

Food Risks and Consumer Trust
European Governance of Avian Influenza

Michiel P.M.M. de Krom

Thesis Committee

Thesis supervisor

Prof. dr. ir. A.P.J. Mol

Professor of Environmental Policy, Wageningen University

Thesis co-supervisor

Dr. ir. P. Oosterveer

Assistant professor, Environmental Policy Group, Wageningen University

Other members

Prof. dr. M.J.J.A. Korthals

Wageningen University

Prof. dr. T. Marsden

Cardiff University, United Kingdom

Prof. mr. dr. B.M.J. van der Meulen

Wageningen University

Dr. J.C. Dagevos

Agricultural Economics Research Institute
(LEI), The Hague

This research was conducted under the auspices of the
Wageningen School of Social Sciences

Food Risks and Consumer Trust
European Governance of Avian Influenza

Michiel P.M.M. de Krom

Thesis

submitted in partial fulfilment of the requirements for the degree of doctor

at Wageningen University

by the authority of the Rector Magnificus

Prof. dr. M.J. Kropff,

in the presence of the

Thesis Committee appointed by the Academic Board

to be defended in public

on Wednesday 8 September 2010

at 11 a.m. in the Aula.

Michiel P.M.M. de Krom
Food Risks and Consumer Trust: European Governance of Avian Influenza
Wageningen: Wageningen University

PhD-Thesis, Wageningen University, The Netherlands, 2010
With references, with summaries in Dutch and English

ISBN 978-90-8585-698-6

Acknowledgements

While working on a PhD-thesis can at times feel like a rather lonely undertaking, a PhD-project is very much a collective endeavour. Since I started working on this thesis in November 2005, numerous persons have been of assistance on the road towards the materialisation of my time as a PhD. A sincere thank you goes out to all who have contributed to this thesis.

I would especially like to express my gratitude to my promoter and co-promoter, Arthur Mol and Peter Oosterveer, for their constructive and inspiring supervision, and for teaching me more than I could have wished for. A big thank you also goes out to all other members of the Environmental Policy Group with whom I have had the pleasure to discuss my work, especially Gert Spaargaren, Bas van Vliet, Simon Bush, Kris van Koppen, Jan van Tatenhove, Astrid Hendriksen, Kristine Kern, Aarti Gupta, Sarah Stattman, Elizabeth Sargant, Bettina Bluemling, Judith van Leeuwen, Jorrit Nijhuis, Lenny Putman, Xie Lei, Pham Hong Nhat, Laurent Glin, Tran Thi Thu Ha, Pham Van Hoi, and Dorien Korbee. I am grateful to Corry Rothuizen for her generous assistance in practical matters.

A special word of thanks is also directed to the members of the School of City and Regional Planning of Cardiff University who greatly contributed to making my research stay in the UK a success. I would particularly like to thank Terry Marsden and Andrew Flynn for all time they were willing to invest in me during my stay, and for the stimulating discussions we had. I also thank all persons who were willing to be interviewed for this research, and so kindly answered the various—difficult and, at least from their perspective, rather self-evident—questions I had.

Once you are finished writing a PhD-thesis, still a lot of work is to be done. My appreciation goes out to Petra de Krom for her beautiful cover-design, Elizabeth Sargant for English language corrections of chapters 1 and 6, and Stephanie Buijs and Anke de Krom for checking the English and Dutch summaries.

Finally, much gratitude is devoted to all friends and family who have supplied invaluable background-support during the last five years. Anke en Petra, thanks for being such wonderful big sisters – I am proud that you are willing to be my *paranimfen*. Veera, Kian, and Thymo, becoming your uncle has been a true source of motivation. I hope this

thesis contributes—if but a bit—to a better future for your generation. Papa and mama, thanks for your unconditional support throughout my life. Steph: of all good things that happened to me during my time in Wageningen, meeting you was by far the best. Thanks for helping me to keep my head in the air and my feet on the ground. I hope I can be of equal support to you during the final steps of your PhD-trajectory.

Contents

Acknowledgements	v
List of figures and tables	ix
List of abbreviations	x
1 Introduction	1
1.1 Introduction	1
1.2 Food risks and consumer trust under late modern conditions	4
1.3 An introduction to highly pathogenic H5N1 avian influenza	7
1.4 Food risk governance	12
1.5 Objective and central research questions	14
1.6 Research methodology	15
1.7 Thesis Outline	17
2 Contesting Risk and Responsibility: European Debates on Food and Agricultural Governance of Avian Influenza	21
2.1 Introduction	21
2.2 Mass-mediated risk governance	23
2.3 Methodology	24
2.4 The Dutch debate	26
2.4.1 Setting the stage: wild birds, animal health and economic risks	26
2.4.2 Dissenting voices	28
2.4.3 Preventive vaccination: an alternative policy instrument?	29
2.5 The UK debate	31
2.5.1 Setting the stage: wild birds and their potential threat to animal health	31
2.5.2 To confine or not to confine poultry	32
2.5.3 Preventive vaccination: an alternative solution to a future problem?	34
2.6 Discussion: contesting food and agricultural risks and their governance	35
2.7 Reflection	37
3 Understanding Consumer Rationalities: Consumer Involvement in European Food Safety Governance of Avian Influenza	41
3.1 Introduction	41
3.2 Conceptualising consumer rationalities	43
3.3 Methodology	46
3.4 Buying poultry meat: an empirical exploration	49
3.4.1 Arguments underlying actual consumption practices	49
3.4.2 Responsibilities and trust in food safety governance	51
3.4.3 Changing consumption: avian influenza	54
3.5 Constructing consumer rationalities around food safety governance	55
3.5.1 The rationality of the invisible hand-lers	56
3.5.2 The rationality of the centrality of the self	57
3.5.3 The rationality of one for all	58
3.5.4 The rationality of the mediators	59
3.6 Reflection	61

