

Consumer Concerns about Animal Welfare and the Impact on Food Choice

- a review of German literature -

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1 Introduction

This national report deals with a literature review of German consumer concerns about animal welfare and the impact on food choice.

Section 1 gives an introduction into the legal and cultural history of concern about animal welfare in Germany. *Section 2* is the main part of the report and elaborates on the nature and level of consumer concerns, also touched are factors affecting consumer concerns. *Section 3* looks more briefly at food choice and national policy issues. *Section 4* sketches out theoretical considerations and is meant to add to points already made elsewhere in the report.

2 Legal and cultural background¹

Human animal relations are diverse across cultures. Culture determines which animals are seen suitable for human nutrition (e.g. dogs in Asia but not in Europe anymore), how much human beings are allowed to interfere with lives of animals (e.g. Buddhism and Hinduism know absolute or relative inviolability of animals), which pets are used as animals etc. Culture is not given for all times and human animal relations change. The latter is exemplified by the fairly recent emergence of factory farming. The aim of this chapter is to give a brief summary of human animal relations and especially its legal treatment in German history.

Roman law generally exercises some influence on German law in history and is therefore not left out here. Roman law does not prevent cruelty to animals in the pre-Christian period. But in the post-Christian period animals are looked upon as subjects of the natural law, given to all creatures (WIEGAND, 1979, pp. 26-27).

During the continental mass migration parts of the Roman empire are settled by Germanic tribes coming from the East. Small Germanic nations evolve, which later form the "Frankenreich". "Peoples law" starts to be written in the 6th century. "Law books" and "city law" are known in the 12th and 13th century. No general law to protect animals is in place for medieval times. Only two single requirements, to protect nightingales from being caught and rabbits from being hunted are recorded for the city of Cologne in 1417.

Canonical law and general practice allow animals to be put on trial. They are held responsible for action. Plausible seems that certain animals are seen as possessed by demons, who ultimately are responsible.

From the 17th to the 19th century it is mostly the police to interfere directly in cases of cruelty to animals. The earliest cases for courts to interfere occur in the 17th and 18th century and are not based on specific law for the protection of animals. Cruelty to animals is treated as "de extraordinariis criminibus" and is punished as "poena arbitraria". Hommel (1739) is the first author of jurisprudence who seeks to have the idea of animal protection cast into formal law.

¹ Unless otherwise stated, information in this chapter is taken from WIEGAND, 1979, pp. 25 – 41.

He suggests humanity to have obligations towards animals even if animals do not have any legal rights.

Various societies for the protection of animals are founded in the first half of the 19th century. They follow British examples, Christian theological arguments (e.g. those of Christian Adam Dann and Dr. von Ammon) and possibly philosophical arguments of Schopenhauer. Major issues are horses as the most important means of transport and dogs used for work. Various other issues are discussed, among these ritual slaughter without stunning and vivisection. Many veterinarians serve as heads of societies, but the conflict between a scientific approach of veterinary science and the enthusiasm of activists also shows up.

By the 19th century the idea of jurisdiction gains influence. Following suit are attempts by the German States, to establish a legal basis for animal protection. The kingdom of Saxony is first to have a specific law to protect animals from cruel treatment in march 1838. It is soon followed by other German states and cities. Common punishments are imprisonment and fines. An illegal treatment of animals is mostly defined, not only to be cruel but also malicious and raising (public) annoyance. Law to protect animals in the "Deutsches Reich", which is founded in 1871, is largely influenced by that of the former kingdom of Prussia. Legal provisions and practices are criticised for requiring public annoyance as a prerequisite for intervention. This changes when the "National Socialists" amend laws in May 1933 and issue the "Reichstierschutzgesetz" in November 1933. Compared to other nations at the time, these are regarded as very animal friendly.

The German law for the protection of animals is again amended in 1972 and 1987 and the "Bürgerliche Gesetzbuch (BGB)" in 1990. One revision of the BGB is that animals are formally no longer defined as "objects". However, in practice legal provisions for "objects" still hold, as long as they do not interfere with the animal protection act. It has further been criticised, that animals are divided into two classes, depending on whether or not people develop personal ties. (BRÜNINGHAUS, 1993)

The history of German legislation with regard to animals and the animal protection movement is overshadowed by anti-human tendencies and racism: The "National Socialists" achieve major advances for animal protection and put a relatively high priority on it. Their animal protection law is an international success and improves government's reputation. Yet while they perceive animals to belong to the nation, they deny this right to Jews and gypsies. Furthermore, the case for protecting animals appears to be used as a weapon against, e.g. Jews. Most notably, anti-Semitic tendencies are intermingled with animal protection in the issue of ritual slaughter. While the debate is biased against Jews and gypsies from the beginning, the discussion grows more intolerant and loses scientific grounding with the turn of the century. Even the scientific community then starts to justify what is politically wanted and forgets to discuss the evidence. (BRUMME, 1991, pp. 29 – 39)

3 Nature and level of consumer concerns

Consumer concerns about animal welfare are here understood to consist of attitudes and knowledge about issues relevant to animal welfare. They arise in consumption related areas that imply some direct or indirect form of human animal relation. Examples are human animal relations in food production, leisure, sport, work and science.

It would be desirable, to discuss and compare consumer concerns across these issues. However, it cannot be done here. The focus of this paper is on consumer concerns about animal welfare in food production. Briefly touched is animal testing. Left out are issues like animals used as pets, animals in zoos, in sport and also fishing. These issues reflect the German literature as it is known to us.²

Concern about animal welfare in Germany has not always centred on food production and animal testing. Only a century ago, animal protectionists were mainly concerned about working animals like horses and dogs. Data presented in this chapter suggest that concern about animals in food production has risen substantially over the past thirty and more clearly the past fifteen years.

What causes the nature and level of consumer concerns about animal welfare to change?

We cannot give a satisfactory answer here nor review the numerous answers given to similar questions elsewhere.³ Suffice be an attempt to classify possible causes and explanations. Consumer concern can be seen to arise when wanted and perceived level of animal welfare do not match, which might be due to the following reasons⁴:

1. Changes in animal welfare demanded: kind of preferences for animal welfare, incomes, willingness to process relevant information, market saturation and respective changes need to be considered.
2. Supply and availability of „animal welfare“ is determined by factors like production methods, distribution and nature of human animal relation. A relevant question is whether today's husbandry practices are worse than they used to be. Also considered is what animals are used for in society: Obviously, concern about horses used for transport should decline, once they are replaced by cars and lorries. Scandalous incidences as representing temporary bad practices also need to be mentioned.

² Due to the background of the authors and limited time available, literature on consumer concerns about animal welfare in areas other than food production has not been looked searched for very intensively. This review primarily looks at literature, which in some way is based on surveys. Largely left out is the more accesible German literature on animal welfare and animal rights in general.

³ According to SIX / SCHÄFER (1985, p. 9) there are more than 100 theories of attitudes and attitude change.

⁴ The first two points are akin to what is known as a „partial model“ in economics, the latter point is a reminder, that ultimately a „total model“, which includes all „products“, not just those related to animal welfare, would correctly reflect reality. I.e. exogenous factors to the „partial model“ need to be considered as a fourth factor. The third factor is included to reflect growing importance of „information“ in models other than pure neoclassical microeconomics.

3. Quantity and quality of supplied information related to issues of animal welfare is a further factor affecting consumer concern. It can be summarised under „demand side explanations“, if the supplied information always equals that demanded. Information is supplied by the media, interest groups, marketing, science and others.

Reflecting the German literature on consumer concerns about animal welfare, this chapter is restricted mostly to describe rather than explain. Therefore not all of the explanatory factors are looked at in detail. For example, we do not discuss aspects like media coverage, indexes of animal welfare or compare husbandry practices across time.⁵ If hypothesised explanatory factors are looked at, they will generally be cross-sectional rather than panel or time-series data.

A point of reference for this and the following chapters is the appendix in chapter 5, which gives technical details about the surveys and studies referred to throughout the text. Chapter 2 is divided into six subsections. Sections 2.1 to 2.5 report on various beliefs and attitudes about animal welfare, section 2.6 on further aspects of knowledge.

Under the heading „Obligations towards animals“ Section 2.1 summarises survey data on whether people generally feel ethically or socially obliged to respect issues of animal welfare and whether they perceive their behaviour to make a difference. These aspects need to be considered for a proper assessment of the „nature of consumer concerns“. Since most of the statements refer either to a certain keeping system or animal product, the section is complementary to sections 2.2 and 2.3. Section 2.2 looks at how current husbandry practices are perceived and what opinions people have about political measures to improve animal welfare. Section 2.3 evaluates animal products and how they relate to issues of animal welfare and husbandry practices.

Section 2.4 reviews what role animal welfare plays in a wider set of issues. This is important since in reality mostly not everything that is good or wanted can be done, choices need to be made. The chapter is divided into two subsections. Subsection 2.4.1 is very much about conscious priorities. These are set by people who are directly asked to prioritise a given set of issues, among which at least one is related to animal welfare. In contrast to this subsection 2.4.2 looks at topical issues, i.e. what people (stated to) know, talk or remember about animal welfare compared to other issues.

Section 2.5 looks at aspects of knowledge related to animal welfare. Whether animal experimentation is perceived as necessary for scientific tests of medical drugs is look at in section 2.6.

A point to be remembered throughout the chapter and the whole paper is that animal welfare is both a socially sensitive and ethical subject. Therefore, social answering and wishful thinking will occur, if people are directly asked what their opinion is about animal welfare. Irrespective of this, most surveys to be reported use the technique of direct questioning. This leads to very

⁵ LUKE (1989) looks at the development of animal husbandry in Germany from ancient up to the beginning of modern times.

high levels of reported concern about animal welfare, which will mostly not be reflected in behaviour.⁶ The point will not always be noted throughout.

3.1 Obligation towards animals

Most people in Germany (74% in 1994) regard animals as sentient beings and therefore verbally support appropriate husbandry⁷ (first statement in Tab. 2.1(a)). Animals are not solely seen as devices for meat production. Under the impression of a scandal over battery hens and the BSE crisis there was nearly unanimous agreement with the statement, that people have ethical obligations towards animals and that everybody should be concerned about it. BALSER (1994), reporting on a national survey by the SAMPLE-INSTITUTE in 1994, found that women, people in the old counties, organic-meat consumers and respondents with a university degree show more concern for animals, as measured by the first two statements given in Tab. 2.1(a). While ethical obligations towards animals are acknowledged, it is not clear from the data, whether these are respected.

General ethical issues

Statement	Agreement	Year
Animals are creatures that can suffer or be happy, too. I therefore support "appropriate husbandry". ¹	74%	1994
Pork, cattle, poultry are meant to be used by people to supply meat. Discussing "appropriate husbandry" is idle sentimentality. ¹	17%	1994
It is our duty, to keep animals "appropriately". ²	97%	1996
Animal suffering should be everybody's concern. ²	96%	1996

Source: ¹ SAMPLE INSTITUTE, 1994, cited in BALSER (1994), n = 1300. ² unpublished results of INSTITUT FÜR AGRARÖKONOMIE, LEHRSTUHL FÜR AGRARMARKETING (1996), survey of Kiel, n = 193

Nearly half the people in 1996 (Kiel) agreed that people close to them want them to buy free-range eggs (about 20% were ambivalent) (Tab. 2.1 (b)). Stated social obligation appears weaker than stated ethical obligation.

Perceived social norm

Statement	Agreement	Year
Most people who are important to me, want me to buy free-range eggs. ¹	47%	1996
Free-range eggs are produced for socially well aware people. ¹	30%	1996

Source: ¹ unpublished results of INSTITUT FÜR AGRARÖKONOMIE, LEHRSTUHL FÜR AGRARMARKETING (1996), survey of Kiel, n = 193

According to the „theory of planned behaviour“, the impact of ethical considerations and social norms on „behavioural intentions“ is moderated by „perceived behavioural control“, i.e. how

⁶ Furthermore, if everybody states to be very concerned about animal welfare, there will be little variance in this factor and its explanatory power for consumer behaviour will be low. This is a problem, if some of the „very concerned“ consumers really are very concerned and others simply say so for social reasons.

⁷ We translate "artgerecht" into "appropriate" and the phrase "artgerechte Tierhaltung" into "appropriate husbandry". This is done consistently in this article. The term "artgerecht" refers to the special and individual needs of each species.

much a person feels to have an impact on what is wanted. The available evidence on this topic is collected in Tab. 2.1 (c).

“Appropriate husbandry” was mostly considered feasible in 1994. In 1996 83% of interviewees in Kiel believed that their shopping behaviour made a difference to the way hens were kept. 76% of people in the same sample stated, not to find it very difficult to buy free-range eggs. Less respondents shared this opinion in a sample of Germany conducted by EMNID in 1998: A relative majority of only 42% thought it would be very or fairly easy to buy free-range eggs. This contrasts the previous finding, as people in the North (of which Kiel is a part) regarded it most difficult to get free-range eggs (agreement to „easy“: 34% in the North compared to 49% in the South). Above average „easy“ was stated by women (44%), people aged 25-55 (42% to 55%), households with net monthly incomes either below DM 2500,- (46%) or above DM 4500,- (45%), people with children (44%) and those not working (44%).

Perceived behavioural control

Statement	Agreement	Year
“Appropriate husbandry” is for idealists only and can nowadays not be realised. ¹	22%	1994
I can help hens to have an “appropriate” existence by buying free-range eggs. ²	83%	1996
I can’t change anything by buying free-range eggs. ²	19%	1996
I can’t change the whole world when shopping. ²	64%	1996
Free-range eggs are difficult to get. ²	15%	1996
Free-range eggs are easy to get. ²	76%	1996
Generally speaking, how easy or difficult is it for you to buy free-range eggs where you normally do your grocery shopping? ³	42% (easy) 22% (difficult)	1998

Source: ¹ SAMPLE INSTITUTE; 1994, cited in BALSER (1994), n = 1300. ² unpublished results of INSTITUT FÜR AGRARÖKONOMIE; LEHRSTUHL FÜR AGRARMARKETING (1996), survey of Kiel, n = 193; ³ EMNID (1998), n = 1031.

3.2 Husbandry practices

Husbandry practices are directly relevant to animal welfare. Perceptions of husbandry practices and animal welfare are therefore closely linked. Major public protests against factory farming in Germany began in the early seventies. Poultry keeping was of major concern to animal protectionists then. Mr. Grizmek coined the term „KZ-Hühner“⁸ for hens confined in cages without daylight.

To the knowledge of the authors, attitudes towards husbandry practices have not been looked at by German market research until the early eighties. Surveys covered the issue more often in the nineties. This might reflect how concerns of consumers, business and politics developed.

⁸ „KZ“ refers to the concentrations camps in Germany before and during the second world war. BRUMME (1991, p. 38) criticises that poultry keeping is described with a term representing mass-murder of European Jews. „The murdered people are again exploited and deprived of human dignity for the sake of a dramaturgical and emotional effect. Therefore this expression is clearly anti-semitic (...)“.

3.2.1 Specific beliefs and attitudes

Does increasing concern mirror deteriorating husbandry practices with respect to animal welfare? This view is supported by an absolute majority of respondents in surveys of Kiel (1993) and the old counties of Germany (1997)⁹. Results are shown in Tab. 2.2.1 (a). In both years an absolute majority believed that “animals today are kept less appropriate than in former times”. Whether the perceptions are correct or just a romantic distortion of the past, must be left open here.

The two samples were drawn from different sample spaces. Therefore one cannot infer from the data that people in 1997 (= sample of old counties) felt less bad about today’s agriculture than in 1993 (= sample of medium size city Kiel). This critique should generally be kept in mind when results of surveys of different sample spaces are compared. Considering data presented in this paper, explanations other than a decline in consumer concern about animal welfare seem more likely. An alternative explanation is e.g. that rural and urban people have differing perceptions and experiences of husbandry practices.¹⁰

Husbandry practices compared over time

Statement	Agreement ¹¹	Year
Animals today are kept less “appropriate” than in former times.	77%	1993 ¹
Farm animals today are kept less “appropriate” than in former times.	60%	1997 ²

Source: ¹ INSTITUT FÜR AGRARÖKONOMIE, LEHRSTUHL FÜR AGRARMARKETING, consumer survey in Kiel (n = 533), summer 1993, unpublished results; ² EMNID (1997), n = 1919

Factory farming („Massentierhaltung“), a term with negative connotations, is widely used to describe current husbandry practices. A clear bias in public opinion against factory farming is documented by the statements summarised in Tab. 2.2.1 (b): An overwhelming majority in 1984 and 1995 expressed moral reservations. In response to an open question in 1988 “inappropriate, unnatural” and “cruel to the animals” were the most important perceived public arguments against factory farming. Young people seem to have even stronger opinions than others: nearly 90% in a sample from 1990 regarded factory farming as “inappropriate” and thus saw animal welfare reduced. 45% of people in 1996 agreed to the statement, that factory farming is as bad as slavery.

