviews, systemic trust seems to be a cause as well as an effect for unconcerned meat consumption.

The mentioned strategies help to some extent to resolve the conflict. However, in the progression of interviews it became obvious, that those strategies are for some participants more desired actions than the guiding course of action in everyday life. Moreover, we observed changes and inconsistencies in the argumentations, e.g. sufficient trust in the meat sector in the context of meat eating behavior and violent accusations while discussing animal welfare and conditions in the meat industry. Thus, the conflict remains an issue and it is of interest to further investigate how people cope with the conflict or the behavioral gap. In the interviews, there are different ways to explain or excuse consumption of meat that is supposed to be produced in a not accepted system.

- Need for meat. Need for meat is mentioned in many interviews to justify meat consumption. Meat is perceived as necessary in the context of hard physical work. Moreover, it is supposed that meat belongs to a complete warm meal and that especially men cannot satisfy their hunger with a meatless meal. In this context, meat is justified by a mixture of perceived necessity and cultural habits.
- Dissociation and repression as a consequence. During many interviews, participants became aware of a necessity to separate the animal husbandry discussion from the one on meat consumption and thus the connection between meat and animals in order to enjoy eating meat. Distance to animals is easier to keep the more the food is processed. At the beginning of the interviews, participants were asked about the frequency of their meat consumption. In retrospect, we found that there is no uniform perception of what actually is meat. Very clearly fresh meat like steaks or roasts are perceived consistently as meat, but e.g. hamburger, meat balls, sausages or cold cuts on bread were sometimes not considered as meat and not taken into account when reporting the frequency of meat eating. This is an additional hint for the

dissociations between animal and the corresponding products that gains relevance the more the meat is processed.

- Blaming other actors of the value chain. Unethical behavior, greed and inappropriate animal treatment are noticed in the meat chain. However, they are attributed to the members of the meat chain and not to oneself. These accusations help to distract from the personal entanglement into the system and to reduce the feeling of personal responsibility and guilt.
- Calming and relativization. Even though the existence of mass animal husbandry and the scaring pictures and imaginations is not neglected, it is supposed to be the exception and not the rule. Moreover, it is assumed that animals in other countries are treated even worse so that animals in Germany have a relatively good live.
- Helplessness. In many interviews with omnivores, helplessness is an issue of considerable relevance. Interviewees realize that they should behave in a different way but feel incapable to do so. Helplessness justifies for not taking action.
- Conflicts. A fair deal with animals can be perceived as conflicting with a fair deal with e.g. economically disadvantaged people. Thus, the lack of action can be also legitimized with putting the relevance of animal husbandry in perspective to all the harm society faces.
- The lesser of two evils. The feeling that consuming meat produced in an inappropriate way can make people sick is outbalanced by the argument that a meatless diet leads to a lack of nutrients and can compromise health as well.
- Being on the right way. Participants assure that they are on their way to eat less meat or that they will start on that way soon.

In the light of the interviews, it becomes obvious that it is possible to condemn the system and still make use of it. Nevertheless, discrepancies between attitudes and behavior can evoke a bad conscience and a need for excuses.

5. Conclusions

Based on a large qualitative study the paper was able to confirm previous findings and provide interesting new insights into societal acceptance of current animal husbandry in Germany. Our findings are in line with those papers analyzing the relevance perception of animal husbandry in Germany (Christoph-Schulz et al., 2015a; Christoph-Schulz et al., 2015b, Christoph-Schulz et al., 2015c; Kantar Emnid, 2017; Wildraut et al., 2015; Zander and Hamm, 2010). Assessment of animal husbandry conditions are uniformly based on stocking density, type of ground, outdoor access, and the use of antibiotics. The lack of the respective desired characteristic level (e.g. regarding stocking density a high density) is what people associate with mass animal production. In mass production, it is in addition presumed that greed determines behavior of actors. Thus, e.g. farmers do not care for animals as non-human beings but treat them as products. Such a system must accordingly also lead to

a low quality of the final product. In line with the Eurobarometer 2007 (EC, 2007) our analysis confirms that this assessment is not based on citizen's own knowledge about or experience with animal husbandry systems in Germany.