4 Food Risks and Consumer Trust: Avian Influenza and the Knowing and Non-Knowing on UK Shopping Floors	65
4.1 Introduction	65
4.2 Theorising food trust in practice	66
4.3 Avian influenza: a brief introduction	69
4.4 Methodology	70
4.5 Consumer trust in food: empirical exploration	72
4.5.1 Consumers at a free-range organic market vendor	73
4.5.2 Consumers at a farmers' market	74
4.5.3 Consumers at a standard market vendor	75
4.5.4 Consumers at a superstore	76
4.5.5 Consumers at an upmarket supermarket	78
4.6 Consumer trust in food: knowing and non-knowing on shopping floors	80
4.7 Conclusion	85
5 Social Interests and Values in European Food risk Governance: The Case of Avian Influenza	87
5.1 Introduction	87
5.2 Conceptualising social interests and values in multi-level food risk governance	89
5.3 Methodology	91
5.4 The Netherlands: governing with society	93
5.5 France: governing consumer trust in food and government	96
5.6 The UK: governing conventionally through a transformed institutional setting	98
5.7 EU food risk governance: between harmonisation and differentiation	102
5.8 Conclusions	105
6 Conclusions	107
6.1 Introduction	107
6.2 European food risk governance of avian influenza: conclusions from the case studies	108
6.3 Consumer trust and involvement in food risk governance: theoretical reflections	113
6.3.1 Consumer trust and involvement in risk assessments	113
6.3.2 Consumer trust and involvement in risk management	115
6.4 Epilogue: policy recommendations and recommendations for further research	118
6.4.1 Policy recommendations	119
6.4.2 Recommendations for further research	122
References	125
Appendix 1: Interview guide consumer research	141
Appendix 2: List of interviewees	143
Summary	147
Samenvatting	153
About the author	159

List of figures and tables

Figures

1.1 Spread of highly pathogenic avian influenza H5N1 from December 2003 to May 2006	9
1.2 Number of reported H5N1 highly pathogenic avian influenza (HPAI) outbreaks/cases by continent and month since December 2003	10
3.1 Analytical framework: the concept of consumer rationality within the social practice of consuming	46
5.1 Conceptual possibilities to incorporate social interests and values in food risk governance	90
5.2 Incorporation of social interests and values in European food risk governance	103

Tables

1.1 Main European food scares 1988-2006	3
1.2 Avian influenza outbreaks since 1959	8
3.1 Numbers of consumers interviewed according to retailer and types of poultry meat products	48
4.1 Number of interviewees according to type of (faceless and facework) retailer and type of poultry meat products	72

List of abbreviations

ACMSF	UK Advisory Committee on the Microbiological Safety of Food
AFSSA	French Food Safety Agency
AI	Avian influenza
BBC	British Broadcasting Corporation
BEUC	European Consumers' Organisation
BSE	Bovine spongiform encephalopathy
BPC	British Poultry Council
BVA	British Veterinary Association
CFSPH	Center for Food Security and Public Health, Iowa State University
CIV	French Meat Information Centre
Defra	UK Department for Environment, Food and Rural Affairs
DG-SANCO	Health and Consumer Protection Directorate General, European Commission
EC	European Commission
EFSA	European Food Safety Authority
FAO	Food and Agriculture Organisation
FMD	Foot-and-mouth disease
FSA	UK Food Standards Agency
HPAI	Highly pathogenic avian influenza
LNV	Dutch Ministry of Agriculture, Nature and Food Quality
MAFF	Former UK Ministry for Agriculture, Fisheries and Food
NBvH	Dutch Association of Smallholders
NFU	UK National Farmers' Union
NGO	Non-governmental organisation
NOS	Netherlands Broadcasting Foundation
OIE	World Organisation for Animal Health
PvdD	Dutch Party for the Animals
SCFCAH	EU Standing Committee on the Food Chain and Animal Health
VWA	Dutch Food and Consumer Product Safety Authority

WHO World Health Organisation
WTO World Trade Organisation

1

Introduction

1.1 Introduction

At the moment of writing (March 2010), the Netherlands is fighting an unprecedented Q fever outbreak. Q fever is a zoonosis caused by the bacterium ‘*Coxiella burnetii*’, which is widely distributed over the world. For many years Q fever has been regarded as a disease of professionals who work with infected animals or their products. In the Netherlands, Q fever occurred in approximately 20 persons per annum during the last decades. From 2007 onwards, however, numbers of infected persons grew rapidly. In 2007, 170 people became infected; in 2008, 1000 cases were reported; and in 2009 the number of infected persons rose to 2100. This makes the current outbreak the largest in the world to date as regards numbers of human cases and duration (Dutch Ministry of Agriculture, Nature and Food Quality [LNV] 2010). Experts suspect a causal relation between the increase in human cases, and waves of spontaneous, Q fever induced, abortions on goat and sheep farms that allow the bacterium to spread in large quantities by air. To fight the outbreak, the Dutch Ministry of Agriculture has ordered mandatory vaccination of designated groups of goats and sheep, and the culling of all pregnant animals on large infected holdings (LNV 2009). This latter containment measure meets much public resistance. A petition against the mass-slaughtering of healthy animals has been signed by more than 44.000 citizens (PvdD n.d.). Public opinion considers recent expansions of intensive sheep and goat farming practices to be a major contributor to the outbreak, which co-incident the livestock-dense Dutch province of *Noord-Brabant* to put a limit to the size of ‘mega-farms’ (NOS 2010).

Q fever is one more in the series of recent food-related crises facing Europe. Over the last two decades, many European countries have been confronted with one or more of such crises. High-profile examples include bovine spongiform encephalopathy (BSE), *E.*

coli, dioxin residues, and foot-and-mouth disease (FMD). But there have been many more (Table 1.1), and—as illustrated by the Dutch Q fever outbreak—predicting that more will follow seems to be a safe bet. Although food production and consumption have never been free of dangers to human health and the environment, for most of the twentieth century little public and policy attention was devoted to food and agricultural risks (Cooter and Fulton 2001; Knowles et al. 2007). With the advent of the above-mentioned food crises, this changed radically. These crises were marked by a growing public recognition of the changing nature of food risks, as well as an increased general awareness of food-related risks. Combined with an overall decline in public trust in the routine practices and institutions that were to protect citizens from unwanted harm, this led to profound public and policy debates about food production and governance, in which essential characteristics of the food system were questioned.