⁹ While the numbers for 1997 in Tab. 2.3.2 refer to the old counties, results by EMNID (1997) are available for the new counties, too. Less respondents in the new counties saw husbandry practices deteriorated (53%). Only slightly more men (59%) than women (58%) agreed to the statement.

¹⁰ Compare ALVENSLEBEN/STEFFENS (1989) for an analysis of factors that influence acceptance of agricultural technologies by people.

¹¹ Values representing degrees of agreement on rating scales are aggregated for tables in this chapter.

How good is factory farming?

Statement	Agreement, stated reasons, average rating	Year
Factory farming in meat production should be rejected for ethical reasons.	5,7 ¹	1984 ³
Factory farming in big flocks is often being criticised. Did you hear about this criticism and <i>do you know, why factory farming is being attacked?</i> (open question) not heard: 6%; no answer: 1%; heard, but do not know why: 5%; other items (not listed on the right): 11%	inappropriate, unnatural,...: 59%; cruel: 48%; hormone scandal: 22%; poor quality: 14%; environment: 4%; bad taste: 3%	1988 ⁴
(Is factory farming “appropriate”?) agreement (disagreement) ((could be either))	7% (87%) ((2%))	1991 ⁵
It is true that factory farming is immoral.	71%	1995 ⁶
Factory farming is like slavery in former times.	45% (3,2 ²)	1996 ⁷

¹ average rating on a scale from 1 (= I don't agree at all) to 7 (= I absolutely agree); ² average rating on a scale from 1 (= I don't agree at all) to 5 (= I absolutely agree)

Source: ³ ALTMANN, ALVENSLEBEN, (1986), p. 66, survey at Hannover, Lingen and Meppen, 1984, n = 2000
⁴ALVENSLEBEN/STEFFENS (1988), telephone survey at Hannover, n = 422; ⁵ KÜHNLE/MÜHLBAUER (1992), n = 715, young people aged 14 - 28; ⁶ FORSA cited in STERN, 46/95, p. 110; ⁷ SAMPLE-Institute (1994), n = 1300

Concern about animal welfare dominates attitudes about factory farming and large flocks, which in 1994 are not seen necessary to supply (inexpensive) animal products (see Tab. 2.2.1 (c)). At the same time self-interest is seen threatened: 64% of respondents in a survey in 1997 saw a link between poor animal welfare and BSE.

Means and ends (see also chapter 3.2)

Statement	Agreement, average rating	Year
Modern husbandry in large flocks is important to supply people with inexpensive meat.	3,7 ^o	1994 ¹
Only by factory farming can the supply of animal food be guaranteed.	27% (2,5 [*])	1994 ²
Do you agree or not, that animal diseases like BSE would not have occurred, if one had better ensured appropriate husbandry.	agree: 64% disagree: 22%	1997 ³

^o average rating on a scale from 1 (= I absolutely agree) to 5 (= I don't agree at all); ^{*} average rating on a scale from 1 (= I don't agree at all) to 5 (= I absolutely agree)

Source: ¹ ALVENSLEBEN (1994), p. 149, n = 388, Kiel; ² SAMPLE INSTITUTE (1994), n = 1300; ³ NOELLE-NEUMANN, KÖCHER (1997), p. 1087

The German term “Massentierhaltung”¹² implies that flock size is a critical point about modern farming. Views, however, are complex: a relative majority of 44% in 1997 did not see large flocks as a sufficient condition for poor animal welfare. Size nevertheless is an important point of criticism, as is established by other findings summarised in Tab. 2.2.1 (d). Interviewees admitted to „dislike growing size of flocks” in Kiel, 1994. EMNID (1992, 1997) suggest that criticism of large flock sizes increased in the nineties.

Views seem less clear in response to a more complex question posed by EMNID in 1982: „How should farmers act in order to supply food at acceptable prices and at the same time not

¹² „Massentierhaltung“ is translated into factory farming throughout.

pollute the environment or threaten human health etc.”¹³ 57% of the sample then suggested to keep large flocks. On the other hand, 80% wanted “lots of small family farms” and only 18% suggested “few industrially organised big farms”.

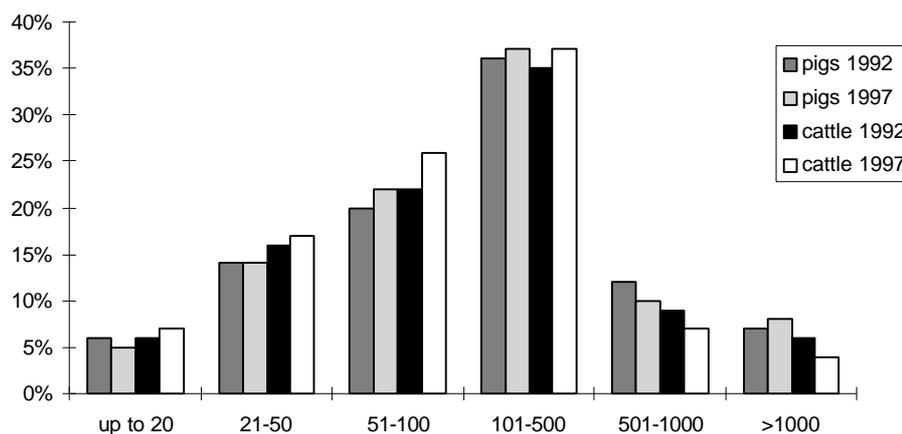
How large are flocks? (When) Are flocks too large?		
Statement	Agreement, average rating	Year
Assume that flocks of more than 600 pigs can be called factory farming. Do you reckon that the majority of pigs in the FRG are kept in (a) such large flocks or (b) rather smaller ones?	(a) 60% (b) 24%	1988 ²
I dislike that animals in today’s agriculture are kept in larger and larger flocks.	1,7*	1994 ³
The reproach against large flocks is largely exaggerated since most German farmers have rather small flocks.	50% 28%	1992 ⁴ 1995 ⁵
Reproaches against large flocks are basically not justified since most German farmers have rather small flocks.	35%	1997 ⁶
Animals can’t be kept “appropriately” in large flocks.	30%	1997 ⁶
Even in large flocks can animals be “appropriately” kept.	44%	1997 ⁶

* average rating on a scale from 1 (= I absolutely agree) to 5 (= I don’t agree at all)

Source: ² ALVENSLEBEN/STEFFENS (1988), telephone survey at Hannover, n = 422; ³ ALVENSLEBEN (1994), p. 149, n = 388, Kiel; ⁴ EMNID (1992); n = 2058; ⁵ ALVENSLEBEN/MAHLAU (1996); ⁶ EMNID (1997), n = 1919

Fig. 2.2.1 shows which size of flocks for pigs and cattle is presumed too large in 1992 and 1997. People admit to slightly larger flocks for pigs than for cattle. Furthermore; it is suggested here, that criticism of large flocks increased more for cattle than for pigs. Yet, public perception seems quite in contrast to actual needs, since cattle prefer larger flocks more than pigs (given enough space).

BEYOND WHICH SIZE ARE FLOCKS PRESUMED TOO LARGE?



Source: EMNID (1992), n = 2058, EMNID (1997), n = 1919, representative samples of adult German population older than 14.

Poultry keeping has been a major subject in the German debate over intensive animal farming from the beginning. The earliest survey results are available for 1983, when people

¹³ Answers to be rated were given.

overwhelmingly agreed battery farming to be inferior to barn keeping in terms of animal health (Tab. 2.2.1 (e)). At the same time battery systems were supposed to be superior in productivity and hygiene. Fifteen years later, respondents in a survey of Kiel nearly unanimously believed hens on battery farms to suffer and to be permanently injured. The high degree of unanimity might be due to scandals over the large scale poultry farmer Anton Pohlmann. These received a lot of media attention in Germany after 1994.

Poultry keeping

Statement	Agreement, average rating	Year
Laying hens perform better in: - battery systems - barn systems - no difference	38%, 27% 12%	1983 ¹
Animal health is better guaranteed in: - battery systems - barn systems - no difference	6% 85% 2%	1983 ¹
Hygiene is better ensured in: - battery systems - barn systems - no difference	43% 25% 27%	1983 ¹
Battery systems do permanently injure hens.	96% (1,2 [*])	1996 ²
Battery hens do suffer a lot the way they are kept.	95% (1,3 [*])	1996 ²
Battery hens do not fare as badly as always said.	4% (4,5 [*])	1996 ²
* average rating on a scale from 1 (= I absolutely agree) to 5 (= I don't agree at all)		

Sources: ¹ INSTITUT FÜR AGRARÖKONOMIE, LEHRSTUHL FÜR AGRARMARKETING, consumer survey in Kiel (n = 193), summer 1996, unpublished results; ²HARRIS (1996), p. 157, n = 121

3.2.2 Spontaneous associations¹⁴

A qualitative study conducted at Kiel by SIES (1997) (n = 30) employed various association-tests¹⁵ to assess people's attitudes, thoughts and feelings undistorted of social answering effects (see also SIES/MAHLAU, 1997). The sample was selected to present a good variety of people.

People came up with only three positive associations in response to the neutral catchword "animal husbandry". 40 out of 60 possible answers were clearly negative (Tab. 2.2.2). Nearly all of the negative associations were related to aspects of animal welfare. Results for the neutral catchword "poultry keeping" are similar. In a further test people were given two pictures, one showing cramped pig pens, another cows on a pasture (see the appendix). These results, too, indicate public disapproval of factory farming - not only rationally but also emotionally.

¹⁴ This section is related to section 2.4.2 „Topical issues“.

¹⁵ Associations tests are a special technique of indirect questioning.

Free associations: answers to the stimulus “animal husbandry”		
Positive associations (3)	Neutral associations (17)	Negative associations (40)
free-range, happy hens (2) - keeping animals free-range	Hopefully “appropriate” – should be kept naturally – breeding beasts - hens - cows (4) – cows on a pasture – keeping dairy cows – rearing cows and pigs - pigs (2) - geese - stable - -fertiliser - - - there are good and bad aspects to it	exploitation – factory farming (9) - keeping masses - mass-production – animal factories - cows side by side in giant sheds - too small stables - too confined - confined - - - not “appropriate” (3) - rarely “appropriate” (2) - natural animal husbandry rather rare - - - too many medical drugs - animals stuffed with drugs - too much concentrated feed stuff – unhealthy - - - pity for the animals - cruel these days – nowadays often terrible - cruel to animals (2) - unworthy of the animals - - - ill animals - hospitalism - animals bitten to death – fidgeting hens - squeaking pigs in a lorry - - - stench – utmost precaution

Source: SIES/MAHLAU (1997), p. 15 (results); numbers in brackets refer to how frequently items were mentioned

3.2.3 Attitudes towards political measures

The bad image of factory farming and concern about animal welfare is directly reflected in an overwhelming support for the prohibition of factory farming in 1990 and 1992 (Tab. 2.2.3). Consumers of organically produced meat even almost unanimously support prohibition. This reflects how strong feelings are.

Results do not imply precise policy recommendations. Besides possible social response effects, trade-offs with other issues are neglected. Trade-offs might be important as suggested by a survey of Kiel in 1996 when respondents ranked eight out of ten political issues to be more important than animal welfare (compare section 2.4.1). Furthermore, since only fairly general political attitudes were measured in Tab. 2.2.3, the correlation with concrete political action, like voting, is likely to be low. This is suggested by the compatibility principle (AJZEN, 1988 and AJZEN, FISHBEIN, 1977 quoted in EAST 1997).

“Stricter surveillance of husbandry practices, animal transport, ...” and “compulsory labelling of battery eggs” receive only little less support than “prohibition”. This again indicates that people strongly feel “something ought to be done” rather than suggest a specific policy measure. At least it has so far not been strictly established, which of various policy options people prefer.

Attitude towards political measures

Statement	agreement/ affirmation	year
Depending on the type of question between 67% and 79% of respondents supported a prohibition of hormones in the production of beef and veal. They spontaneously come up with the following reasons: health concerns: 74%; not appropriate, unnatural, etc.: 39%; feeling uneasy: 24%; general attitude against hormones and chemical additives: 19%; distrust in science: 8%; cruel to animals: 5%; else: 12%		1988 ³
Depending on the type of question between 77% and 83% of respondents supported a prohibition of hormones in the production of milk. They spontaneously come up with the following reasons: there is too much milk anyway: 56%; health concerns: 38%; not appropriate, unnatural: 37%; feeling uneasy: 14%; general attitude against hormones and chemical additives: 10%; more farmers would have to give up: 8%; cruel to animals: 7%; distrust in science: 3%; else: 7%		1988 ³
Should or shouldn't certain forms of factory farming, e.g. batteries for hens be prohibited?	85% (should) 6% (shouldn't)	1990 ⁴
Most important reasons for wanting to have factory farming prohibited (given categories): "it is cruel to the animals": 94%; "the animals illegally get given substances like hormones": 77%; "the animals are fed with too many medical drugs": 69%; "it threatens subsistence of small farmers": 47%. ⁴		1990 ⁴
Factory farming should be prohibited. (consumers (non consumers) of organic meat)	98% (81%)	1992 ¹
Husbandry, animal transport and the production of meat and sausages should be put under stricter surveillance.	79%	1994 ²
At present in this country, there is no legal requirement for eggs produced from battery farming to be labelled as "battery" eggs. To what extent do you agree or disagree that eggs produced under battery conditions should be labelled as "battery" eggs?	79%	1998 ³

Sources: ¹ HEILMEIER (1992), n = 174, customers of butcheries and retailers in (equally divided between the two groups) Landsham, Kirchheim, Gräfelting; ² FORSA, quoted in: Die Fleischerei, 9/1994, p. 92; ³ EMNID (1998), n = 1031; ⁴ NOELLE-NEUMANN, KÖCHER(1993), interviews held in 1990, old counties, people older than 15; ⁵ ALVENSLEBEN/STEFFENS (1988), telephone survey at Hannover, n = 422.

3.3 Animal products

While husbandry practices are directly relevant to animal welfare, beliefs, attitudes and images about animal products are potentially more relevant to purchases. This is suggested by the compatibility principle (AJZEN, 1988 and AJZEN, FISHBEIN, 1977). Purchase behaviour in turn is a major determinant of husbandry practices.

This chapter looks at how animal products are perceived or evaluated and what role aspects related to animal welfare play. Is there evidence for links between perceived animal welfare and criteria used to evaluate and purchase products? A direct and an indirect role of perceived animal welfare will be distinguished. Products discussed include beef, pork, meat in general, eggs and milk. The available evidence for these products varies considerably. Due to lack of data some products are left out, like meat of sheep and horses or fish¹⁶.

Product image, attitudes, trust and quality¹⁷ are supposed to be important purchase predictors (BALLING, 1991). These constructs are used in sections 2.3.1 to 2.3.5. In addition, section 2.3.5 directly inquires into peoples motives for purchasing food products.

¹⁶ Unlike fish, meat of sheep and horses are quantitatively rather unimportant in Germany.

¹⁷ Perceived quality of products can be equated to attitudes about products or their images (BROCKHOFF, 1993).

3.3.1 Deterioration of meat image

While strong negative associations with modern husbandry practices are documented to persist since nearly twenty years, this is different for the image of meat and other animal products: In 1982 more than 70% of interviewed women spontaneously came up with positive associations for meat, like “tasty”, “healthy” and “easy to prepare” (MTC, 1982, survey of meat consuming women aged 25 - 55). Only 10% mentioned negative aspects, among which bad husbandry practices were second after price. Veal, pork and poultry were the most negatively affected types of meat.¹⁸

In a follow-up study in 1983 MTC asked housewives aged 25 - 69 to mark those positive and negative statements about meat, which they could agree with. High prices (74%), residues (65%), unattractive packaging (51%), the adverse affects of unnatural husbandry practices on meat quality (49%) and shrinkage during preparation (49%) were criticised most.

The positive picture for meat in the early eighties dramatically changed by the nineties: SCHMITZ (1993) reports on a survey in which people at Aachen were directly asked about their image of meat and sausages. 54% agreed to “negative” and only 18% felt it was “positive”. About 80% of people explained their opinions. Reasons stated most for scepticism towards meat were „current trend to healthier nutrition“ (40%), „uneasiness about meat processing practices and related insecurity“ (31%), „scandals in the area of rearing and slaughtering animals“ (most notably those related to hormones) and „diseases“ (29%).