Regarding the interpretation of interviews with respect to market reactions, it is necessary to have a look at the relevance of animal husbandry in citizens' everyday life. Within the interviews, participants were prompted to deal with a specific topic. While especially vegetarians/vegans seemed to have had intensively coped with the issue in the past, there is reluctance among omnivores to reflect on the topic. However, once entering into the discussion both groups mainly focus on animal husbandry in the context of mass animal production which is associated with considerable deficiencies with respect to farm animal welfare. However, when we asked the omnivores for possible consequences they normally stated that they presumably would not change their consumption. Based on their own experiences in the past they were certain that everyday life would push that discussion into the background again. Moreover, the reluctance of omnivores when exposed to animal welfare and especially with the gap between attitude and behavior is an additional signal for the low relevance that dealing with this topic might have in everyday life.

It becomes obvious that omnivores feel entangled in the system and parts of the interviews address the way that omnivores negotiate meat consumption against the background of a meat production system that they do not accept. The arguments can be reduced and summarized to Joy's (2011) for "N" that meat consumption is natural, necessary, normal, and nice.

In the interviews, we find repression and dissociation as a way to deal with the "meat paradox". Moreover embedding meat consumption in (family) habits and rituals seems to alleviate dissociation as it detracts attention away from the animal-food context. This is in line with Bastian and Loughnan, (2016) and Graça et al. (2014). Still, we found that several respondents felt the necessity to not totally dissociate the food from the process of production. If people consider the husbandry system as a relevant factor influencing the quality of meat, they have to consider those for the purchase decision. In this context, we found strategies like buying local, at the butchers or at a meat counter. By assuming (and not controlling) that the respective distribution systems are not so much integrated in the factory farm value chain, it is possible to shift the responsibility of control to the seller and to avoid personal confrontation with the production system.

We can partly confirm the results regarding dissociation (Grauerholz, 2007; Kunst and Hohle, 2016). Several respondents state that they do not want to think of animals while eating meat and a higher level of processing helps to dissociate animals from food. However, we observe that there is a tendency that the husbandry system is supposed to have an influence on taste and health safety. This requires the link between animal and meat. Making a fair deal in terms of a good life for the animal as a compensation for using it as food is one way to overcome the dissociation. In this regard, we modify the dissociation process as described by Kunst and Hohle (2016) and are inclined to follow Bastian

and Loughnan, (2016) who compare dissonance reducing mechanisms to a veil that can become transparent and does not perfectly protect from dissonances.

The objective of our study was to examine the basic structure of acceptance of animal husbandry and the way people react in purchase behavior. Correspondingly, the sample was composed in a way that allows for a variety of participants. Nevertheless, it is noticeable that many participants mentioned that they had adopted their buying behavior. The strategies that were mentioned to help to resolve the conflict may lead to the assumption that the market share of butchers increased and that especially prepacked meat and the market share of discounter decreased. However, looking at available statistics referring to private households purchases we do not find empirical evidence:

- Butchers who are perceived as not so much involved in the mass animal production value chain lost market share in overall meat sales. Their proportion decreased from 14% in 2006 to 11% in 2016. In contrast, the share of discounter increased from 26% to 36%.
- Regarding pre-packed meat there is a corresponding development: Even though pre-packed meat is perceived as “cheap” meat, the share in sales increased from 44% in 2006 to 52% in 2016.
- The share of organic meat increased from 0.6% in 2006 to 1.7% in 2016 but it is still at a very low level

One explanation can be that people have a biased perception regarding the way that they behave. Bastian and Loughnan (2016) concludes that people may underreport their frequency of meat consumption in order to reduce cognitive dissonances. Indeed, also in the progression of some interviews it became obvious, that strategies previously mentioned not necessarily guide everyday action.

Interviewees felt guilt and concern to a different extend. No one really accepted what he or she perceived as the current way of animal husbandry, but tolerance was quite diverse among participants. While acceptance of animal husbandry is relative easy to evaluate, it is much more difficult to analyze tolerance of a system that is not really accepted but that you are willing to go on with because it leads to many benefits. Moreover, it has to be taken into account that not own experience and knowledge but media and peoples fantasies and horror scenarios mainly drive the perception of mass animal production. Museums husbandry on the other hand reflects longings that do not originate in animal husbandry. That leads to the question to what extend people realize potential future adjustments in animal husbandry and, whether, that changes their perception. Accordingly, the factors that influence the perception of animal husbandry are much more complicated.