The emergence of different food crises prompted European food governance actors to substantially renew the European food policy framework. Herewith, they aimed to (re-) establish (i) an effectively functioning European market, (ii) harmonisation of national legislation to secure a safe food-producing and consuming environment throughout Europe, and (iii) high levels of consumer trust in food. Core transformations included institutional and legislative changes at the EU level, at national levels, and within food supply chains. Moreover, the renewal of the policy framework implicated innovative roles for different actors involved—including, notably, for citizen-consumers. No longer should food governance be the exclusive remit of a small circle of scientists, state agents and actors higher in the food supply chain, who determine policy measures based on scientific data, and subsequently communicate their rulings and measures to the general public. Instead, (individual and organised) citizen-consumers should be actively incorporated in food governance practices (European Commission 2000; European Parliament and Council 2002; European Commission 2007; Flynn et al. 2003; Hajer et al. 2004; Kjærnes et al. 2007; Knowles et al. 2007; Mol and Bulkeley 2002).

While this innovative position for citizen-consumers represents a definite shift in discourse, it remains rather unclear how citizen-consumers are and can best be included in food risk governance practices, and what effects such inclusion has on consumer trust and other aims underlying a transformed European food policy framework (Ansell and Vogel 2006; Lang and Heasman 2004; Oosterveer 2007). This study aims to contribute to the

Table 1.1. Main European food scares 1988-2006 (adapted from Knowles et al. 2007)

	Microbiological	Contaminants	Zoonotic/Epizootic
1988	Salmonella in eggs (UK)		
1989	Listeria (UK) Salmonella Enteritidis (UK) Botulism in hazelnut puree (UK)	Alar pesticide (EU) Sewage contamination of fresh meat (Fr)	BSE (UK)
1990		Benzene in Perrier bottled water (EU)	Classical Swine Fever (Be)
1992	Listeria (Fr)		
1993			Classical Swine Fever (Be, Gy)
1994			Classical Swine Fever (Be)
1995	Campylobacter (UK) E. coli (Sw)		Classical Swine Fever (It)
1996	E. coli (UK/Sw)		CJD deaths (UK) FMD (Gr/Bul) Classical Swine Fever (It)
1997			Classical Swine Fever (Ne, It)
1998	Salmonella Enteritidis (Gr) Salmonella Bongori (It) Botulism (It/Fr/UK/No)		
1999	Salmonella Typhimurium (Fr) Listeria (Fr)	Dioxins in animal feeds (EU) Fungicide/poor carbon dioxide in Coca-Cola (EU)	CJD alert in red wine (Fr)
2000	Salmonella Enteritidis (Ne) Salmonella Typhimurium (UK/Ic/Ne/Gy) E. coli (Sp)		BSE (Fr/Gy/Sp) Classical Swine Fever (UK)
2001	Listeriosis (Be)	Olive oil contamination (Sp/UK)	BSE (It) FMD(UK/Ir/Fr/Ne)
2002		Nitrofurans in prawns (UK) Nitrofen in wheat (EU) Acrylamide (EU)	FMD (UK)
2003	Campylobacter (UK/Sp) E. coli (Dk)	Mercury poisoning in swordfish (UK) Sudan 1 (EU)	Avian influenza (Ne)
2004	E. coli (Dk) Salmonella Enteritidis (Ne) Salmonella Bovis-morbificans (Gy)	Lasalocid in eggs (UK) PCB's and dioxins in salmon (UK) Sudan 1 (EU)	
2005	Salmonella Bovis-morbificans (Gy) Salmonella Typhimurium (UK/No/Dk/Ne) Campylobacter (Dk)/Listeria (Ne) Salmonella Hadar (Sp)/E. coli (Fr) Salmonella Stourbridge (UK/Fr/Swe/Sz/Gy/Au)	Sudan 1 (EU) Para Red (EU)	Avian influenza (EU)
2006	Salmonella Montevideo (UK)	Benzene in soft drinks (Fr/UK) Dioxins in animal feed (Be/Ne)	Avian influenza (EU)

further understanding of these issues by examining consumer involvement and trust in European food risk governance. The study empirically focuses on one major food and agricultural risk to Europe that emerged after the renewed policy framework had largely been implemented: highly pathogenic avian influenza H5N1.

This chapter provides background information from which the objective and central research questions are developed. The following section presents the theoretical framing of the study. Subsequently, the case of highly pathogenic avian influenza H5N1 is introduced. Before setting out the objective and central research questions of this study, I will summarise the main academic debates that this study engages with. Finally, I will provide an introduction to the study's methodological approach and an outline of the remainder of this study.

1.2 Food risks and consumer trust under late modern conditions

Risks are anticipations to undesirable future events. In this anticipation lies the transformative potential of risks in the present: in view of risks, present action can be mobilised to govern the future (Beck 2009; Renn 2009). The emergence of risk as a social category can be traced back to the advent of modernity. The Enlightenment ideal of progressive intellectualisation implicates, following Weber (1958, p. 117), “the knowledge or belief that ... there are no mysterious incalculable forces that come into play, but rather that one can, in principle, master all things by calculation. This means that the world is disenchanted”. This ‘disenchanted’ notion that an uncertain future can be made available to present scientific-rational knowledge and action is a central element of the concept of risk: not an externally determined destiny, but human action determines the future (Beck 2009; Zinn 2008).