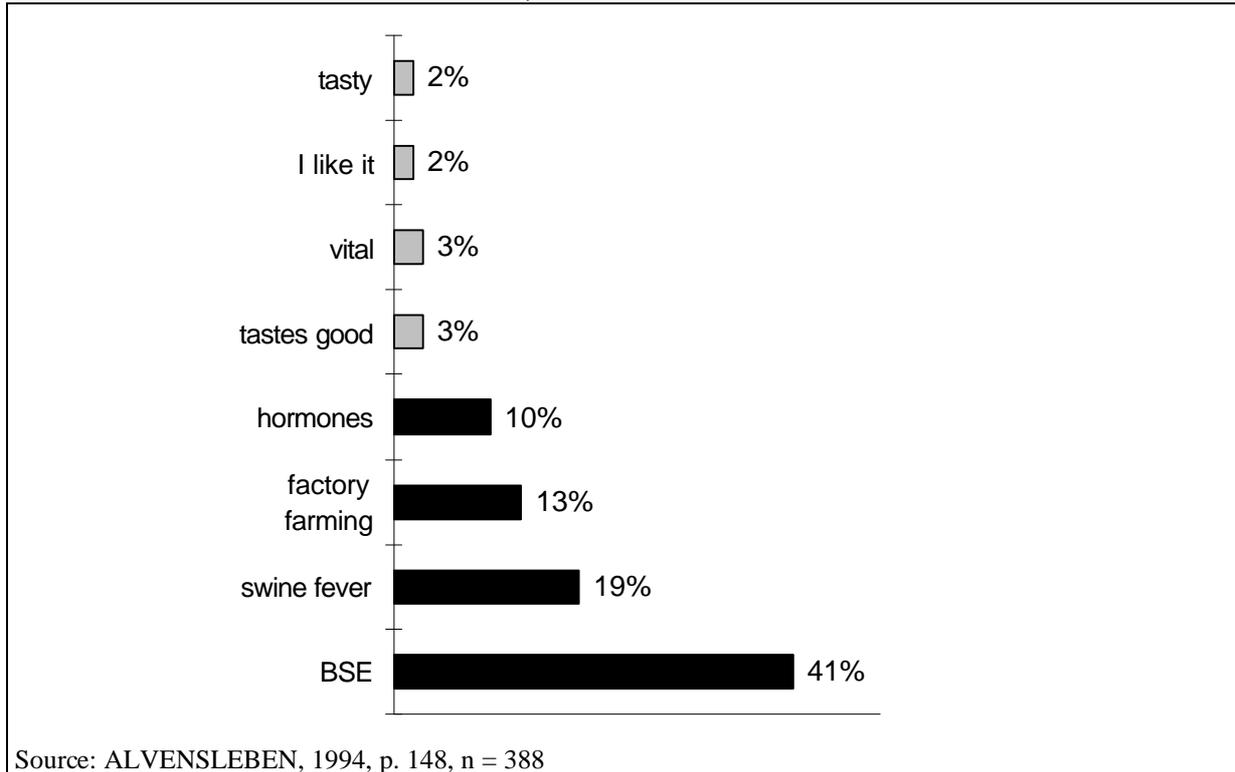
NIELSEN (1994, p. 3)¹⁹ like MTC in 1982 reports on spontaneous associations with meat: 63% of the interviewees mentioned meat scandals like BSE and swine fever (multiple associations possible). Positive aspects like “healthy” and “important” were ranked only fourth (14%, 11% respectively). Less than 10% of respondents mentioned “expensive”, “poor animals, factory farming”, “slaughter, blood” and “tasty” respectively.

Findings from a survey of Kiel in 1994 are displayed in Fig. 2.3.1: Again overwhelmingly negative associations for meat were found. Of primary importance were issues like BSE, swine fever and factory farming, which then were extensively discussed in the media.

¹⁸ The consumption of veal was quantitatively not very important.

¹⁹ NIELSEN (1994) is quoted in MEYER-HULLMANN (1996), p. 91.

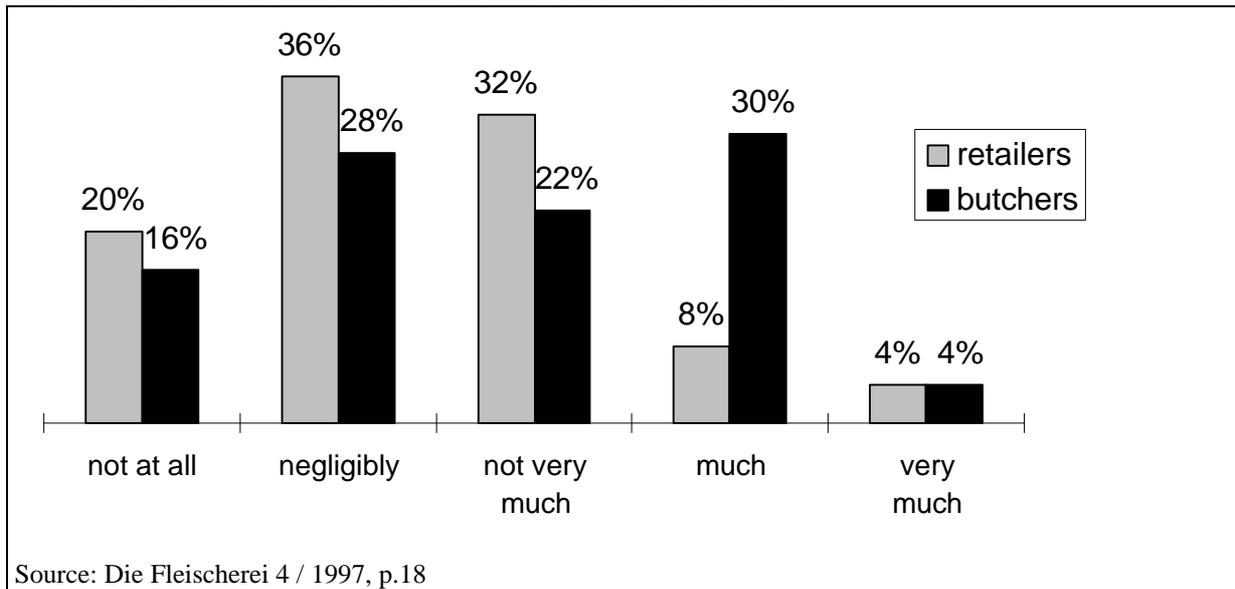
ASSOCIATIONS WITH “MEAT” IN KIEL, 1994



To get an idea on how the meat image will develop in future, BBE (Die Fleischerei, 1997) asked experts, retailers and butchers²⁰ about their beliefs (Fig. 2.3.1 (b)): “Will the meat image deteriorate further due to reasons related to ethics and animal welfare?”. Butchers agreed more on this statement than ordinary retailers. 56% of butchers as opposed to 44% of retailers saw a noticeable impact. A third of the butchers saw either a strong or very strong impact. The different perceptions are probably due to each serving distinct market segments. While a majority of experts perceived an impact, expectations differed as to impact strength. A majority expects less than a strong impact.

²⁰ Butchers are relatively important for retailing meat in Germany.

**MEAT IMAGE TO DETERIORATE FURTHER
DUE TO CONSUMER CONCERNS ABOUT ANIMAL WELFARE?**



To summarise, the image of meat clearly deteriorated during the past twenty years. In the eighties price dominated among negative attributes and husbandry practices already played a role. By the nineties the importance of price had diminished, scandals and health worries were at the fore of people’s concern, followed by and connected with issues related to animal welfare and farming practices.

3.3.2 Distrust of meat

The deteriorated image of meat is accompanied by increasing consumer distrust of meat: In a survey by KÜNZNER (1989) 75,4% of interviewees admitted to distrust certain food products, especially those like meat, fish and poultry. Hormones used in the production of meat and especially veal were seen to be the most important contributing factors. People were afraid of detrimental health effects arising from e.g. chemical residues. Inappropriate husbandry was a reason for distrust in animal food.

Confirmation of these results are found in HALK (1990, 1993). She conducts focus group discussions and concludes that distrust is not so much expressed of individual products than of unnatural production and processing. This is indicated by support for appropriate husbandry in the groups. HALK further suggests people’s lack of knowledge about husbandry practices and meat origin to contribute more to consumer’s distrust than negative publicity.

3.3.3 Purchase criteria

This section is complementary both to section 2.3.1 and 2.3.4: to the latter since we look at individual quality criteria used for purchase decisions, to the former since quality and image are very similar concepts (BROCKHOFF; 1993). The question to be explored is, whether perceived animal welfare and husbandry practices have an impact on the evaluation of purchase criteria. Considered are „perceived health impact of meat“, „taste“ and „German origin“, i.e.

aspects both belonging to product and process quality (to be further discussed in section 2.3.4).

87% of women in 1982 believed husbandry practices to affect meat quality (MTC, 1982). The impact was seen to be primarily negative and to result in inferior taste and unhealthy residues. With respect to the *health aspect* this was less clear for a sample drawn in both a rural and urban area in Lower Saxony in 1984 (ALTMANN/ALVENSLEBEN, 1986, p. 66). An interpretation is, that women see the impact more strongly. Subsequent unpublished findings of LEHRSTUHL FÜR AGRARMARKETING KIEL in surveys of the same areas as ALTMANN/ALVENSLEBEN confirm an impact.²¹ On average respondents in 1989 and 1994 agree with the statement “consumption of meat is detrimental to health due to chemicals used in fattening”. WIRTHGEN/ALTMANN (1988, p. 19) report on a regional sample in 1986, which showed that criticism and distrust of modern methods of meat production are much more prevalent with those very conscious about health and food.

A relationship between *taste* and type of keeping system was already discovered by ALVENSLEBEN ea. (1973, p. 23) for a sample of Göttingen. 79% of respondents (n = 88) agreed to the statement „Eggs taste better from farmers who still keep chickens naturally“. A very similar statement²² received less support in 1980 (59%) than in 1985 (68%) for samples drawn at Hannover (ALVENSLEBEN / VIERHEILIG, 1985). WILL/BALLING (1987) found 77% of people in a sample drawn at Freising (n = 100) to agree to a certain extent with the statement that “One gets most tasty meat from free-range animals”. Unpublished results of LEHRSTUHL FÜR AGRARMARKETING KIEL (1996) show that more than 80% of people agree with the statements “Free-range eggs taste good” and “Free-range eggs have good quality”.

The lesson to be drawn from these findings is, that the impact of consumer concerns about husbandry practices on the image of animal products is partly mediated by beliefs and attitudes relating to health-impact, taste and other product attributes. Strength and nature of this mediating relationship seem to vary over time and are partly documented since the early seventies. As health impact and taste are solely defined by its relevance to the individual consumer, non-altruistic motives appear to play a role in consumer concerns about animal welfare.

There might also be a connection between consumer concerns about animal welfare and purchase criteria related to production processes. This has been looked at for consumer preferences for products of the own country.²³ HOFMANN/SOMMERER (1997) asked people in 1995 why they preferred German origin. People mentioned “trust”, “severe German legislation and controls”, “better keeping conditions for animals”, “better quality assurance” and “reports on the bad state of international animal transports and BSE”.

²¹ These are documented by Wildner (1998, p. 16).

²² Statement: “Eggs from free-range chicken taste better”.

²³ Most people in Germany believe meat of German origin to be better than imported meat (73% in a survey by EMNID, 1997). In spite of a clear preference for German origin in absolute terms, it might not be very important seen relatively: “German origin” was ranked least important among six criteria of the production process in a sample by BALLING (1991).

3.3.4 Product quality

Products consist of bundles of properties and should therefore be evaluated considering multiple dimensions. Yet, the construct of quality reduces multiple characteristics into one and therefore allows uni-dimensional evaluations. Bundles of product properties might either be objective or subjective. Accordingly *objective* and *subjective* quality are distinguished. The construct of objective quality is generally rejected in economics and marketing. The construct of subjective quality on the other hand is closely related, or even equated with attitudes and images (Brockhoff, 1993, pp. 42-50). It is used in this section: food quality and the role of animal welfare is evaluated, by asking people, rather than by measuring objective characteristics of the product or the production process.

Product and *process* quality of food (especially meat) are the two main constructs discussed in this section. Process quality is related to production, transport and processing of food and animals, it cannot be evaluated by e.g. inspecting or tasting the product. The distinction between product and process quality is of interest, since issues of animal welfare are part of processes and at the same time have objective links with the product. So, how are these objective relationships between processes and products (which we do not evaluate here) reflected in consumer perceptions of quality?

We will discuss studies of BALLING (1991) and BECKER ea. (1996). Both employed closed-end survey questions in supermarkets and butcheries. BALLING asked people to select the most important items from a set of six product and process characteristics. From all criteria those of the production process were chosen most. They received the following ranks: 1. "Basically no drugging", 2. "natural feeding", 4. "controlled rearing and fattening", 5. "free-range", 7. "slow growth", 10. "German production". The most highly rated production characteristic was "hung" at rank three.

BALLING accordingly draws the conclusion that people value production process quality more than product quality. But is this really so? A distinction between quality and measures of quality should be made. Also one should take into account that processes and products are connected, since products are outcomes of processes.

People might for pure pity or altruism be interested in "happy" hens, even if this had no or adverse consequences for the animal product. But if there is a (perceived) connection, people might simply be interested in process quality as an indicator of product quality. So, if people are asked, how important they perceive a certain process for food quality, will they refer to an indicator or to an end in itself? The indicator would surely not be valued in itself, while the end is.

While the distinction seems academic at first sight, it could be useful for explaining and predicting people's demand and shopping behaviour, which is a major reason for employing the construct of "quality". If e.g. animal welfare related criteria were primarily used as indicators of product quality, people would stop using it once a better indicator was at hand. Alternatively people would still buy the product, if the production function changed to require less animal welfare as an input. If animal welfare was an end in itself (due to e.g. altruistic reasons) demand changes could be expected to be due more to availability, changes in people's resources or preferences.

Are there any process criteria used as indicators or safeguards in Balling's list? This is probably the case for those three most important process criteria. They relate in same way to the product criterion "without residues", which has been operationalised as "controlled for residues" by ALVENSLEBEN (1990)²⁴.

Balling's conclusion then should be modified: There are certain properties of beef which are more important than purely sensory beef characteristics. If they cannot be easily evaluated by consumers, people might use criteria of the production process as an indicator or safeguard, these in turn can be more important than traditional main beef characteristics. Product quality²⁵ is more important than process quality.

Central assumptions underlying even this modified conclusion are first, that Balling considered the most relevant criteria to consumers and second, that consumers judgement was undistorted. Distortion is likely due to people's artificially drawn attention towards the criteria and possible social responses. The answers would then, as in earlier examples, not reflect people's choices in shopping.

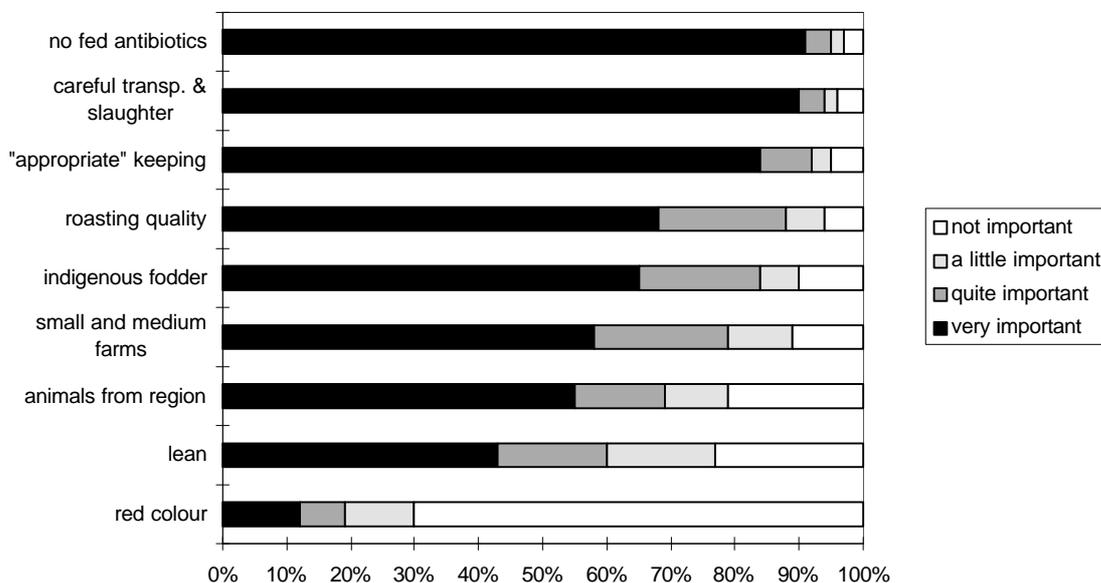
Lessons we see to be drawn with regard to consumers concerns for animal welfare are firstly, that they are probably not as important as other process criteria for beef. Secondly, animal welfare aspects are not clearly isolated by BALLING. Thirdly, altruistic motives are at least not most important. Fourthly, animal welfare criteria are likely to become important to consumers if they serve in some way as indicators or safeguards for important product characteristics.