References

- Albersmeier, F., and Spiller, A. (2010). Die Reputation der Fleischwirtschaft: eine Kausalanalyse.
- Bastian, B., and Loughnan, S. (2016). Resolving the Meat-Paradox A Motivational Account of Morally Troublesome Behavior and Its Maintenance. *Personality and social psychology review*, 1088868316647562.
- Bastian, B., Loughnan, S., Haslam, N., and Radke, H. R. M. (2012). Don't mind meat? The denial of mind to animals used for human consumption. *Personality and Social Psychology Bulletin*, 38(2), 247–256.
- BMEL. (2015). Nutztierhaltungsstrategie: Zukunftsfähige Tierhaltung in Deutschland. Retrieved from http://www.bmel.de/SharedDocs/Downloads/Tier/Nutztierhaltungsstrategie.pdf;jsessionid=7EE4FABF47E26D96E65FFE23A8311233.2_cid358?__blob=publicationFile, last access 15.01.2018.
- BMEL. (2017). Deutschland, wie es isstDer BMEL-Ernährungsreport 2017. Retrieved from https://www.bmel.de/SharedDocs/Downloads/Broschueren/Ernaehrungsreport2017.pdf?__blob=publicationFile, last access 15.01.2018.
- Chen, M.-F. (2008). Consumer Trust in Food Safety-A Multidisciplinary Approach and Empirical Evidence from Taiwan. *Risk Analysis*, 28(6), 1553–1569. <https://doi.org/10.1111/j.1539-6924.2008.01115.x>, last access 15.01.2018.
- Christoph-Schulz, I., Salamon, P., and Weible, D. (2015a). What about the calves? How society perceives dairy farming. In D. E. Dumitras, I. M. Jitea, and S. Aerts (Eds.), *Know your food: Food ethics and innovation* (pp. 209–224). Wageningen Academic Publishers.
- Christoph-Schulz, I., Salamon, P., and Weible, D. (2015b). What is the benefit of organically-reared dairy cattle? Societal perception towards conventional and organic dairy farming. *International Journal on Food System Dynamics*, 6(3), 139–146.
- Christoph-Schulz, I., Weible, D., and Salamon, P. (2015c). Zwischen Heidi-Idyll und Agrarfabrik-zur Wahrnehmung der Milchviehhaltung. *Tagungsband 2014*, 37.
- Clark, B., Stewart, G. B., Panzone, L. A., Kyriazakis, I., and Frewer, L. J. (2017). Citizens, consumers and farm animal welfare: A meta-analysis of willingness-to-pay studies. *Food policy*, 68, 112–127. <https://doi.org/10.1016/j.foodpol.2017.01.006>, last access 15.01.2018.
- EC. (2007). European Commission. Attitudes of EU citizens towards animal welfare.: Special Eurobarometer 270/Wave 66.1-TNS Opinion and Social. Retrieved from http://ec.europa.eu/public_opinion/archives/ebs/ebs_270_en.pdf, last access 15.01.2018.
- EC. (2016). European Commission. Attitudes of European towards Animal Welfare. Retrieved from <http://ec.europa.eu/COMMFrontOffice/publicopinion/index.cfm/Survey/getSurveyDetail/instruments/SPECIAL/surveyKy/2096>, last access 15.01.2018.
- Els, T., and Dittrich, J. (2017). *AMI Markt Report Verbraucherforschung 2017: Nachfrage, Verbraucherpreise, Private Haushalte, Deutschland*. Bonn: Agrarmarkt Informations-Gesellschaft mbH.
- Graça, J., Calheiros, M. M., and Oliveira, A. (2014). Moral disengagement in harmful but cherished food practices? An exploration into the case of meat. *Journal of Agricultural and Environmental Ethics*, 27(5), 749.
- Grauerholz, L. (2007). Cute enough to eat: The transformation of animals into meat for human consumption in commercialized images. *Humanity and Society*, 31(4), 334–354.
- Grethe, H. (2016). The Economics of Farm Animal Welfare. *Annual Review of Resource Economics*. (0).