In what can be considered the first phase of (simple) modernity, taking risks was principally deemed legitimate as progress contributed to prosperity and welfare, and negative side-effects were considered controllable by decision-making based on calculations of probabilities and extents of (undesirable) future events (Beck 1999; Zinn 2008). Rooted in this perspective, conventional European food risk policy consisted of the three distinct phases of scientific *risk analysis*, on the basis of which *risk management*

decisions were made that were subsequently relayed to the general public in *risk communication*. Risks were defined as scientifically assessable chances of harmful effects that had little to do with social change, trust, and values. The instrumental rationality of cost-benefit analysis subsequently underlay risk management decisions.

The food risks and crises of the past two decades, however, had a major contribution to undermining the legitimacy of this regime. Science lost its claim to being the undisputed assessor of food safety, as with the food crises (most notably BSE) the existence of internal disagreements and controversies within scientific communities became visible to the public eye, and the role of (applied) science in not only managing but also creating and contributing to risks became perceptible. Additionally, the food crises sensitised citizen-consumers to values and interests that are inherently implicated in risk assessment and management practices, and how these may contradict citizen-consumer values and interests that had become less focussed on only meeting basic needs. Consequently, citizen-consumer trust in the conventional food policy regime could no longer be taken for granted (Beck et al. 1994; Kjærnes 2006; Oosterveer 2002).

This transformation in the social perspective on food risks and their governance can be understood within the framework of a shift from simple to late (or reflexive) modernisation. As society is confronted with the expansion of negative side-effects implicated in the progressive production of food, these side-effects increasingly move into the centre of social attention. In this process, different contradictory certainties emerge. For reasons discussed above, the Enlightenment notion that all ideas can principally be revised in the light of new information applied to scientific knowledge and its (political and technological) applications as well, leading to what has been termed the ‘disenchantment with science’: science lost its Enlightenment character. At the same time, scientific rationality remains indispensable to detect side-effects that escape everyday sensory experience, and to subsequently indicate possible risk management options (Beck et al. 1994; Beck 2009; Ewald 2002). Additionally, on the one hand the ‘disenchantment of the world’ contributed to the dissolution of tradition as the main force structuring social life, allowing—and forcing—individuals to (more) actively choose in which social practices they want to participate. Yet, the omnipresence of science-based expert systems in contemporary societies implicates that social actors cannot but rely on one or another expert

system, while they know that the knowledge and values on which expert systems are built are in principle contestable and open to revision (Giddens 1990, 1991).

Under these conditions, science-based risk characterisations and management decisions are potentially open to contestation not only from within the communities of risk assessors and managers, but also by other social actors carrying alternative knowledge claims or values. Moreover, in the face of severe food risks, affected social actors are triggered to reconsider their routine involvement and trust in food (consumption, production and governance) practices. Hence, citizen-consumer trust in food governance must be more actively established and retained than in the past, for instance through the participation/incorporation of citizen-consumers and their values and interests in food risk governance. This active establishment and retention of citizen-consumer trust is not restricted to the state-based policies and institutions. To the extent that policy institutions fail in adequately fostering citizen-consumer involvement and trust, governance practices tend to shift to 'subpolitical' domains, where encounters between citizen-consumers and food system actors are further mediated (Beck et al. 1994). Hence, mass media become increasingly important political arenas in which different food system actors aim to publicly legitimate their opinions and decisions (see e.g. Allan 2002; Castells 2004). And on shopping floors, the social practice of consuming becomes a political act. Consumption through buying food signifies a commitment with more or less trustworthy food governors or suppliers who claim that particular foodstuffs are safe—or environmentally and socially sustainable—to consume (Beck 1999; Micheletti 2003). Hence food politics is as much part of conventional politics of state and political parties, as it is part of media claims and shopping practices.

In the renewed European food policy framework we can identify the contours of a more active involvement of (organisations representing) citizen-consumers and their values and interests, which were previously largely excluded from the traditional food policy arenas. At the same time, we can observe a growing importance of citizen-consumer involvement in food governance practices outside of the policy-institutional arenas, such as in the media and in consumer practices. To explore how and to what extent citizen-consumers have become involved and how consumer trust is being built and maintained in European food risk governance, I studied the case of highly pathogenic avian influenza H5N1. It is to the introduction of this risk that we turn in the next section.

1.3 An introduction to highly pathogenic H5N1 avian influenza

Avian influenza (popularly referred to as ‘bird flu’) is a globally occurring disease of birds that is thought to be infectious for all bird species. Avian influenza is caused by influenza A viruses. Wild waterfowl, gulls and shorebirds are the natural reservoir of influenza A viruses, and have likely carried these viruses for thousands of years without developing symptoms (Lee Ligon 2005). Infected birds of other species may show a wide range of symptoms. Based on disease severity, two forms of avian influenza are identified. The common, low pathogenic variant entails disease with predominantly mild effects on birds’ well-being. The highly pathogenic form, on the other hand, causes severe disease, and can entail bird mortality rates as high as 100% within 48 hours after virus introduction in a poultry flock (World Health Organisation [WHO] 2006).

Influenza A viruses are sub-classified based on the antigenic nature of two of their surface proteins: hemagglutinin (H) and neuraminidase (N). To date, respectively 16 hemagglutinin (H1-H16) and nine neuraminidase (N1-N9) variants are known. Influenza A subtypes are named after combinations of these proteins: ‘H5N1’ represents the virus strain with the fifth hemagglutinin and first neuraminidase type as listed in the World Health Organisation naming system (Greger 2007). All 16 hemagglutinin and nine neuraminidase avian influenza subtypes can infect wild birds. Most of these viruses are low pathogenic (Lee Ligon 2005; Osterhaus 2006). Only H5 and H7 subtypes have been found to cause outbreaks of highly pathogenic avian influenza. Not all of these subtypes are highly pathogenic, but it is thought that most can develop such pathogenicity by mutation (WHO 2006).