In contrast to BALLING (1991) BECKER ea. (1996) included aspects of animal welfare in their list quality criteria for interviews in Hamburg, 1994. More than half the interviewees were customers of butcheries selling „Neuland“-meat and more than a quarter of all customers bought „Neuland“ meat. Since "Neuland" is a special brand assuring high standards of animal welfare, the sample can be expected to be distorted accordingly. Results are presented in Fig.2.3.4. Interpretation and methodological critique are left to the reader.

²⁴ Compare section 2.3.6, p. 19-20.

²⁵ Product quality as measured by product criteria and the respective indicators belonging to processes.

Fig. 2.3.4: Importance of meat quality criteria



Source: BECKER ea. (1996), p. 272

3.3.5 Conjoint Analysis

This section presents results obtained for eggs by conjoint analysis. A connection to section 2.3.4 is that the concept of utility is employed in conjoint analysis.

In a conjoint-analysis of $n = 44$ VOLLBEHR (1990) finds the keeping system to be most important to people, followed by the price. Battery eggs were very much negatively perceived and barn eggs very positively. RENKEN (1997) also finds the keeping system to be most important. Price and colour are clearly less important. Free-range eggs are *ceteris paribus* preferred by 85% of people, barn eggs by 12% and battery eggs by only 3%.

3.3.6 Reasons for food purchase

A final approach used in the German literature to assess consumer concerns about animal welfare, inquires into peoples motives for purchasing food products. This has been done both in ordinary surveys or at point of purchase, either as an open question or with given answer categories. Motivation as revealed through such in depth interviews, is cognitive and can therefore largely be equated with the attitude construct used in means-end-analysis (KROEBER-RIEL / WEINBERG, 1996, 141 - 152).

HARIS (1986) interviewed customers who bought free-range or deep-litter eggs in 1982, 1983 at point of purchase. He inquired into state reasons for choices (open question).²⁶ Most

²⁶ About 90% of interviewees were aware of the choice situation. It is not sure whether people in a non-experimental situation would have shown the same degrees of awareness. Further evidence suggests that purchasers of barn eggs bought more deliberately and that the keeping system was of higher interest to them

important to people who consciously bought *battery eggs* was the lower price. Compared to 1982, price was even more important in 1983. “Good quality” played almost no role. Perceived lower quality of battery eggs might be reflected in their preferred use for baking and cooking. Most important to people who consciously decided to buy *deep-litter eggs* was, that they perceived barn hens to be “kept more appropriately”. Like “price” for battery eggs, “appropriate keeping” was more important in 1983 than in 1982 - which suggests a certain polarisation of consumers. A quarter of deep-litter egg purchasers stated to buy these due to their better quality. Again husbandry practices are associated with food quality.

Tab. 2.3.6: Reasons for purchasing eggs (percent of people)

Battery eggs	1982	1983	Barn eggs	1982	1983
inexpensive	59%	75%	more appropriately kept	39%	50%
for baking, cooking etc.	26%	15%	better quality	24%	28%
on trial	6%	-	on trial	15%	7%
good quality	5%	-	barn egg wanted	12%	-
no difference perceived between battery and barn eggs	-	3%	freshness wanted	4%	-
else	4%	7%	more natural	-	5%
			else	6%	10%

Source: HARIS, 1986, p. 153

EMNID (1998) asked interviewees “What would you say is the most important factor you take into account when buying eggs?”. A list of possible answers was presented. The three criteria perceived as most important were “quality of the eggs” (21.8%), “price of the eggs” (21.5%), “only buy free-range eggs/the conditions under which the eggs are produced/hens are kept (18.1%).

These two studies do not necessarily reveal the importance of criteria in the actual shopping situation. Then the systems of poultry keeping might not be highlighted as much as in the experimental situation set up by HARIS (1986). Also closed ended questions might be a problem as seen from the study presented next.

In March 1989 HESS (1991) conducted consumer interviews at a retailer. Two brands of pork were on sale in the shop: brand A was marketed as from controlled rearing with special feeding and good sensory qualities. Its price per kilo was up to DM 2.50 above that of brand B. Brand B was marketed as “high quality pork” with valuable nutrients and vitamins.

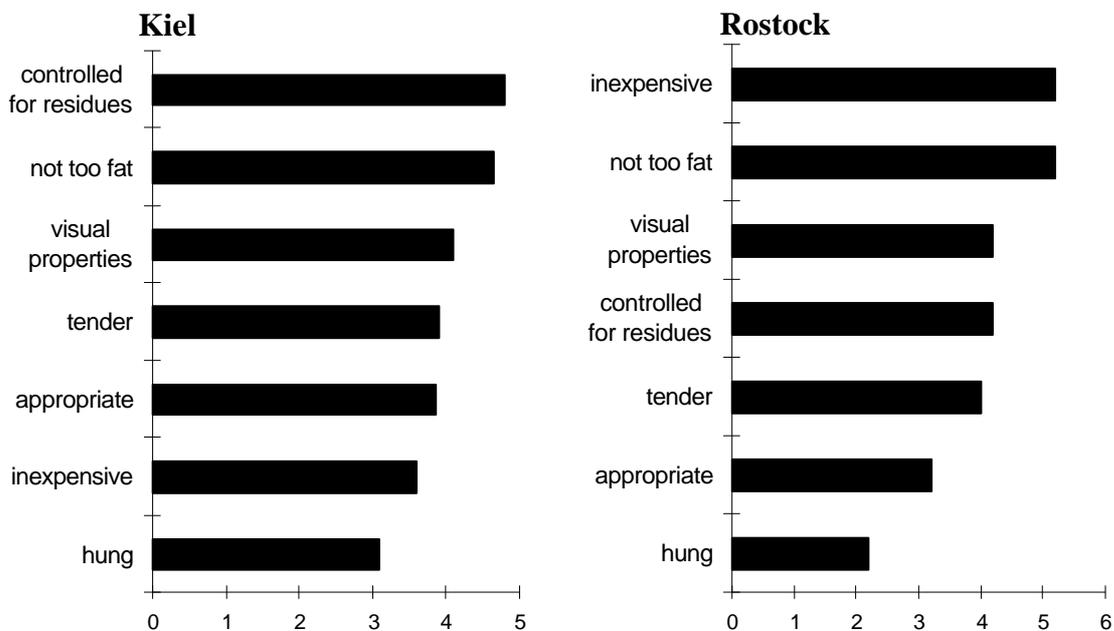
People who bought either of the brands were asked, whether they had any reasons for their choice. About two third answered in the affirmative. Respondents who bought *brand A* referred very much to product characteristics like general quality, taste, tenderness etc.. Only 7% mentioned “controlled rearing” (six criteria were mentioned more often). 49% of purchasers of *brand B* mentioned low price as a factor (11% referred to appearance, 8% to low fat contents and 5% to better quality). Hence, even among people who consciously bought brand A, “controlled rearing” and further aspects of the production process were rather unimportant.

than to purchasers of battery eggs. Barn egg purchasers therefore seem to more highly involved with regard to aspects of keeping systems and animal welfare (the latter will become clearer in the next paragraph).

This is in striking contrast to results obtained with closed-end questions (multiple answered allowed). “Controlled rearing” then was considered crucial by 63% of people. It was even more important than “more tender”, “more succulent” and “better taste” chosen by 50% to 57% of interviewees. 47% of people saw “from animals who get better food” as crucial, 40% “from animals reared without medical drugs or artificial fatteners”, 27% “from animals which are more appropriately kept”, 23% “from animals which are more carefully slaughtered”.

Thus the type of question, open-ended or close-ended, makes all the difference. HESS (1990) suggests two explanations. Social answering might be at work when answer categories are given, since people could state what is socially desirable. Alternatively criteria like “controlled rearing” might simply be less conscious motivations which only surface with some help. KROEBER-RIEL / WEINBERG (1996, p.151) very much agree, that important motivations are subconscious, but generally do not see standardised interviews as an appropriate means to get to grips with the subconscious. They instead recommend projective and non-verbal methods.²⁷

Fig. 2.3.6(a): Motives for purchasing meat in 1990



Source: ALVENSLEBEN (1990), p. 101, consumer survey in Kiel (n = 249) and Rostock (n = 151) in 1990; „appropriate“ stands for „appropriate husbandry“.

Shortly after German reunification ALVENSLEBEN (1990) conducted consumer surveys in Kiel (situated in old counties) and Rostock (situated in new counties). People were asked to prioritise given motives for purchasing foodstuffs. Fig. 2.3.6(a) shows the different weights given to price, residues and appropriate husbandry (in short „appropriate“) in Kiel and Rostock. For the purchase of meat, top priority was given to price by people in the East (Rostock), whereas people in the West (Kiel) were most concerned about possible residues. “Appropriate husbandry” ranked fifth in Kiel and sixth in Rostock (with seven criteria given) and was thus not very important when seen by itself. Factor analysis, however, revealed that “appropriate husbandry” and “controlled for residues” were two very akin motives, very much

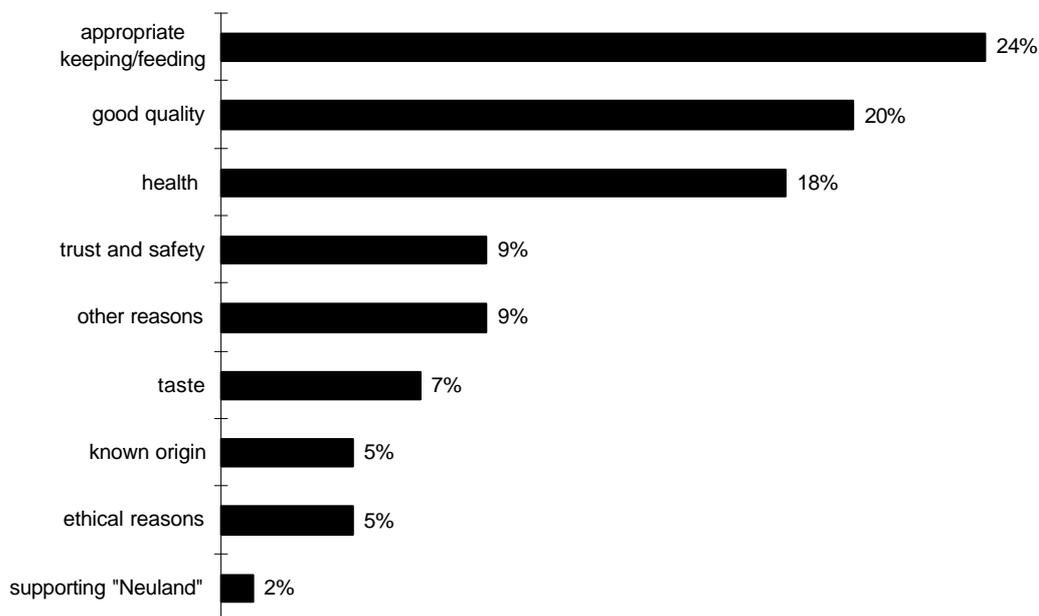
²⁷ A way to circumvent the criticism of KROEBER-RIEL/WEINBERG might be to replace the concept of the „subconscious“ with that of „passive knowledge“.

interchangeable in peoples consciousness. This again shows issues of animal welfare to be indirectly of interest to consumers, even if it might not be primarily due to altruism.

ALVENSLEBEN (1990) also conducted a similar analysis for milk. Factor analysis again reveals a close relationship between the criteria “appropriate keeping, environmentally friendly” and “controlled for residues”. Since “appropriate keeping” was amalgamated with “environmentally friendly” results are not directly comparable with the case of “meat”. Compared to milk meat received a lower rank by one for “appropriate keeping” in both Kiel and Rostock. “Controlled for residues” received the same rank for both milk and meat in Rostock but not at Kiel (lower for milk than for meat).

One of the best known certified-meat programs emphasising aspects of animal welfare in Germany is that of “Neuland”-meat. BECKER ea. (1996) asked customers of “Neuland”-meat why they bought it (results see Fig. 2.3.6(b)). He chose an open-ended question to qualify his results obtained for product quality with a close-ended question (presented in Fig. 2.3.4, p. 17) and to get findings closer to purchasing behaviour. No surprise for this brand is that “appropriate keeping and feeding” is most often mentioned (24%). But compared to results presented on page 17, it is surprising that “good quality” (20%) and “health reasons” (18%) are so close up with it for these special customers. Again this shows, how important the type of question is.

Fig.: 2.3.6 (b):Reasons for buying “Neuland”-meat



Source: BECKER ea., 1996; sample: n = 806, 1994, drawn at butcheries in Hamburg

3.4 Animal welfare put in perspective

Today's Western societies are often called affluent. Still, the fundamental human condition of scarcity is binding. Resources like money and time do not suffice to fulfil all needs and desires. As basic needs are satisfied others come to mind. Priorities still need to be set, both by consumers and politics. Therefore, it is to be expected, that if consumer concerns are relevant to purchase behaviour, it will be more in line with relative than absolute (isolated) importance attributed to them. In spite of this, priorities have largely been neglected in this paper so far and generally in attitude-behaviour-modelling (FREY / STAHLBERG / GOLLWITZER, 1992, p. 392).

This chapter presents surveys which look at priorities for issues related to animal welfare in chronological order. Section 2.4.1 reports available results for areas like „food shopping“²⁸, „politics“ and „tasks for agriculture“. Section 2.4.2 does not so much look at conscious priorities, but rather at topical issues (i.e. what people talk and think about most at a given time). Questions used in section 2.4.2 are open and inquire into what people remember about food and agriculture. In contrast to section 2.4.1 animal welfare is not mentioned as an issue to interviewees in section 2.4.2.

3.4.1 Stated priorities

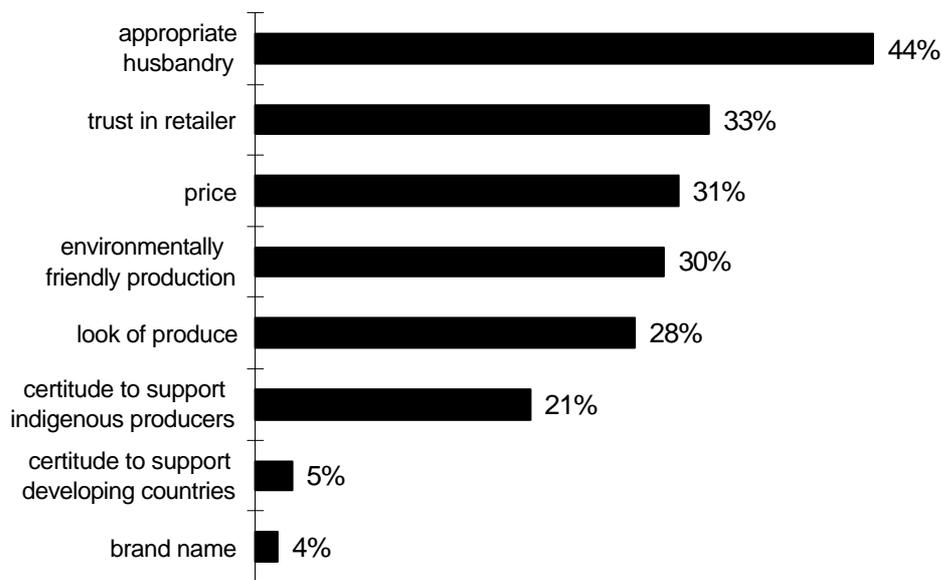
In 1994 the SAMPLE INSTITUTE surveyed (n = 1300) how much the statement “I do not care how they keep the animals, what counts is the taste of it.” reflected priorities of people.²⁹ On average respondents disagreed (average score 2,1). Only 15% agreed (scores 4 and 5). The starkest contrast showed up between those with elementary/primary education and higher education, new and old counties and non-buyers and buyers of organic meat.³⁰

²⁸ Similar questions about animal products and trade-offs with price are discussed in section “2.3 Animal products” and section “3.2 Willingness to pay”.