- Hemmerling, U., and Pascher, P. (2017). *Situationsbericht 2017/18: Trends und Fakten zur Landwirtschaft* (1. Auflage). Berlin: Deutscher Bauernverband e.V.
- Janssen, M., Busch, C., Rödiger, M., and Hamm, U. (2016). Motives of consumers following a vegan diet and their attitudes towards animal agriculture. *Appetite*, *105*, 643–651.
- Joy, M. (2011). *Why we love dogs, eat pigs, and wear cows: An introduction to carnism*: Conari press.
- Kantar Emnid. (2017). Image der deutschen Landwirtschaft: Grafikreport. Retrieved from http://www.ima-agrar.de/fileadmin/redaktion/Pressemeldungen/2017/Emnid_2017/Grafikbericht_Image_der_Landwirtschaft_2017.pdf, last access 15.01.2018.
- Kayser, M., Schlieker, K., and Spiller, A. (2012). Die Wahrnehmung des Begriffs „Massentierhaltung“ aus Sicht der Gesellschaft. *Berichte über Landwirtschaft*, *90*(3), 417–428.
- Kunst, J. R., and Hohle, S. M. (2016). Meat eaters by dissociation: How we present, prepare and talk about meat increases willingness to eat meat by reducing empathy and disgust. *Appetite*, *105*, 758–774.
- Loughnan, S., Bastian, B., and Haslam, N. (2014). The Psychology of Eating Animals. *Current Directions in Psychological Science*, *23*(2), 104–108.
- Meijboom, F. L. B., Visak, T., and Brom, F. W. A. (2006). From trust to trustworthiness: Why information is not enough in the food sector. *Journal of Agricultural and Environmental Ethics*, *19*(5), 427–442.
- Müller, M., and Schmitz, P. M. (2002). Ökonomische, ethische und medizinische Relevanz zur Beurteilung ausgewählter Tierhaltungsverfahren und-systeme auf der Basis der Conjoint-Analyse. *Schriftenreihe der Landwirtschaftlichen Rentenbank, Bd, 17*, 7–47.
- Piazza, J., Ruby, M. B., Loughnan, S., Luong, M., Kulik, J., Watkins, H. M., and Seigerman, M. (2015). Rationalizing meat consumption. The 4Ns. *Appetite*, *91*, 114–128.
- Roosen, J., Dahlhausen, J. L., and Petershammer, S. (2016). Acceptance of Animal Husbandry Practices: The Consumer Perspective. *Proceedings in Food System Dynamics*, 260–267.
- Sapp, S. G., Arnot, C., Fallon, J., Fleck, T., Soorholtz, D., Sutton- Vermeulen, M., and Wilson, J. J. H. (2009). Consumer trust in the US food system: an examination of the recreancy theorem. *Rural Sociology*, *74*(4), 525–545.
- TNS Emnid. (2007). Das Image der deutschen Landwirtschaft: Ergebnisse einer Repräsentativbefragung in Deutschland. Retrieved from <http://www.ima-agrar.de/fileadmin/redaktion/download/pdf/DasImagederdeutschenLandwirtschaft-2007.pdf>, last access 15.01.2018.
- TNS Emnid. (2012). Das Image der deutschen Landwirtschaft: Ergebnisse einer Repräsentativbefragung in Deutschland. Retrieved from http://www.ima-agrar.de/fileadmin/redaktion/download/image-studie/2012/ima-imagestudie-landwirtschaft_bericht-2012.pdf, last access 15.01.2018.
- WBA. (2015). Wissenschaftlicher Beirat für Agrarpolitik beim BMEL; Wege zu einer gesellschaftlichakzeptierten Nutztierhaltung.: Gutachten. Retrieved from http://www.bmel.de/SharedDocs/Downloads/Ministerium/Beiraete/Agrarpolitik/GutachtenNutztierhaltung-Kurzfassung.pdf?__blob=publicationFile, last access 15.01.2018.
- Wildraut, C., Plesch, G., Härten, I., Simons, J., Hartmann, M., and Ziron, M. (2015). Multimethodische Bewertung von Schweinehaltungsverfahren durch Verbraucher anhand von Videos aus realen Schweineställen. *Schriftenreihe des Lehr-und Forschungsschwerpunktes USL*. (179).

- Zander, K., and Hamm, U. (2010). Consumer preferences for additional ethical attributes of organic food. *Food Quality and Preference*, 21(5), 495–503.
- Zander, K., Isermeyer, F., Bürgelt, D., Christoph-Schulz, I., Salamon, P., and Weible, D. (2013). Erwartungen der Gesellschaft an die Landwirtschaft. *Münster: Stiftung Westfälische Landschaft*.
- Zühlsdorf, A., Spiller, A., Gauly, S., and Kühl, S. (2016). Wie wichtig ist Verbrauchern das Thema Tierschutz? Präferenzen, Verantwortlichkeiten, Handlungskompetenzen und Politikoptionen. Retrieved from <https://www.vzbv.de/sites/default/files/downloads/Tierschutz-Umfrage-Ergebnisbericht-vzbv-2016-01.pdf>, last access 15.01.2018.