Avian influenza was first described in 1878, when it was observed in poultry in the northern part of Italy. However, it was not until 1955 that the influenza A virus was revealed to be the agent causing this disease. The first confirmed avian influenza outbreak followed four years later, involving an outbreak on a Scottish farm. Since then, over 20 outbreaks have been reported (Table 1.2). Among these outbreaks, the chain of outbreaks of H5N1 that started in 2003 stands out, and received much scholarly, political and social attention.

Firstly, this chain of outbreaks is unprecedented in terms of its transnational spread and number of affected birds (Figure 1.1; Table 1.2). The outbreaks commenced in south-

Table 1.2. Avian influenza outbreaks since 1959 (adapted from Ligon 2005; Osterhaus 2006; Lupiani et al. 2009)

	Area	Subtype	Approximate number of affected poultry
1959	Scotland	H5N1	1 small farm
1961	South Africa	H5N3	1300
1963	England	H7N3	29,000
1966	Canada	H5N9	8,000
1976	Australia	H7N7	58,000
1979	Germany	H7N7	2 farms
1979	England	H7N7	9,000
1983	United States	H5N2	17,000,000
1983	Ireland	H5N8	307,000
1985	Australia	H7N7	240,000
1991	England	H5N1	8,000
1992	Australia	H7N3	18,000
1994	Australia	H7N3	22,000
1994	Mexico	H5N2	Millions?
1994	Pakistan	H7N3	>6,000,000
1997	Australia	H7N4	160,000
1997	Hong Kong	H5N1	1,500,000
1997	Italy	H5N2	8,000
1999	Italy	H7N1	14,000,000
2002	Chile	H7N3	700,000
2003	The Netherlands	H7N7	33,000,000
2003–present	Eurasia and Africa	H5N1	100s of millions
2004	United States	H5N2	6,600
2004	Canada	H7N3	16,000,000
2004	South Africa	H5N2	30,000
2005	North Korea	H7N7	219,0000

east Asia, and initially remained geographically confined within this area. Since late July/early August 2005, however, the virus emerged in poultry and wild birds in Russia (western Siberia) and adjacent parts of Kazakhstan. In October 2005, Europe reported its first outbreaks after detecting infection in poultry in Turkey and Romania, and in wild birds in Croatia and Hungary. A month later, the Ukraine reported cases in domestic birds, and the virus was for the first time detected in the Middle East, in a captive flamingo in Kuwait. Between January and May 2006, the virus spread across Europe, the Middle East, and into Africa. During this period, 24 European countries reported cases, predominantly in wild birds in February and March; six central Asian and Middle Eastern countries reported infections of domestic poultry; and nine African countries reported outbreaks. By May 2006, reports of outbreaks decreased in frequency in most of Europe, the Middle East and Africa, but the virus remained to have a stronghold in south-east Asia. Since 2007, overall

numbers of reported cases have remained below those of 2006, but reports of new cases keep coming from all previously affected continents—especially from Asia and Africa (Egypt), in parts of which the virus is endemic. In Europe, reports of infections have become increasingly sporadic since mid-2006 (Figure 1.2). In 2007, six European countries reported outbreaks in poultry; four detected cases in wild birds. In 2008, these figures were respectively one (Germany) and two. In 2009, only Germany encountered a case of highly pathogenic H5N1, in one wild duck (Alexander 2007; Scientific Task force on Avian Influenza and Wild birds 2008; WHO 2006; World Organisation for Animal Health [OIE] n.d.; Yee et al. 2009).

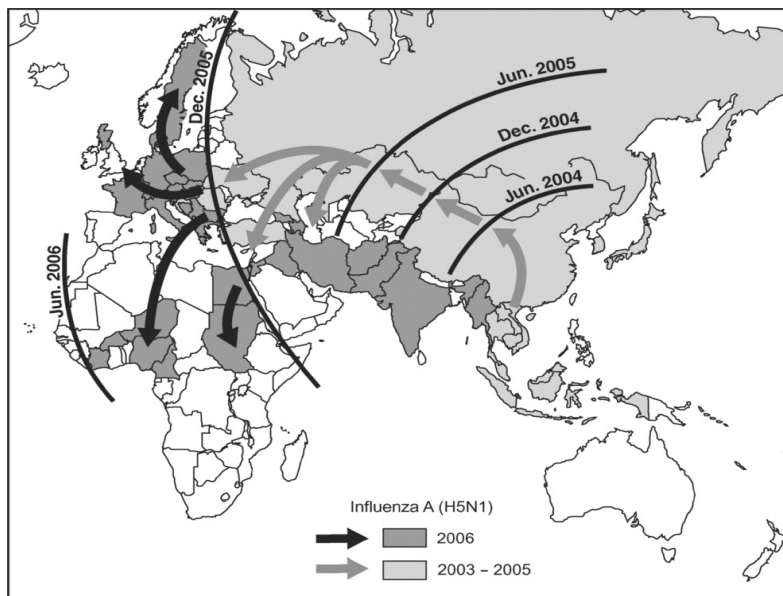


Figure 1.1. Spread of highly pathogenic avian influenza H5N1 from December 2003 to May 2006. Shading categories signify OIE member states in which H5N1 cases in poultry and/or wild birds were reported between 1 January – 18 May 2006 (dark shading) or in prior time periods (light shading). (Source: Smallman-Raynor and Cliff 2008)

Secondly, the large-scale geographical spread of H5N1 outbreaks also received much attention because from 2005 onwards migratory birds were considered to be possible vectors of highly pathogenic avian influenza. Previously it was thought that wild birds do not carry or directly spread highly pathogenic avian influenza. Highly pathogenic strains were thought to emerge only after wild birds introduced H5 or H7 low pathogenic viruses

in poultry flocks, in which the previously stable low pathogenic virus then mutated into a highly pathogenic strain. The virus was subsequently spread from farm to farm by movements of live birds, of persons wearing contaminated shoes and clothes, and of contaminated vehicles, equipment and feed. During 2005, however, evidence emerged that migratory birds may carry highly pathogenic H5N1, and spread it along their flight routes (Lee Ligon 2005; Osterhaus 2006; WHO 2006)—although the precise role of wild birds in spreading H5N1, especially over large distances, was and remains controversial (see e.g. Gauthier-Clerc et al. 2007; GRAIN 2006; Greger 2007). In light of this uncertain information, questions arose if and how virus spread via wild birds should be dealt with.