²⁹ Statement had to be rated on a scale from 1 (= I do not agree at all) to 5 (= I absolutely agree).

³⁰ Those mentioned first disagreed much less.

Figure 2.4(a): General priorities for food shopping - Kiel, 1996



Question: Please imagine a typical shopping situation and tell me how important the following items are for your decision to buy food.

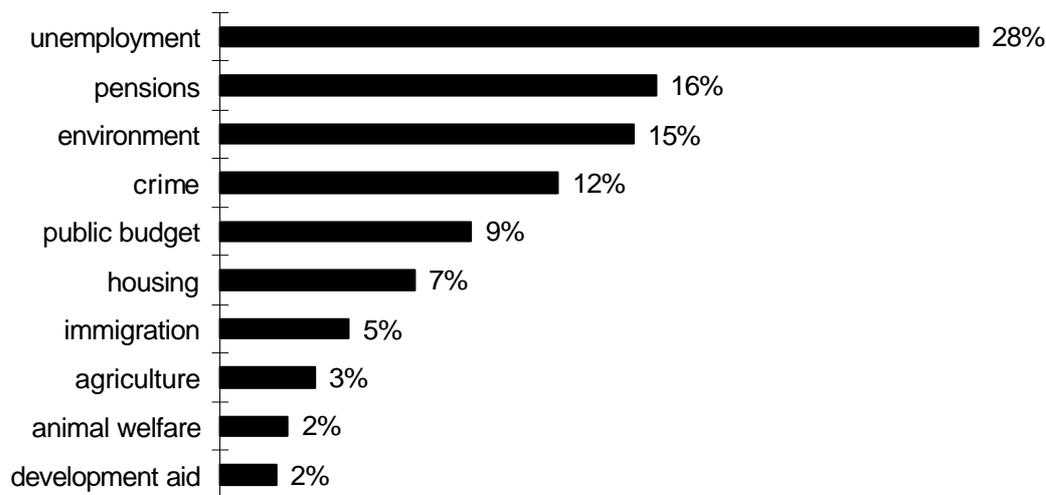
Source: ZIEHLBERG/ALVENSLEBEN (1998), p. 203; random sample drawn from the directory of Kiel, summer 1996, n = 387, multiple answers possible

A wider set of given issues is considered in a survey of Kiel. Results are presented in Figure 2.4(a), which shows how people in Kiel prioritise items relevant to food-shopping, shortly after a major scandal over battery eggs in 1996. Animal welfare as represented by “appropriate husbandry” is rated highest. However, relevance of these data for shopping behaviour needs to be questioned, since social responses appear important. This is indicated by e.g. the low priority given to “brand name” (ZIEHLBERG/ALVENSLEBEN, 1998, p. 203).

What role does animal welfare and agriculture play in people’s political priorities? Results from the mentioned survey in Kiel, 1996 are displayed in Figure 24(b). Among a set of ten political issues, only development aid was regarded as less urgent than animal welfare³¹ and agriculture. On the other hand, „animal welfare“ received about half the points of “immigration”, a problem which stirred up much of German politics in recent years (but which might now be perceived as solved to some extent).

³¹ “Tierschutz” is here translated into “animal welfare”.

Figure 2.4(b): Priorities for political action - Kiel, 1996



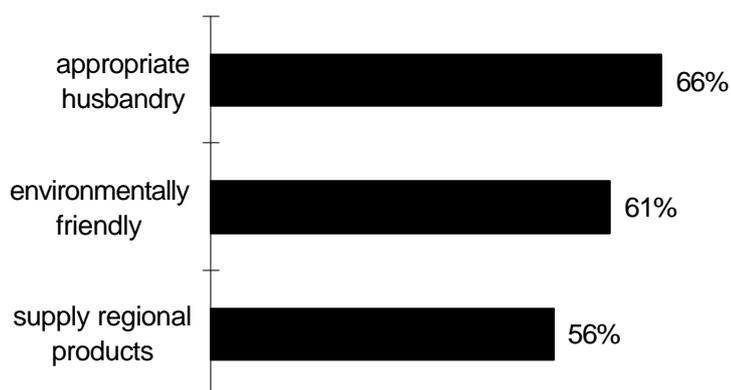
Question: I am presenting you cards with important political problems in our society. (...) Please select and rank the five most important problems. Aggregation of answers: the first priority of each person received 6 points, the second 4, the third 3, the fourth 2 and the fifth 1. For each of the ten items figure 2 shows the share of total points given.

Source: unpublished results of INSTITUT FÜR AGRARÖKONOMIE; LEHRSTUHL FÜR AGRARMARKETING (1996), Kiel, summer 1996, n = 387.

Finally, data on stated priorities for agriculture are available (Fig.2.4(c)). EMNID (1997) asked a sample to judge importance of the following given tasks for agriculture:

1. deliver regional products to people,
2. appropriate husbandry (rearing and feeding),
3. environmentally friendly production of agricultural produce like wheat, potatoes and sugar-beet.

Figure 2.4(c): Important tasks for agriculture



Source: EMNID (1997), table 8, p. 121, representative sample (n = 1919) of German population; numbers refer to the percentage of individuals who regard an item as “very important”.

„Appropriate husbandry“ was seen to be most important, no major differences between new and old counties were found. Compared to men, women felt the issue to be more important,

which also holds for people aged 30 - 44. The ordering of items is interesting as all items might be positively biased by social answering to some degree.

3.4.2 Topical issues³²

Under conditions of low involvement and information overload, consumers might not consciously and laboriously evaluate their priorities in a shopping situation. They will behave more habitually or spontaneously. Thus conscious priorities could loose and simple topicality might gain importance (KROEBER-RIEL, 1993). What ,then, is the relative topicality of animal welfare related issues in the context of husbandry and agriculture?

A comparison of findings by INFRATEST (1973, sample of old counties) and ALVENSLEBEN/WERNER (1980, sample of Hannover) gives some indications. Both inquired into what people recollected from what they had recently seen or heard about German agriculture (open questions, multiple answers). Whereas in 1973 problems like “factory farming and agrochemicals” were quite unimportant, 14% of respondents mentioned these in 1980. Likewise, more people in 1980 (73%) than in 1973 (27%) came up with an agricultural item.

The general trend is confirmed by MTC semi-structured interviews undertaken with German meat-eating women aged 25-55 (n = 300) in 1982: 88% stated to have come across information on rearing and keeping animals. Only 2% interpreted these in a positive way (although meat itself was then still perceived positively). Some women gave very emotional accounts of cruel practices.

ZIEHLBERG/ALVENSLEBEN (1998) asked people in Kiel in summer 1996 what they had heard about food in the media.³³ 92% remembered “BSE or swine fever”, 58% “appropriate husbandry” and 49% “health issues” related to genetic engineering, salmonella and hormones. In a sample by EMNID (1997, n = 1919, Germany, given answers) 81% of interviewees stated to have repeatedly come across information about “cruel animal transport” (West: 82.6%, East: 75.2%; men: 78.9%, women 83.1%).

All this suggests, that awareness and concern about animal welfare issues has risen over the past 25 and especially during more recent years. Women seem more aware than men, people in the West more than people in the East. Like in the theory of agenda setting, the media and especially media coverage of certain scandals appear to be important for determining topicality of specific issues. Awareness of agricultural issues as a whole has risen. Animal welfare issues within agriculture are more clearly perceived.

³² This section is related to section 2.2.1 „Spontaneous associations“.

³³ Question: The media, e.g. print media, radio and TV often report on food. Please tell me issues which you remember. (n = 387, Kiel, multiple answers possible)

3.5 Knowledge

People's knowledge is here understood to consist of data and information which reflect the actual state of matters. While beliefs might be right or wrong, this is not possible for knowledge. It therefore prevents people from having prejudices that lead to behaviour with unintended results.

Another reason to look at knowledge is that it possibly reflects involvement towards a problem and also towards products which address these problems. This is so since one definition of involvement is that it is activation and motivation for searching, receiving, processing and saving information (TROMMSDORFF, 1993, p. 49). People's involvement is of interest since it determines the way consumers behave. This in turn determines the kind of models to be used for explaining and predicting consumer behaviour.

One way to assess how knowledgeable people are about feeding, husbandry practices, transport, (pre-)slaughter treatment and their effect on animal welfare, is to see whether the believes which have already been presented in this paper are right or wrong. Two examples follow.

For instance, people in a sample drawn in 1988 overestimated the number of pigs kept in large flocks, when flocks were defined as large beyond a size of 600 pigs: a large majority thought pigs to be kept in these large flocks, whereas only about 20% really were (ALVENSLEBEN / STEFFENS, 1988, p. 375). But the results could be biased since a different definition of "large flock" might have revealed different beliefs.

Knowledge generally prevents from oversimplification. An example of a simplifying statement is "Animals cannot be kept appropriately in large flocks". More people disagreed (44%) than agreed (30%) with this statement in 1997 (EMNID, 1997). It looks like people are knowledgeable in this case.

In 1982/83 HARIS directly tried to assess knowledge about battery and deep-litter systems for poultry (HARIS, 1986, p. 156). He reports on two methodological difficulties: First, a situation had to be avoided, which put pressurised questions on consumers and had reduced their willingness to participate. Second, only a short time was available with each person due to circumstances.

A very general question about the difference between battery and deep-litter systems revealed that most consumers had no or wrong perceptions: About a quarter of people admitted, not to know the difference. About half the people equated deep-litter-keeping and free-range-keeping. Only 16% and 12% respectively answered rightly, that deep-litter hens have more space to move than battery hens. In 1983 Haris asked retail customers to compare the two systems with regard to productivity, health and hygiene. A relative majority thought productivity and hygiene to be better guaranteed in battery-keeping, whereas an absolute majority believed deep-litter-keeping to be better for animal health. Haris concluded, that people were more knowledgeable on these specific matters than in the general case.

EMNID (1998) looked at how well known were the following terms used to describe poultry-keeping systems: "battery/cage farming", "barn/perchery farming", "deep litter farming" and "free-range farming". 90% of the interviewees in Germany had heard about free-range-

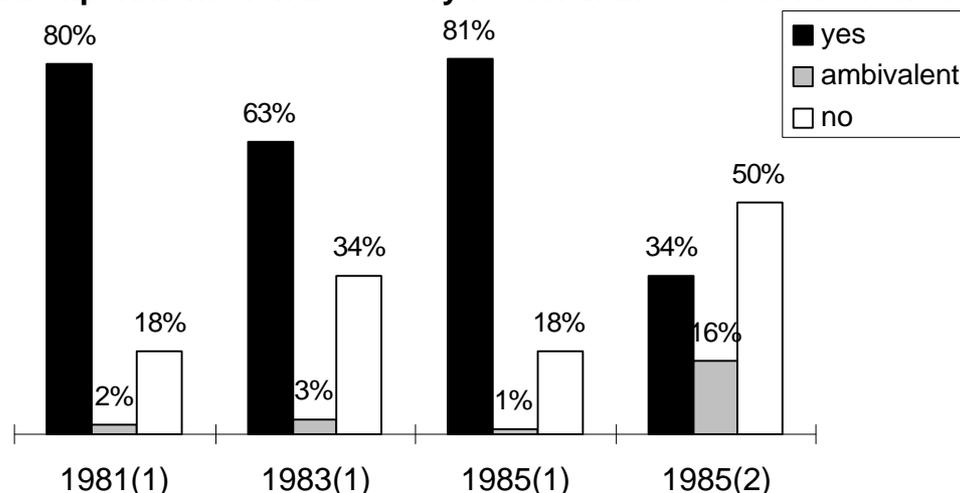
keeping, 78% about battery farming and 75% about deep litter farming. Perchery farming was less well known (30%). 28% of interviewees knew all four systems.

Whereas knowledge about the official terms is high, legally not regulated, but often used terms are not properly identified by most people: “Eier frisch vom Bauernhof” is a label used for battery eggs, yet only 4% of people knew it, whereas 63% believed it to be a label for free-range eggs. Only 4% knew that “Bauerneier” were battery eggs. Balsler (1994, p. 50) notes, that this lack of knowledge poses the problem that consumers actually buy battery eggs but believe to buy eggs from systems respecting high standards of animal welfare. This is a political problem. It also is a problem for practical research. Consumers will tend to overestimate the amount of products bought from appropriate keeping as stated in consumer surveys.

3.6 Animal testing

Animal welfare issues also arise in fields other than food production. Examples are leisure and sport and animal testing. Study of these fields should yield valuable insights into the nature of concerns about animal welfare. Given limited resources, I restrict myself to present some data on consumers acceptance of animal testing in Fig. 2.6.

Fig. 2.6: Animal experimentation necessary for scientific tests of medical drugs?



Sources: (1) Surveys by EMNID, data reported in: BUNDESVERBAND DER PHARMAZEUTISCHEN INDUSTRIE E.V. (BPI), Pro + Contra - Eine Beilage zum Thema Tierversuche. Wording of questions not stated in the source. (2) NOELLE-NEUMANN/KÖCHER, Allensbacher Jahrbuch der Demoskopie, Bd. 9, 1984/92, 1993, p. 934.

The data are puzzling: The EMNID-sample in 1985 (as well as in 1983 and 1981) indicates that a vast majority of people favoured animal testing, “if it is necessary”, while the sample reported in NOELLE-NEUMANN/KÖCHER for the same year suggests the opposite. The puzzle can only be partially resolved, since only the wording of the question posed by Allensbach is available to the authors:

“Two people talk about the use of animals to humans. Who expresses your opinion? (1.) We have to rear and kill animals to feed ourselves. Animals do otherwise definitely have to be respected and should not be misused for tests, not even in the medical sciences. (2) Since we rear animals for our nutrition, I also agree to use them for animal testing, because animal testing is useful to people, e.g. to better cure diseases.

EMNID probably put the emphasis on “*necessary tests*”, whereas Allensbach inquires into how acceptable *misuse* of animals is in testing. If this explains the conflicting results, complexity of attitudes needs to be accounted for in questionnaire design. Questionnaires need to be carefully tailored to the actual question of interest.

Some further findings on the topic are the following: According to the BPI³⁴ a third of those who reject testing when asked by EMNID, could be convinced not to ban it altogether, if otherwise all hopes for effective drugs against cancer or heart-attacks were said to be lost. The BPI further reports that 66% of the respondents do not believe animal tests could be completely substituted by other measures (16% thought so and 17% believed tests could partially be substituted).

4 Behaviour and market

4.1 General consumption of animal products

Meat consumption in Europe and Germany underwent dramatic changes during past centuries. Consumption of meat in Europe varied around 50 to 100 kilos per person and year in medieval times. Later, around 1800, average meat consumption in Germany was much lower (about 10 kilos per year and person) because a generally poor population could not afford more. Meat consumption trebled in the nineteenth century due mainly to large productivity gains in farming and industry and hence rising real incomes (ZMP-ZENTRALBERICHT, 1996, p. 3). The increase continued in the twentieth century as scientists discovered the value of animal proteins for humans and especially as incomes rose after the second world war.

³⁴ BPI is an organization with vested interests in animal testing.