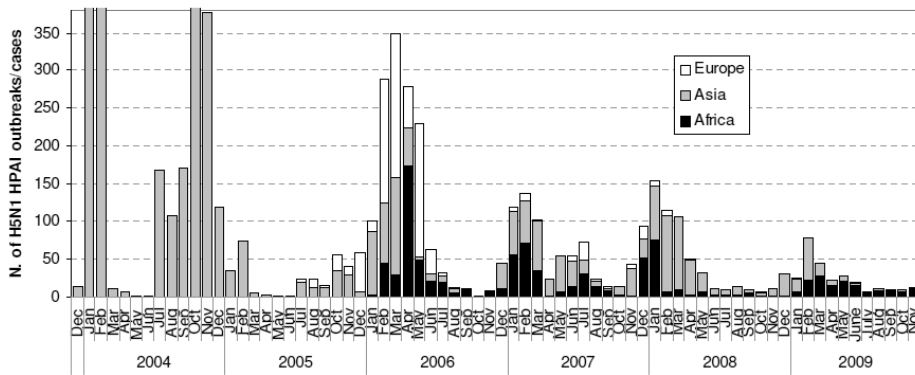


Figure 1.2. Number of reported H5N1 highly pathogenic avian influenza (HPAI) outbreaks/cases by continent and month since December 2003 (Source: *Empres 2009*, p. 5)

A third reason why highly pathogenic avian influenza H5N1 received much attention concerns the different, complex and severe risks it posed. The virus is thought to entail a human health risk. It has caused a relatively large number of bird-to-human infections, which resulted in multiple human cases of severe disease and deaths.¹ It is feared that the virus would acquire the capacity to spread efficiently and sustainably among humans, which would spark off a pandemic (see e.g. Greger 2007; Osterhaus 2006; WHO 2006). As little pre-existing natural immunity exists in the human population, this pandemic would likely result in large numbers of casualties (Lee Ligon 2005). There is, however, little consensus among experts on the magnitude of this risk. Fundamental knowledge about how influenza A viruses jump from wild birds to domestic avian species and mammals, and

subsequently to humans, remains unknown, and genetic changes necessary to allow for swift human-to-human transmissibility are even less well understood (Taubenberger and Morens 2009). Highly pathogenic avian influenza viruses have been found in eggs, bones, blood, skin, and meat of infected poultry (Greger 2007). Evidence suggests that H5N1 is transmitted from birds to humans via close contact with infected birds. Yet, some cases may have been the result of swimming in contaminated water, or exposure to contaminated faeces (CFSPH et al. 2009). The gastrointestinal tract (ingestion) could be an additional source of transmission, but proper handling and cooking (at least five seconds at 70 degrees) of poultry products would eliminate any food safety risk (CFSPH et al. 2009; Greger 2007). No cases of sustained human-to-human transmission of the virus have, as of yet, been reported.

In addition to this human health risk, highly pathogenic avian influenza H5N1 entails major food and agricultural risks. Avian influenza epizootics have the propensity to entail large social and economic costs, which largely result from high mortality rates among infected poultry and the standard containment measure of mass slaughtering infected or potentially exposed animals (Council of the European Union 2006; Rushton and Upton 2006; WHO 2006). Not only do these issues result in large economic losses; additionally, they may trigger social concern related to the loss of food sources and/or pet-animals, and the questioning of the epidemiological necessity and moral soundness of the mass-slaughtering of (still) healthy animals. Economically, costs of avian influenza outbreaks furthermore stem from trade restrictions. Highly pathogenic avian influenza² is a notifiable disease according to the OIE (OIE 2009).³ Outbreaks of notifiable diseases implicate import bans of animals and animal products to avoid disease spread. Finally, consumer backlashes in the face of a risk as avian influenza may result in economic damage to food supply chain actors.

In Europe, highly pathogenic H5N1 started to receive broad European public and political attention from 2005 onwards. Early that year focus was particularly placed on the potential of the virus to mutate into a pandemic virus, after publication of an investigation into suspected human-to-human transmission in January 2005 (Nerlich and Halliday 2007). From August 2005 onwards the attention increasingly included food and agricultural risks, after detection of the virus in Russia and Kazakhstan—the outer eastern border of Europe (De Krom and Oosterveer 2010). Experts feared that the virus would soon spread from that

area into Europe, by trade, human travelling, or the autonomously border-crossing vectors of wild birds. Questions arose on how to define the complex avian influenza risk, and if and which measures should be taken to protect European societies against this complex risk. Herewith, avian influenza turned into a salient topic of European health and food risk governance.

1.4 Food risk governance

This study engages in an academic debate that has grown rapidly since the 1990s, when the main interest among social scientists involved in food expanded from nutrition and food security to food safety and risks. The BSE crisis, followed by similar food scares and debates on the risks of consuming genetically modified food, generated much research on food risks and their governance in several academic fields and disciplines. The most relevant themes from these debates, for this study, are how to understand food risks from a social science perspective, what the role should be for different societal actors in food risk governance, and in particular what should be the role of food consumers. In this section, I will present some of the most relevant positions in these debates.

Food scares have become hotly debated topics in contemporary society. For social scientists this raises questions on the definition of food risks (Bildtgård 2008), on their societal causes (Jasanoff 1997; Nestle 2002), their social impacts (Busch 2000; Millstone and Lang 2003), and their impacts on regulation and governance (Ansell and Vogel 2006; Lang 2006; Oosterveer 2007). Most authors agree that food risks have increased in number and intensity putting conventional ways of handling them under pressure, but they differ on the reasons why this is the case. Whereas some consider these contemporary food risks as illustrations of the increased presence of ‘manufactured risks’ (Smith et al. 2004), others rather looked at it as indicators for the need to revise traditional regulatory practices particularly by developing new ways of communicating between science, politics and the general public (Renn and Schweizer 2009).

According to the first viewpoint the newly emerging risks are to be understood as the consequence of the structural changes in modern society. These risks containing unfamiliar characteristics spread rapidly under the conditions of globalisation (Atkins and

Bowler 2001; Knowles et al. 2007; Lien and Nerlich 2004). With the help of concepts as ‘risk society’ (Beck 1992), and the ‘global network society’ (Castells 1996), the conventional approach to food risk policies dominated by sovereign nation-states was criticised (see Lang et al. 2009). Conventional institutions and regulations intend to manage food risks on a domestic scale, but risks that easily cross borders require other forms of regulation. In response, innovative regulatory arrangements emerge including forms that engage non-governmental actors such as private companies, NGOs, and consumers (Smith et al. 2004). Such innovative regulatory arrangements on food safety constituted part of the wider shift from government to governance, since the 1990s, as politics is no longer confined to a specific delineated domain (Hajer et al. 2004; Paul 2009). Allowing non-state actors to engage in food safety governance, however, proved a source of contestation. Whereas some authors were rather positive about non-state actors’ contribution to more sustainable food provision (Jackson 2006; Oosterveer 2007), others were much more sceptical especially on the involvement of private companies like the food processing industry and supermarkets (Lang and Heasman 2004; Pollan 2008). In response, these others either still vest their hope on more active state interventions, or on active consumer engagement.

Food risks are also consumer risks and many therefore study this relationship as an important input to food risk governance while paying attention to their potential role in governing food risks. Some promote a rather individual (or psychological) approach and consider the relationship between consumers and (food) risks essentially as cognitive. As the ways in which consumers perceive risks determines their handling of it, risk perception necessarily becomes the focus of their attention (Slovic 2000). Information provision that is better adapted to actual consumer concerns is considered essential for improving the communication that is required for better handling food risks. Risk communication should also include the social and economic dimensions of food risks and allow consumers to make their (individual) decision in an informed manner (Renn and Schweizer 2009). These authors suggest a more explicit inclusion of consumer concerns in the risk assessment procedure through social impact assessment and through consumer participation (Cope et al. 2009; Dreyer et al. 2009).

In contrast other authors underline the social character of the relationship between consumers and food risks. They suggest that, in spite of the aims of the individual-focused

psychological approaches, perception, attitudes and information cannot be separated from the social processes of which they are part. Consequently, they put consumer trust central in food risk governance (Bildtgård 2008; Kjærnes et al. 2007; Poppe and Kjærnes 2003). Handling food risks by consumers—i.e. dealing with uncertainty in the consumption of particular foodstuffs—involves the actualisation (or not) of trust in the food product itself as well as in the related food supply chain actors, food regulators, experts and NGOs (Kjærnes 2006). Trust is hence not an individual personal characteristic but a dimension of social dynamics that has to be actively established by the involved social actors (Möllering 2001; Sztompka 1999). As Spaargaren (2003) points out, consumers are social agents involved in (re-)establishing social practices. Analysing food-risks thus requires studying the balance between structure and agency at the level of social practices where trust in food is established (Halkier 2001b).

Food safety governance under conditions of globalisation should thus be understood in a sociological framework that combines the dynamics at an institutional level, especially the role of science and governmental agencies, with those within the social practices that organise everyday food consumption.

1.5 Objective and central research questions

The conventional food governance framework in Europe, which principally involved scientific experts, state agents, and actors higher in the food supply chain, was unsuccessful in retaining citizen-consumer trust in food in view of the different food risks and crises that emerged over the last 20 years. To restore and retain citizen-consumer trust in food risk governance (which we define here as those practices involved in steering food supply and consumption to limit or control undesirable food-related future events, including those pertaining to human health, animal health and welfare, social equity, and environmental sustainability), Europe renewed its food policy framework intending to actively involve citizen-consumers and their interests and values in food risk governance practices. Simultaneously, we can observe the growing importance of trust-building mechanisms through citizen-consumer involvement outside of the conventional policy-institutional arenas, such as in public media and at shopping floors. Yet, it remains undetermined how

citizen-consumer interests and values are institutionally incorporated in different social domains (scientific, political, public) and governance levels (national, EU), how citizen-consumers are involved in governance practices within and outside of the policy-institutional arenas, and how such incorporation establishes or restores citizen-consumer trust in food and food risk governance. These issues are, however, key in understanding developments in contemporary European food risk governance, and thus require further conceptual and empirical elaboration.

The central objective of this study is, therefore, to understand whether and how citizen-consumer involvement in European food risk governance (re)establishes trust in handling avian influenza food risks.

The central research questions of this thesis are, consequently:

- 1) How are citizen-consumer interests and values institutionalised in European food risk governance?
- 2) How are citizen-consumers involved in food risk governance practices within and outside (European) policy institutions?
- 3) What constitutes citizen-consumer trust in food, and how does citizen-consumer involvement in food risk governance relate to this constitution of trust?

These research questions centre on different elements of European food risk governance, involving dynamics between multiple actors, multiple governance levels and multiple social domains involved in this governance. These research questions, consequently, provide a methodological challenge, as they necessitate the development and application of different methods. In the following section, I introduce the methodological framework that is applied to gain insight into the different aspects covered in the central research questions of this study.

1.6 Research methodology

To answer the central research questions, citizen-consumer involvement and trust in food risk governance of avian influenza are explored in the three EU Member States—France, the Netherlands and the UK—as well as at EU level. Hence, this research is based on a

qualitative, single and embedded case-study research design (Mason 2002; Stake 1998; Yin 1994, 1998), for the reasons discussed below.