FIGURE 3.1: CONSUMPTION OF MEAT AND EGGS

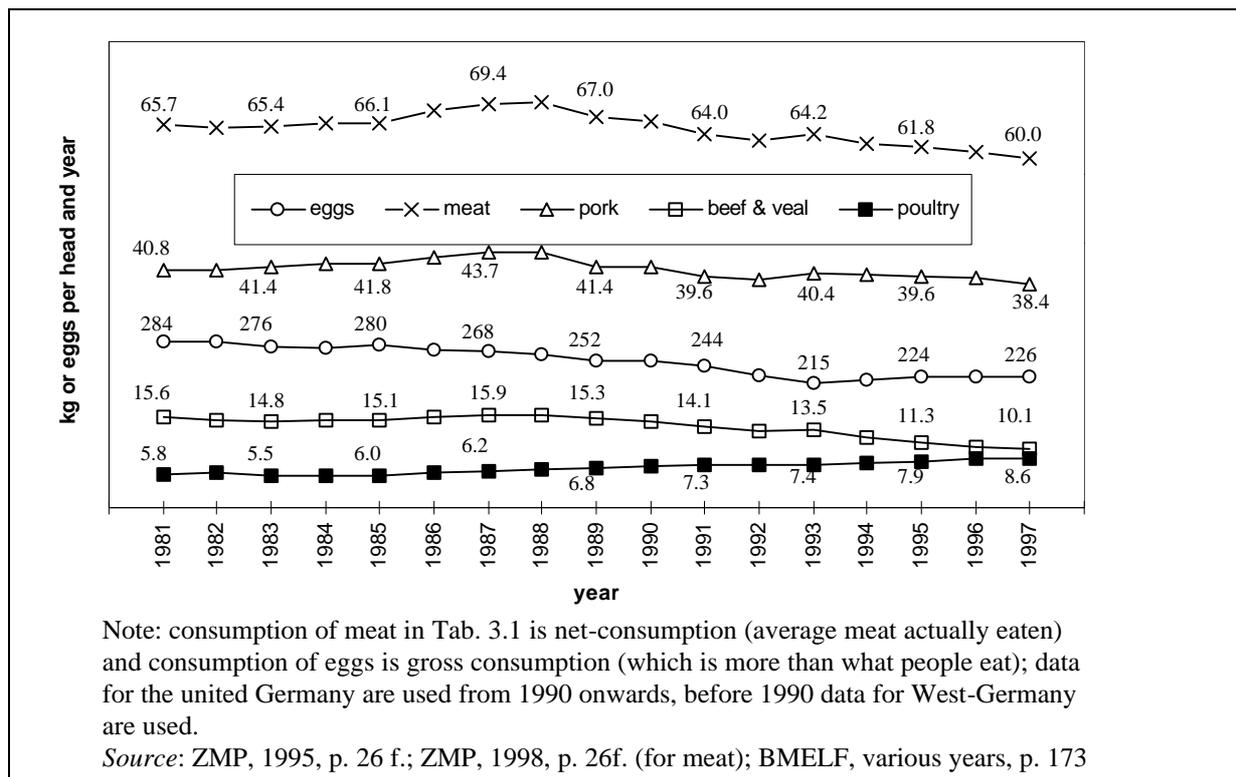


Figure 3.1 graphs the more recent consumption trends for eggs and the most important types of meat in Germany. Total meat consumption in Germany peaked in 1988 at 69.7 kilograms per person and year, when declining beef and pork consumption brought about a turnaround. In contrast to red meat, consumption of poultry increased over the past 15 years. In 1996 beef and veal accounted for 17.2% of meat consumption, pork for 64.4% and poultry for 13.7% (Wildner 1998, p. 30). Egg consumption reached saturation already in the seventies. Since 1993 a moderate increase has been recorded.

Lücke (1998, p. 447) points at rising sales of poultry and concludes that price, convenience properties and image (e.g. low fat content) as predictors of purchases are more important than altruistic motives like animal welfare or environmental impact.

Declining meat consumption is partly reflected in individuals stated past and intended future consumption changes. Therefore selected survey results for these questions are given in Tables 3.1 (a) and 3.1 (b).

TABLE 3.1 (A): STATED CHANGES IN MEAT CONSUMPTION (IN PERCENT)

Question: Do you eat ... meat than you used to eat in recent years?				
	1980 (n=1000)	1983 (n=700)	1986 (n=1000)	1992 (n=103)
more	15	8	9	2
the same amount of	70	64	68	31
less	15	27	23	67

Source: CMA, 1987, Fig. 15; MTC, 1983, p.67; Schmitz, 1993, p.639

TABLE 3.1 (B): BEHAVIOURAL INTENTIONS 1984 – 1989 – 1994

Reduced meat consumption	1984	1989	1994

intended?			
yes, already practised	56%	71%	79%
no	45%	29%	21%

Source: Alvensleben, 1994, p.148

4.2 Animal welfare concerns and consumption

Little is known about individual consumer's behaviour with regard to products respecting high standards of animal welfare in Germany. Attitudes have been better looked at.

We know of only three studies in German language, which to some degree use observational data for peoples behaviour towards aspects of animal welfare (HARIS, 1986; DIEKMANN; 1998; BADERTSCHER FAWAZ, JÖRIN, RIEDER, 1998). Two were conducted in Switzerland. Two obtained data via field experiments and one used panel data to some degree. The only German study by HARIS (1986) is discussed elsewhere in this paper.

Some very preliminary data are available from consumer surveys. In 1994 NIELSEN looked at peoples responses to the statement "I only buy meat from animals which have been appropriately kept". Responses were rather ambivalent.³⁵ A less demanding question was asked by FORSA in 1997: 74% then stated to have already bought foodstuffs from appropriate keeping, 11% said to intend to buy them in future. Only 9% did not want to buy them. BALSER (1994) emphasises that people's self-reported buying behaviour is very much exaggerated in a survey conducted by SAMPLE-INSTITUTE (1994). She suggests this to be due to misleading advertising information (especially for eggs and poultry), lack of relevant knowledge and social answering. Self-reported behaviour seems to be a bad predictor for actual behaviour.

Are attitudes about animal welfare relevant for purchase behaviour? ALVENSLEBEN (1997) looks at attitude-behaviour relations for meat. He evaluates a consumer survey of Kiel, 1994 (n= 388). 17 statements to be rated were included in the survey. A factor analysis was conducted which reduced the statements to two attitude dimensions (factors). The factor „preference“ comprised statements like „I like to eat meat“ (0.88³⁶). Statements related to an issues about animal welfare loaded most on the factor „confidence“: „I dislike that animals in our farms are held in bigger and bigger flocks“ (-0.49), „I think, newspapers and TV should report on our livestock production much more critically“ (-0.49), „Modern livestock production in big flocks is important to supply the population with meat at reasonable prices“ (0.46).³⁷ Self-reported consumption frequency was measured on a seven-step-scale from „never“ to „daily“. In a multiple regression analysis factor scores for „preference“ and „confidence“ were used as independent variables to predict the dependent variable „intensity of consumption“. Only 20% of the total explained variance was attributed to the factor „confidence“ and 80% to „preference“.

³⁵ NIELSEN, Fleischskandale: Reaktionen der Verbraucher, 1994, cited in MEYER-HULLMANN, 1996, p. 92.

³⁶ This and the following numbers in brackets are factor loadings for the respective question.

³⁷ The statement with the largest factor loading on „confidence“ was „I think people overact if worrying about polluted meat“ (0.65).

KAFKA/ALVENSLEBEN (1997) analyse data from a survey of Kiel in summer 1997 (n = 332). Statements related to animal welfare were not included in the construction of „concern“ but had most likely have loaded on it. They distinguish two types of behaviour „changes in meat consumption“ and „absolute frequency of meat consumption“. They find a clear impact of concern on changes in consumption but only a minor impact on the absolute frequency and doubt whether stated changes in consumption reflect actual behaviour.

FAWAZ/JÖRIN/RIEDER (1998) evaluate survey data for panel participants in Switzerland. They too conclude that attitudes on animal welfare have little impact on the absolute level of meat consumption. Attitudes have a comparatively larger impact on changes in meat consumption and on the decision to buy meat from appropriate keeping.

Some research in Germany has been conducted on environmental attitudes and behaviour. Researchers in this field are now beginning to deplore, that they hardly know enough about peoples actual behaviour. Various researchers see this as a future challenge and believe it to promise substantial rewards (Schupp/Wagner, 1998). Observational data are generally seen as the preferred choice. They have the advantage not to be distorted by social answering and limited memory. They also avoid the drawback of self-reported data, which are likely to be biased towards reducing discrepancies between (stated) opinions and behaviour.

Data on consumption exist for various animal products in Germany but not for products respecting high levels of animal welfare. The nineties saw a decline in net-consumption of pork, beef, egg and general meat. This trend was opposed by an increase in poultry consumption. Saturation is a common in the German meat sector.

One area of consumer behaviour has received more attention in the available literature on consumer concerns about animal welfare. It is that of people's willingness to pay, to be looked at next.

4.3 Willingness to pay

Higher prices are one very important reason not to buy products marketed as respecting high standards of animal welfare in production. People generally state to be willing to pay more for these products, but actual buying behaviour is often opposed to this. A major methodological problem is to measure stated willingness to pay in a way which reflects actual buying behaviour. Therefore we will discuss common measurement methods in section 3.2.1 and will afterwards summarise empirical results relevant in our context in sections 3.2.1 to 3.2.4.

Willingness to pay is understood to be the maximum amount people are prepared to pay in order to e.g. secure high standards of animal welfare to a product. Studies suggest that the stated willingness to pay does not sum up to people's total income or even wealth (WILDNER, 1998, p. 33). Whereas willingness to pay is defined for a given quantity and product properties, it is for marketing purposes of interest to obtain some idea of how people trade off price, quantity and different realisations of product properties. This can be done using the concept of elasticity. The elasticity of demand for a product quantity or property with respect to prize is defined as the relative change of demand for quantity/property per relative change of the price. The value of this elasticity can change with the level of price and quantity/degree of property. The general data are then called price response data.

4.3.1 Data generating methods

Data on willingness to pay for animal welfare are often collected by *directly asking consumers*. This procedure does not yield high validity for the following reasons: (a) Statements are distorted by an induced atypical price consciousness. (b) Trade-offs with other utility aspects are largely neglected, although these are important in shopping situations. (c) The variable quantity case can not be easily or adequately dealt with. (d) Generally interviewees are not asked to behave as stated, there is no incentive to minimise discrepancies between stated and practised behaviour. (e) Answers to closed-ended questions might simply reflect intention to make a good impression. (f) Results will vary with the type of question and interview technique. (g) Finally use of direct questioning for innovative products has been questioned. Therefore this approach has to be used with caution, best in a multi-method approach to check-cross validity.

Conjoint-analysis puts people in a more realistic position, as they have to value a whole set of properties at once. Price response data can then indirectly be inferred. The approach therefore shows good validity. Yet certain methodological problems are unresolved and reliability therefore uncertain. Conjoint-measurement can be used for both established and new products.

Expert interviews are a low cost alternative with acceptable validity and reliability. When experts are asked in successive rounds, to first give an estimate and then correct it on the basis of estimates, this approach is called “Delphi technique”. Expert interviews can be used for both established and new products and are especially good for the latter.

Price-experiments can be used either in field or laboratory. Field experiments are rather costly. Compared to laboratory experiments they have lower internal but higher external validity. Generally experiments yield high validity and can be used for both established and new products.

Finally *market and behavioural data* should naturally reflect peoples willingness to pay in real situations. The validity is therefore high, but the reliability can be low. With respect to animal welfare no exact market data are reported. A further problem might be that prices in the market do not vary enough to allow inferences about large price changes.

4.3.2 Factors affecting willingness to pay

This section reviews whether saturation, involvement and positive attitude towards products with animal welfare influence willingness to pay.

One hypotheses about willingness to pay for animal welfare is that it increases as people get more *saturated*. This hypotheses can be evaluated by comparing, how willing to pay people are for products respecting high animal in the new and old counties of Germany. Several German surveys looked at this question. In sum, people in the new counties were less willing to pay more for animal welfare than people in the old counties since unification. Evidence also suggests that the difference between the two regions is narrowing down. Both of these findings support the saturation hypothesis. The data are presented by WILDNER (1998, pp. 36 - 38).

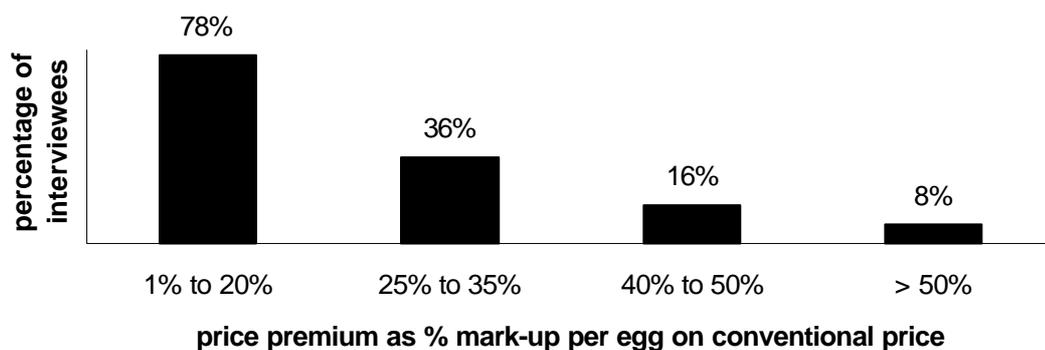
The hypothesis is also supported by differing willingness to pay for people with different incomes: 63% of interviewees in a representative sample of the German population with an income above DM 5000,- stated to be willing to pay 10-20% more for food with high animal welfare standards. This was so only for 48% of people with an income below DM 2500,- (SAMPLE-INSTITUTE, cited in BALSER, 1994, p. 44). Different surveys and approaches came up with similar results (BAADE, 1988, p. 161; VOLLBEHR, 1990, p. 61; ALVENSLEBEN, SCHLEYERBACH, 1994).

Willingness to pay for animal welfare is also higher for people with higher formal education. But the most important difference in stated willingness was detected between consumers and non-consumers of organic produce. 64% of interviewees belonging to the first group as opposed to 42% of the latter group stated to be willing to pay 10-20% more. Similarly nearly 50% of interviewed non-consumers of organic produce agreed to the statement "Appropriate husbandry would be good, but who can pay it?". Only 34% of consumers of organic produce did so (BALSER, 1994, p. 43 - 44). Interviewed people who changed their consumption behaviour as a consequence of BSE stated to be more willing to pay for higher degrees of animal welfare in meat production. The difference was tested to be statistically significant at the 0.1% level (SCHULZ, 1997, p. 165). A survey conducted in 1997 with people, who had already bought products from appropriate keeping found 88% of interviewees to accept higher prices for these products. All this suggests that consumers with a higher degree of *involvement* towards food consumption and a *positive attitude* towards products respecting high standards of animal welfare have a higher willingness to pay.

4.3.3 Willingness to pay for eggs

Figure 3.2.3(a) and 3.2.3(b) graph results for price response data obtained in consumer surveys by direct questioning. These are cumulated with decreasing mark-ups on conventional price.³⁸ One can easily imagine a continuous price-response function to produce these data.³⁹

Fig. 12: Stated price premia: free-range eggs



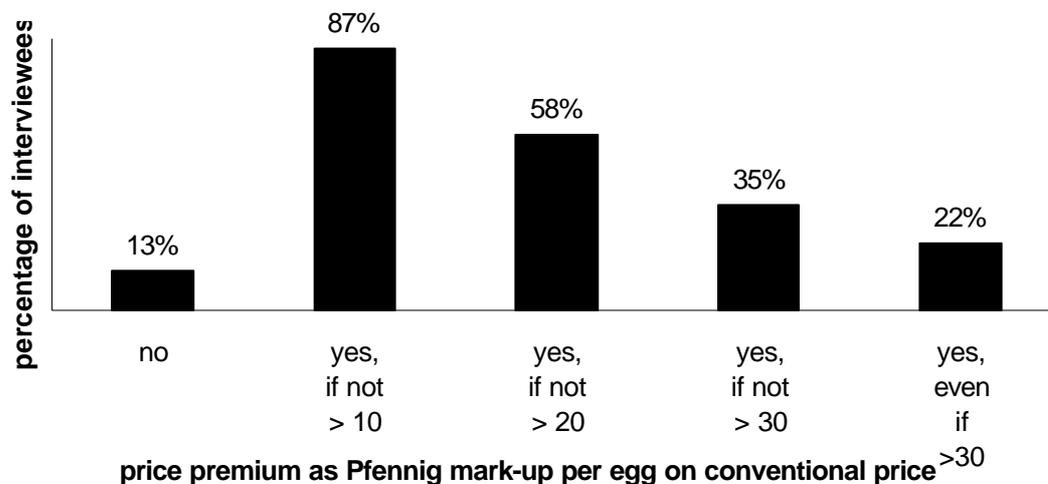
Source: EMNID 1998, n = 1000

“VgtM” is an abbreviation for “Verein gegen tierquälerische Massentierhaltung” which translates as “charity against cruel factory farming”. A careful inspection of both Fig. 3.2.3(a) and Fig. 3.2.3(b) suggests that people expressed a higher willingness to pay for “VgtM”-certified eggs than for ordinary free-range eggs. This is so because 30 Pfennig per egg in Fig. 3.2.3(b) corresponds to about 100% mark up in Fig. 12. While a significant proportion of interviewees stated to be willing to pay more than 100% more for “VgtM”-certified eggs, only very few people would do that for ordinary free-range eggs.

Why is this so? First of all, the two samples are not directly comparable due to differing sample spaces. But this is probably not all of the explanation. LEHRSTUHL FÜR AGRARMARKETING KIEL found people to be more hesitant to accept higher prices for free-range eggs as well (compare WILDNER, 1998, p. 35). It might be that “VgtM”-certified is simply right on and therefore induces people to social answering. Finally people might be more willing to pay due to the high credibility of “VgtM” to assure high standards of animal welfare.

³⁸ For instance, the category “> 50%” in Fig. 2.3.2(a) contains all people, who are willing to pay more than 50% mark-up on the ordinary price of 25-30 Pfennigs/egg in 1998. The category “40% to 50%” contains all people prepared to pay 40% to 50% more plus all those in the category “> 50%”. The category “25% to 35%” thus also contains people in the previous two categories.

³⁹ Due to cumulation the functions are necessarily non-increasing.

Fig. 13: Stated price premia: “VgtM”-certified eggs

Source: unpublished results of INSTITUT FÜR AGRARÖKONOMIE, LEHRSTUHL FÜR AGRARMARKETING KIEL (1996), n = 197, sample of Kiel, summer 1996

HARIS (1986) asked people a very general question about price-willingness: “*To avoid battery keeping, one should be willing to pay a little more for deep litter eggs*”. 78% of interviewees agreed in 1983, which reflects a high stated willingness to pay. Quite in contrast only 38% bought deep litter eggs and 62% battery eggs, i.e. only half the people followed their stated willingness to pay. This was probably partly due to the relatively high price mark up of 6 Pfennigs/egg and reveals a drawback of the question used, which did not lead to quantifiable willingness to pay. Furthermore, answers were probably distorted for social reasons and price was not the only influence on the decision to buy eggs. Finally, 12 % of purchasers were not aware of the choice situation. According to the compatibility principle a good point about HARIS’ question is that he inquired into something directly relevant in the purchase situation.

4.3.4 Price versus conscience

Price and consumer concerns about animal welfare are two determinants of purchasing behaviour for „animal-friendly“ products. Which one is more important? Evidence presented in section 2.3.5 suggests that the keeping system is more important than the price, since the absolute amount of money spend on eggs is rather small. This would suggest that people are faced with a low cost situation in which consumers concerns normally are important.

A field experiment carried out in Switzerland adds an important finding about how to best influence people’s behaviour: demand for free-range eggs doubled after price was reduced to the level of deep litter eggs. Appeals to conscience brought about demand increases of only 10 - 20 % (DIEKMANN, 1998, S. 68). Thus price seems central after all and the perception of the keeping-system does not only appeal to conscience.

4.4 Meat quality programmes

Due to lack of data, it is not possible to quantify market size and market structure for "animal friendly" products from the demand side of consumers. It is easier to assess the market from the supply side of producers. But even then, only few data are available.

There are a number of meat quality assurance programmes for beef and pork in Germany. Some of these include criteria related to aspects of animal welfare like "appropriate keeping", "careful transport", "careful slaughter", "appropriate feeding", "no medical drugs or fatteners". According to BUND (1998), the most demanding of these for conventional, i.e. not ecologically produced meat is the certified meat quality programme of CMA (Central Marketing for Agriculture)⁴⁰ It was set up in 1990 for pork and 1992 for beef. Careful transport and slaughter and no medical drugs apply to all brands with this certificate. Yet, BUND (1998) criticises that this is what the German Animal Welfare Act demands anyway. Not included are more far-reaching demands like not to keep animals on fully slatted floors, limit flock size or not use fatteners. Two brands which carry the certificate do more than demanded by the certificate, notably meat of "Bäuerliche Erzeugergemeinschaft Schwäbisch-Hall (BES)" and "Thönes Natur".

Ralf-Uwe Beck of BUND, referring to a survey of 2500 supermarkets and butchers, estimates a maximum of 5% of conventional beef and 10% of conventional pork in Germany to carry the CMA certificate. He emphasises that most of it is intensively produced (factory farming) and cannot be said to be produced respecting high standards of animal welfare. A further result of the survey by BUND is that against some claims of quality programmes, 90% of beef and pork in Germany cannot be followed back to its origin. Therefore, it is not possible to test whether stated claims are correct.

BUND (1998) concludes that ecologically produced meat certified with the label of AGÖL assures better standards of animal welfare and also allows to find out about meat origin. Independent of these, very high animal welfare standards are assured by "Neuland" and good standards by brands like "Ökobund", "WFG Franki", "Reiter", "FairLand", "Waldecker Weideschwein", "Limousin Herdbuchzucht" and "Marschenrind". The latter three, however, do not have any external controls.

BUND (1998) criticises, that the large amount of quality labels and certificates confuses the consumer. Advertising gives the impression that most meat is produced up to high standards also with respect to animal welfare. This is seen as an obstacle for consumer decision making

4.5 Information material for consumers

Various organisations produce information material for consumers on issues of animal welfare. An overview and content analysis of the material available in 1994 is given in BALSER (1994). Her findings are summarised in this section.

⁴⁰ We refer to the programme "German quality meat from controlled rearing", which mustn't be mixed up with the certificate "Branded quality from Germany – always neutrally controlled". While both certificates are authorized by CMA, there are significant differences. The latter only looks at the quality of the final product, while the former also includes husbandry practices, feeding and additives.

BALSER lists fifty useful informants. Not among them are food consultants or government departments, who did not send in relevant material when asked.⁴¹ Most of the material was provided in the form of information sheets or leaflets. These were either meant for short- or long-term use. Rarely used booklets covered aspects of animal husbandry like cage-keeping, veal rearing or animal transport. The abbatoir Thönes is the only organisation to publish a regular journal, which reports on efforts to further appropriate husbandry. Not available in 1994 was a comprehensive booklet about all aspects of appropriate husbandry for consumers. Little education material was written for children⁴² and no translations into other languages were available for people not capable of the German language.

BALSER distinguishes commercial informants (meat-quality assurance programmes, abattoirs, wholesalers, retailers, farmers and producer organisations), producer-independent informants (information services, animal protection societies, consumer associations) and a mixture between the two (e.g. producer-consumer-initiatives).

Producers generally delegated publishing of information materials to *producer organisations*. Advertising and information work for meat programmes was done by the CMA. Farmers assuring high standards of animal welfare in food production aimed to clarify differences from ordinary producers and to justify higher prices. The relatively brief information material was used as a means of advertising. Consumers were addressed emotionally, segments targeted included those distrusting food safety, animal protectionists, environmentally conscious consumers and hedonists. The material conveyed the impression of a good background knowledge of authors but a dominating commercial objective was obvious and diminished trust. There was a mismatch between stated and realised animal welfare for a lot of meat quality programmes. While animal welfare was referred to in advertising, there was a lack of actual guidelines and controls to assure that promises were met. Balsler judged the information work of Thönes-Naturverbund to be best.

Animal protection societies and especially the „Society against cruel factory farming“ (*VgtM*⁴³) provided most material. In addition to farm animals used in food production, issues like animal testing, fur production and others were covered. Animal protectionists informed consumers primarily about problematic aspects of intensive livestock farming and used pictures extensively. Examples of better practices were rarely included. The booklets were well written and often gave a comprehensive and well researched introduction into the relevant questions. On the other hand leaflets sometimes lacked adequate explanations of catchwords and negative pictures. Appeals were made on the consumers to promote animal welfare in everyday life. Apart from a general call for lower consumption of meat and eggs, specific advice for shopping opportunities was provided and thus the responsibility of consumers clarified.

⁴¹ The government ministry for food, agriculture and forests has a special department for animal protection which issues the „Government's report on animal protection“ and other material. In March 1997 it published a booklet titled „Tierschutz geht alle an“ (animal protection for everybody). Topics discussed include legal and political framework of animal protection, farm animals, pets, animal transport and animal testing.

⁴² An exception were the materials for school by Thönes-Naturverbund.

⁴³ Verein gegen tierquälerische Massentierhaltung

Consumer associations published a comprehensive booklet on meat⁴⁴ and only few leaflets. Otherwise they used material from animal protection societies or passed on suitable addresses. Overall they paid little attention to animal welfare as they were primarily concerned with adverse effects of food for consumers. AID and IMA are the two agricultural *information services* in Germany. AID only briefly touched appropriate husbandry in some booklets while IMA published a leaflet and a booklet on animal protection in agriculture.⁴⁵ Balser judged the information material of AID and IMA as insufficient and that of IMA even as problematic. Materials were mostly meant for farmers.

Complexity of animal welfare issues poses a common problem for producer-independent informants. Some leaflets accordingly contained false statements (Balser, 1994, p. 30). Often the problem is evaded by contracting competent authors and scientists for the production of relevant material, which also assured high trustworthiness.

4.6 Current national policy issues

A major revision of the German Animal Welfare Act has been enacted in 1987. Revisions have been discussed and enacted since. The new law currently in place is from 1993.

The Social Democrats and the Greens were the main proponents of better animal protection laws while in opposition. They proposed shorter transport duration for live animals and prohibition of the battery-keeping system for hens and even had a draft new animal protection law. The coalition treaty between the two parties which now form the government naturally is naturally more vague and includes aspects like animal protection is „Staatsziel“ and general promotion of appropriate husbandry (Agra-Europe 44/98). Societies for the protection of animals demand the right to sue from the new government.

The government publishes a report on animal protection every other year. The last one was published in 1997. Authors comment that public interest from 1995 to 1997 centred on transport for slaughter, initiatives for amendments to the animal protection law and battery-keeping of hens (BMELF, 1997).

What about the policy of major retailers in Germany? Edeka has about 2500 shops in Germany has been one of the first retailers to have certified-quality meat on sale. Some shops offer ecological meat. Most shops of Edeka still sell meat from factory farming. Rewe has about 4500 shops of which about 130 sell the brand „Füllhorn“ which is ecologically produced meat respecting high standards of animal welfare. BUND (1998) mentions no other retailers that sell meat from appropriate keeping better than legally prescribed. Meat is only one product for which animal welfare is relevant. Policies about other products like milk, eggs, tuna or cosmetics could not be looked at.

With regard to specific animal species and products, egg production systems have been a major concern to consumers, to a lesser degree poultry meat production. Veal, while quantitatively relatively unimportant, has received a lot of attention in the eighties, but less these days. Milk

⁴⁴ A new booklet on meat-quality programmes has been published in 1998. The evaluation criteria used include appropriate keeping, appropriate transport and careful slaughter. A summary is given in ALSFELD (1998).

⁴⁵ The catalogue of outdoor posters „Der Grüne Pfad“ published by IMA in 1998 contains some posters which present current husbandry practices in a positive light, also with respect to animal welfare.

might be seen as an area relatively untouched by consumer concerns yet. But there seems to be a potential for improvement. Beef and pork/bacon production has received a lot of consumers attention through issues like PSE, swine fever and BSE. Several quality assurance programmes are in place to address animal welfare related aspects in this area.

Major public concerns focus on factory farming and keeping animals. Transport, slaughtering and pre-slaughter treatment have largely been neglected in consumer surveys. However, an analysis of themes covered in the German journal “Die Fleischwirtschaft” and “Die Fleischerei” showed, that these issues are being discussed.

5 Proposed theoretical approach

In selecting a theoretical approach it is useful to think about what purpose the model should serve. Is the model expected to be used for policy recommendations on how governments should or should not address consumers or producers? Or should the emphasis be more on predicting consumer behaviour as to give farmers, food producers and retailers a better idea of what they can expect to result from their production and marketing activities? Are consumers or non-consumers to be considered? Which consumers are of primary interest? Is the model intended to be descriptive or normative? Which behaviour of consumers is of interest (e.g. consumption, non-consumption, change in consumption of relevant products, consumption patterns, circumstances etc.)? Different needs will determine for instance whether models explaining attitude change or consumption behaviour are looked at. Attitude change models are covered e.g. by SIX/SCHÄFER (1985).

Marketing literature, psychology, sociology, anthropology and economics have all contributed towards a better understanding and explanation of consumer behaviour. Economics analyses rational behaviour. The neo-classical approach is also found in models like those of Ajzen and Fishbein, theory of planned and reasoned action. Some theories of consumer behaviour used in marketing allow for non-rational behaviour. BÄNSCH (1995); KROEBER-RIEL/WEINBERG (1996), and EAST (1997) give good introductions. KROEBER-RIEL/WEINBERG (1996) suggest that partial-models of consumer behaviour instead of total models be developed. These have the disadvantage of not taking into account all factors and are therefore applicable only for specific situations. But under these; they yield more valid explanations.

There have been lots of studies on the attitude-behaviour-relationship. A narrative review of seven meta-analysis of these studies is presented by SIX/ECKES (1996). They conclude, that against much criticism of recent years, the attitude concept is an important tool for predicting behaviour. They identify what makes up bad studies in this field. One point they make is, that psychologists often came up with a higher correlation between attitudes and behaviour in their models than ordinary market researchers. Furthermore they suggest, to pay more attention towards the concepts of “behaviour”, “action”, “context”, “situation”, “environment”, “script”, “episode” and “behaviour setting”.

Also, the question of interest and the model have ramifications for the sort of measurement techniques and evaluation methods used. These need to be respected.

6 Appendix: Technical presentation of surveys and studies

This chapter gives a presentation of consumer surveys referred to throughout the paper. Surveys are put first into an alphabetical order and then ordered by years. Naturally, presentations will be restricted to those information readily accessible to the authors.

6.1.1.1 A

Many data are gathered from the published or unpublished work of ALVENSLEBEN ea.. Throughout the text more recent unpublished data of Alvensleben ea. are often referred to as „LEHRSTUHL FÜR AGRARMARKETING KIEL“.

ALTMANN / ALVENSLEBEN (1986) drew a sample of $n = 2000$ from the directories⁴⁶ of Hannover ($n = 1508$), Lingen and Meppen ($n = 492$). The survey was conducted in July 1984 and looked at consumer attitudes towards organically produced food. Hannover is a large German city, Lingen and Meppen are smaller ones. The population in Hannover is mostly Protestant and in Meppen or Lingen mostly catholic. Protestants are thought to be more progressive and Catholics conservative. 44% of the original random sample gave interviews. The others were replaced by people, sought to be like those dropped out with respect to location, gender and age. Altmann/Alvensleben (1986) note, that those not chosen at random were more interested in the subject. They trusted conventional food less and consumed more organically produced food.

ALVENSLEBEN ea. (1973) conducted a survey of households in Göttingen in the summer term 1973. A sample of $n = 150$ people was drawn at random from the directory of Göttingen, $n = 89$ of these were interviewed, the rest dropped out. The survey intended to inquire into factors affecting direct sale of eggs and potatoes.

ALVENSLEBEN / WERNER (1980) inquire into the image of agriculture for the urban population. A random sample of $n = 240$ was drawn from directory of Hannover and interviewed in June 1980.

ALVENSLEBEN / VIERHEILIG (1985) inquire into very much the same issue and drew a random sample of $n = 247$ from the directory of Hannover. Samples from directories only reach adults.

ALVENSLEBEN / STEFFENS (1988) look at consumers perspective of factory farming and hormones used in husbandry. They conducted a telephone survey, the sample of $n = 422$ was drawn from the telephone directory of Hannover.

ALVENSLEBEN (1990) summarises results of a survey of $n = 400$ conducted at both Kiel ($n = 249$) and Rostock ($n = 151$). The subject of the survey is „the importance of environmental motives for food purchase“.

ALVENSLEBEN / SCHLEYERBACH (1994) use data of a survey conducted in June/July 1993 in Kiel ($n = 553$), some results from a survey of $n = 108$ conducted in Kiel and Ostbrandenburg in summer 1992 and a survey of $n = 553$ visitors of the „Green week of Berlin“.

ALVENSLEBEN (1994) primarily reports on a representative survey in Kiel ($n = 388$) in summer 1994.

⁴⁶ We distinguish between directories and telephone directories.

ALVENSLEBEN/MAHLAU (1996) interview n = 308 people, selected at Kiel in 1995. The subject is „people’s image of agriculture“ as in 1980 and 1985. Interviewers for these surveys were mostly students.

6.1.1.2 B

BAADE (1988) looks at consumer behaviour towards alternative food. She interviewed 300 customers of organic retailers in Munich. The sample was drawn on the basis of quotas. Quotas are determined by prior investigation into the structure of customers under consideration.

BALLING (1991) investigates into determinants of perceived food quality and employs an closed-ended question. He interviewed n = 220 people (two supermarkets at Stuttgart, n = 60 each, with meat counter; one supermarket with self-service at Bielefeld, n = 100; although not presented in this paper, Balling differentiates results accordingly).

BBE (1997) asked experts, retailers and butchers about their beliefs about the future development of the meat image. No details about the survey are mentioned in the Source (Die Fleischerei, 4/1997, p. 18).

BECKER ea. (1996) interviewed n = 806 customers of butcheries in Hamburg in 1994. They inquired into attitudes and behaviour about meat and meat products. The sample was drawn at both ordinary butcheries (n = 335) and at butcheries selling „Neuland“ meat (n = 471), a brand marketed as respecting high standards of animal welfare in production. Of the latter customers, n = 227 actually bought „Neuland“-meat.

6.1.1.3 D

DIEKMANN (1998) reports on a field-experiment conducted by himself, which looked at whether price incentives or appeals to conscience were more effective to influence buying behaviour of eggs. He gives no further details about the set-up of the experiment.

6.1.1.4 E

Except for covering the whole area of West-Germany, no details about the surveys by EMNID (1981), (1983) and (1985) are provided in the source of Bundesverband der Pharmazeutischen Industrie e.V. „Pro + Contra - Eine Beilage zum Thema Tierversuche“.

EMNID (1982), (1992) and (1997) conducted national surveys employing standardised interviews with German adult population older than 14. The East was included in 1992 and 1997. In 1982 the sample size was 2036, in 1992 n = 2571 (n = 2058 for the West, n = 513 for the East) and in 1997 n = 1919 (n = 1530 for the West, n = 389 for the East). Interviews were conducted in January 1982, September 23rd to October 14th 1992 and September 5th to 15th 1997. Emnid presents aggregate results. Data are also available by region (East/West, Nielsen-areas), size of parish, gender, age group, vocation, employed/unemployed and formal education. In West-Germany sample selection followed the ADM-Master-Sample, which is a commonly used three step selection procedure. In a first step constituencies as sampling points were selected. In the East similar sampling points were obtained. Secondly, households within the sampling points were selected by the random-route procedure. Finally individuals were randomly chosen. Interviewers were asked to follow guidelines.

Commissioned by the „Eurogroup for Animal Welfare“ and the „Deutsche Tierschutzbund“ EMNID (1998) conducted a further survey to inquire into attitudes and knowledge about eggs and egg production. Results are available by gender, age, household net-income, buyers and non-buyers of eggs, given answers to questions in the survey, existence of children, marital status, working or not, regions (North, West, East, South).

6.1.1.5 F

No details about the surveys conducted by FORSA (1994/5) are given in the sources (Stern 46/95 p. 110 and Fleischerei 9/1994, p. 92).

6.1.1.6 G

ROTTKA, THEFELD (1984) refer to personal communication and cite a survey of GfK NÜRNBERG which was conducted in summer 1983. Sample size is $n = 2074$. The sample is said to be representative for the former Federal Republic of Germany (West-Germany) and people aged 16 to 69.

6.1.1.7 H

HALK (1990) conducted 17 focus group discussions on the subject of distrust of food from March to May 1990 (total sample size $n = 85$) and from February to April 1991 ($n = 80$). Participants knew each other beforehand (except in one group) and discussions benefit from people having similar interests and sociodemographic characteristics.⁴⁷ In 1990 only individuals with a responsible position in a household participated in the discussions. Since women occupy most of the responsible positions in households, mostly women groups were contacted. In 1991 only groups which were involved in voluntary activity in the areas of the environment, health and ethics were selected.⁴⁸ Group sizes varied from 6 to 15 people. Selection of individuals and groups was not at random. Discussions took place in 12 different cities in West-Germany, mainly in Bavaria.

HARIS (1986) set up an experimental shopping situation in 1982 and 1983 at seven food retailer shops. Two of the shops were situated in major German cities, one in a rural suburb and four in smaller towns. The structure of customers differed. The set up required all eggs to be removed from the shop except for battery eggs and deep litter eggs. These were put into the same shelf as always and both types of eggs were packaged into lots of 10. Size, dirt and packaging were the same for both. A sign was visibly put up to tell the difference between the eggs and their prices. Prices were fixed by the shop keepers. Compared to deep litter eggs, battery eggs were about 6 Pfennigs cheaper per egg. Interviews were conducted by trained interviewers. $N = 303$ egg purchasers were interviewed, 182 in 1982 and 121 in 1983. Interviewers watched the customers. Once these put the eggs into their trolley, they were interviewed. Almost none of the customers refused to be interviewed. Interviews were conducted on three days a week in 1982 and on two days a week in 1983 - for three or two successive weeks. The days and times of the days changed each week.

⁴⁷ The problem that a large part of participants does not participate in the discussion is substantially weaker in homogeneous groups (Pollock, 1955, p. 435, cited in Halk, 1993, p. 74).

⁴⁸ According to Salcher (1978, p. 56, cited in Halk, 1993, p. 74), a fundamental factor to be considered for the selection of people for focus groups is that they should in a distinct way be connected with the issue at question.

In her master thesis HEILMEIER (1992) empirically compared consumer behaviour for ordinary and organically produced meat and sausages. The survey was conducted from September 14th to October 10th 1992. The first two weeks at an ecological retailer in Landsham and butchery „Huber“ in Kirchheim, the remaining two weeks at the ecological retailer „Biomarkt“ and the butchery „Frank“ in Gräfelfing. The towns were situated in Southern Germany. A sample of $n = 174$ was drawn, 60% in Landsham, Kirchheim and 40% in Gräfelfing. It was equally divided between butchereries and retailers selling ordinary and ecologically produced meat. Interviews were conducted with a laptop computer which was centrally placed on a table opposite the counter and raises interest of customers. Interviews with purchasers of organic meat last an average 18 minutes and interviews with purchasers of ordinary meat 14 minutes. This turns out to be helpful since ordinary shoppers were generally less patient and interested. The percentage of individuals who refused to participate in the interviews is twice as large for purchasers of ordinary compared to organically produced meat. Frequently given reasons for refusal are lack of interest and general distrust of interviews.

HESS (1991) conducted a pilot survey with $n = 420$ meat purchasers in a retailer shop in East-Westfalia from March 6th to 11th 1989 (daily). The amount of interviewer time spend in the shop at a given time of the day reflected the number of customers in the shop. The interview period was chosen not to be near any bank holidays, which would influence consumption patterns. Since finally only few interviews were refused, the sample can be expected to represent the structure of customers at this retailer. Compared to the German population, women aged 30 to 39 and people of larger families (3 to 4 members) are overrepresented. Men over 60 and Singles are underrepresented. Both differences are statistically significant at an error level (of the first kind) of 5%. Two brands of pork were on sale in the shop: brand A was marketed as from controlled rearing with special feeding and good sensory qualities. The price per kilo was up to DM 2.50 above that of brand B. Brand B was marketed as „high quality pork“ with valuable nutrients and vitamins. The aim of the survey was to assess, how many consumers would buy the high priced quality meat A in this situation.

HOFMANN / SOMMERER (1997) look at what is generally understood as „meat quality“, attitudes towards meat consumption and purchasing habits. They interviewed a sample of $n = 202$, consisting of 57% women and 43% men. The sample was drawn in the region of Bayreuth in summer 1995 at three different places: in the non-public area of a supermarket, around the shops of an ordinary and ecological butcher.

6.1.1.8 I

INFRATEST (1973) is a nationwide (West-Germany) survey quoted in ALVENSLEBEN / WERNER (1980). Further details are not available from the source.

6.1.1.9 K

KÜHNLE/MÜHLBAUER (1992) look at attitudes about meat and related consumption patterns. They interview $n = 715$ young people aged 14 to 28 in December 1991. They are thought to be an important group for predicting future meat consumption. Results about vegetarianism and cutting down on meat are published in Die Fleischerei 7/1992, pp. 710 - 712. Attitudes about factory farming, associations about ecologically produced food and sources of information are published in Die Fleischerei 8/1992, pp. 792 - 793.

KÜNZNER (1989) interviewed n = 167 people who were in charge of a household in Freising (Southern Germany). The study looks at what causes consumer distrust of food.

6.1.1.10 L

LEHRSTUHL FÜR AGRARMARKETING KIEL (1989) and (1994) are part of a series of consumer surveys conducted in 1984, 1989, 1994 to look at purchase behaviour for ecologically produced food (Fricke, 1996, pp. 20 - 22). This series will be continued. The fundamental set up of the survey of 1984 is described under ALTMANN / ALVENSLEBEN (1986) in this chapter. It was basically maintained for 1989 and 1994. Thus time comparisons and cohort analysis are facilitated, as these require a constant survey design, constant time intervals and constant sample spaces (towns, cities, in this case Hannover, Lingen and Meppen). In 1989 45% of the sample of 1984 was again interviewed (panel). Missing people were replaced according to fixed quotas. The panel showed to be biased towards highly interested people with high consumption of organically produced meat. Therefore in 1994 a new random sample was drawn from the official directories. The total size of the sample was maintained at about n = 2000 throughout the years. Results are extensively analysed in Fricke (1996) except for some of the data presented in this paper. Fricke also published the questionnaire used for 1994 (Fricke, 1996, pp. 322 - 330).

LEHRSTUHL FÜR AGRARMARKETING KIEL(1993) uses the data of the survey conducted in June/July 1993 in Kiel (n = 533). These are the same data as for the survey in Kiel which is referred to in ALVENSLEBEN / SCHLEYERBACH (1994).

LEHRSTUHL FÜR AGRARMARKETING KIEL (1996) uses unpublished data of a survey conducted in summer 1996 in Kiel. The total survey sample of n = 387 people was drawn at random from the directory of Kiel. People who refused to be interviewed were replaced with individuals in the same family, house, street and the surroundings. The task of the survey was to inquire into what role ethical motives played for the purchase of food products. The sample was divided into two subsamples with different questionnaires: n = 193 for the subject of „appropriate husbandry“ and n = 194 for the subject of „fair trade“. Throughout this paper we indicate the sample size to clarify whether the whole sample or a subsample is used. The published results of this survey are found in ZIEHLBERG / ALVENSLEBEN (1998).

6.1.1.11 M

MTC (1982) is a qualitative analysis of motivations which relate to meat and sausages. The aim is to find possible causes for the decline of meat consumption in 1981/1982. In a first step 30 face-to-face explorations were conducted by psychologists in major cities in the North, West and South of Germany in order to find relevant barriers to meat consumption. Whereas the subject of explorations was given, psychologists were free to interfere and choose wording and order of questions. This step was conducted in week 27. and 28. 1982. In a second step 300 meat eating women aged 25 to 55 were interviewed. Wording and order of the questions was given and psychometric and projective methods partly included. The sample was drawn from the West-German area with quotas. Interviews took place in the 30. to 34. week in 1982. The authors *summarise results* as follows: 1. Many housewives need to buy meat price-consciously, while price for meat rises. 2. Unnatural and inappropriate methods for meat production lead to perceived lower quality and taste and fear of health hazards. 3. Simple and cheap meat dishes are replaced by lighter non-meat food.

MTC (1983) conducted a second quantitative survey from October to November 1983. The sample consists of women aged 25 to 69 and was drawn respecting quotas of age, marital status, vocation, size of parish and county. Urban areas of major cities were excluded. Sample

size is 700. While the study in 1982 primarily focused on motivations and attitudes, the study in 1983 focused primarily on changes in meat consumption and consumption patterns.

6.1.1.12 N

NIELSEN (1994) commissioned a representative German consumer survey on the impact of meat scandals. The survey was conducted by the IFAK Institute in May/June 1994. N = 1711 individuals in charge of households were drawn by the random-route procedure. Selected results are reported in Meyer-Hullmann (1996), a study about how food scandals influence attitudes and behaviour of consumers (with special consideration of the media).

NOELLE-NEUMANN/KÖCHER (1993) summarise a wealth of survey data in „Allensbacher Jahrbuch der Demoskopie...“. The question on mass animal husbandry was asked in January 1990. About 1000 adults (older than 16) were interviewed per region. Again a wealth of survey data on different topics is summarised in NOELLE-NEUMANN / KÖCHER (1997).

6.1.1.13 R

In her master thesis RENKEN (1997) conducts a qualitative analyses of the egg-market from consumer perspective. She interviewed 11 individuals. Each interview was transcribed and analysed in depth. Also a conjoint-analysis was conducted.

6.1.1.14 S

Aggregate results of the survey by SAMPLE-INSTITUT (1994) are reported in BALSER (1994). The survey was conducted from February 4th to February 11th 1994 as part of a „multi-task survey“ (Mehrthemenumfrage). According to Balser (1994) 1300 adults older than 14 were included in the evaluation.⁴⁹ Interviewees were selected with the ADM-Mastersample (random sample of German population). Target households were chosen at random. Interviewers were then asked to write a list with all household members older than 14, out of which the interviewee was again selected at random. Results are available by gender, formal education, area, size of household, size of parish, age group, new and old counties, net income of household, households with children and vocation. One set of questions concerned attitudes towards animal welfare, the other questions about shopping behaviour.

SCHMITZ (1993) reports on results of a master thesis by Kai Fischer. A consumer survey on the general subject of meat image was conducted in the pedestrian zone in the inner city of Aachen. Individuals (older than 20) were selected respecting certain quotas. A sample of n = 103 was drawn.

SCHULZ (1997) looks at how the involvement construct contributes towards explaining consumer behaviour towards beef, both theoretically and empirically. N = 568 individuals were interviewed in the period from August 14th to September 5th 1995. Interviewers were trained in advance and consisted mainly of students. The sample was drawn from 22 shops in Stuttgart and 26 retailers from the rural area of Baden-Württemberg. Shop selection was done by telephone without any special criteria. Generally, the person next to the interviewer was

⁴⁹ The Sample Institute stated that the initial sample size was 2.100, of which 1.594 people were interviewed. It declares not to know about any induced bias.

interviewed. Interviews were held each day of the week except Sundays and at different times of the day. Interviewees were generally very willing to participate and interested in the subject of beef. Duration of interviews was around 15 minutes. Schulz regards 15 minutes as the upper limit in shopping situations.

SIES (1997) and SIES/MAHLAU (1997) look at the general image of agriculture and more specific issues. They use various projective methods like word-associations tests, sentence completion, subjective likelihood attributed to statements, picture association tests and book catalogue test. Associations tests belong to the method of indirect interviewing, which is preferable to direct questions, if social answering, unconscious reasons, feelings etc. are relevant. 30 people presenting a good variety were selected. Some results are relevant to the issue of animal welfare, only some of these are presented in detail in this paper.

6.1.1.15 V

VOLLBEHR's (1990) master thesis looks at the importance of price for product evaluation in the food sector. She interviewed 44 people in a shopping centre in Kiel (36 females and 8 males, 21 younger than 30 and 14 older than 45). They were selected at random.

6.1.1.16 W

WILL/BALLING (1988) inquire into consumer attitudes and behaviour for beef. The sample of $n = 100$ was drawn at Freising, a town of 36.000 inhabitants near Munich. In a first step the street map of Freising was divided into a number of units of the same size. Each interviewer then selected one unit with random numbers. The interview addresses including spare-addresses were then again selected at random by the interviewers. About 88% of interviewees were women. The youngest person was 21 and the oldest 78 years old. 53% of interviewees had an occupation. Interview duration was about 45 minutes.

WIRTHGEN/ALTMANN (1988): survey in June 1986 of Eschwege, Witzenhausen, Bad Sooden-Allendorf and Hessisch-Lichtenau in North-Hessia ($n = 322$). Size of towns was between 10.000 and 24.000 inhabitants. Of the total sample $n = 266$ interviewees were drawn at random from telephone directories (ordinary directories were not available). Of these 50% were reached and 50% were replaced. Student interviewers exercised influence on the selection of the latter, which hence included more consumers of organically produced meat and consumers with a more critical attitude towards consuming meat and sausages. Additionally 56 interviewees were selected which were very conscious about health aspects in food consumption. These were customers of organic producers and retailers and members of a charity to promote health issues. Inclusion of the latter subsample was necessary for cluster analysis. In addition to the direct interviews 900 telephone interviews were conducted in the region to get a more representative picture of purchase habits and frequencies for meat and sausages. These are thought to be representative of the region.

6.1.1.17 Z

ZIEHLBERG / ALVENSLEBEN (1998) use a survey conducted in Kiel in summer 1996. It is the same as for LEHRSTUHL FÜR AGRARMARKETING KIEL (1996). Total sample size is $n = 387$, sub-sample size for „appropriate husbandry“ is $n = 193$. It is clear in the text which is meant. The subject of the paper by ALVENSLEBEN / ZIEHLBERG (1998) is to assess the role of ethical motives for purchasing fair trade coffee.

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