Avian influenza was selected as a single case (Yin 1994, 1998) for three main reasons. First, the avian influenza risk to Europe represents a *critical case* for theoretical and empirical understanding of current developments in European food risk governance. The risk of avian influenza started to receive much European policy and public attention after the renewed European food policy framework was largely implemented (European Parliament and Council 2002). This emerging risk is therefore well-suited to investigate the operation of the renewed policy framework in practice (Stake 1998). Second, the avian influenza risk and its European governance were developing while this study was being conducted (this study started in November 2005). This made it possible to observe these developments in real time, and attune our data collection activities to the occurrence of relevant events, such as policy decisions and avian influenza outbreaks. Finally, the avian influenza risk had transboundary, pan-European characteristics. Hence, studying the governance of this risk allowed us to explore to what extent and how inclusion of citizen-consumers in different EU countries diverged, and how this divergence impacted on the aims of European food policy, including the harmonisation of policies in all EU countries.

To identify citizen-consumer involvement in different institutional and social practices of European food risk governance, I chose for an *embedded* single case-study design (Yin 1994, 1998), by focussing on different contexts in which citizen-consumers are involved in governance practices. These different contexts, firstly, concerned the three EU Member States France, the Netherlands, and the UK. I opted for these Member States because all three had to handle food crises in their recent history, including BSE (France, the Netherlands, and the UK), foot-and-mouth disease (the Netherlands and the UK), and avian influenza (the Netherlands). These crises triggered reflections among food system actors as well as citizen-consumers in these countries, making these countries interesting sub-units to study how these actors dealt with the emerging risk of avian influenza. Moreover, previous research has shown country-specific differences in the handling of previous food crises by the Member States (Oosterveer 2002; Wynne and Dressel 2001). Studying avian influenza governance in these countries, therefore, provided the possibility to assess the merits of a renewed European policy framework to co-ordinate and harmonise policy at the EU level. Finally, these three countries have for several decades been

important stakeholders of EU food and agricultural policy, whose positions have carried substantial weight in this policy's development. The French, Dutch, and UK positions in avian influenza food risk governance could accordingly be expected to be significant inputs to EU-level policy dynamics as well.

Further contextual differentiation within our research design was based on theory-informed selection of research loci and domains (media, retail sector, policy institutions), combined with attuning our research activities to relevant developments concerning the avian influenza risk. Given the theoretical and practical specificity of the choices in which this approach resulted, we will elaborate on these sub-case specific methodologies and methods in the following four empirical chapters.

1.7 Thesis outline

This thesis is structured in six chapters. Having discussed the background information from which this study started in this chapter, the following four chapters present the results of our case-studies that focus on particular topics within our central research questions.

Chapter 2 analyses UK and Dutch public debates on food and agricultural risk governance of avian influenza. Based on qualitative content analyses of these debates as they developed in national newspapers between August 2005 and August 2006, we discuss how (differences in) struggles on risk definitions relate to (different) policy decisions. Moreover, we analyse how these political dynamics are informed by the involvement of state, market, and civil society actors in European governance, and discern their wider implications for the functioning of the EU food governance framework.

Chapter 3 explores consumer involvement in food safety governance of avian influenza. Moving away from ideas of knowledge deficit, which hold that consumers should be better educated to avoid 'irrational' unease, we examine consumer perspectives on food safety governance at the time and place that consumers are dealing with food risks. Based on qualitative interviews with Dutch consumers buying poultry meat in different retail settings, we discern the existence of different consumer rationalities. These different rationalities entail different challenges to European food governance that aims to actively incorporate consumer trust.

Chapter 4 aims to further the understanding of the constitution of consumer trust in food. Starting from the observation that information provision cannot fully explain and constitute trust in food, the chapter investigates what additional factor(s) underlay consumer trust in food. This is examined through qualitative interviews with consumers of a variety of poultry products at different shops in the UK—an EU Member State in which, irrespective of food crises in 2000s, trust in food seems to remain high. We analyse how trust depends not only on knowledge inducted from information provision, but as much on consumers' relational handling of so-called non-knowing of food risks and their governance. The chapter distinguishes different forms of trust relations, which together at a system level result in high levels of consumer trust in food.

Chapter 5 studies the institutional inclusion of citizen-consumer interests and values in EU and Member State food risk governance. The study is based on qualitative analyses of key official publications and press releases of Member State and EU level bodies, as well as those of scientists, NGOs and food supply chain actors, combined with 40 in-depth interviews with relevant food system actors. The chapter analyses how and which social interests and values are incorporated in food risk governance in the Netherlands, France and the UK, and at the EU level. Furthermore, the chapter discerns the effects of including social interest and values on public trust and the functioning of the internal market.

The sixth and final chapter answers the research questions, and reflects on the conceptual and practical implications of our findings. It concludes with discerning policy recommendations and recommendations for further research.

Notes

1. As of 17 February 2010, 478 human cases of avian influenza H5N1 infections have been confirmed, of which 286 resulted in death. The list of countries in which human cases of H5N1 avian influenza have been confirmed are, in alphabetical order: Azerbaijan, Bangladesh, Cambodia, China, Djibouti, Egypt, Indonesia, Iraq, Lao People's Democratic Republic, Myanmar, Nigeria, Pakistan, Thailand, Turkey, Viet Nam (WHO 2010).
2. Put precisely, "avian influenza in its notifiable form (NAI) is defined as an infection of poultry caused by any influenza A virus of the H5 or H7 subtypes or by any AI virus with an intravenous

pathogenicity index (IVPI) greater than 1.2 (or as an alternative at least 75% mortality)” (OIE 2009, Article 10.4.1., emphasis omitted).

3. The OIE is recognised in the World Trade Organisation (WTO) Agreement on the Application of Sanitary and Phytosanitary Measures as the organisation responsible for developing and promoting international animal health standards and guidelines, and recommendations concerning trade in animals and their products.

2

Contesting Risk and Responsibility: European Debates on Food and Agricultural Governance of Avian Influenza*

Abstract

In August 2005, avian influenza entered European public arenas as the next food and agricultural risk. As the virus was detected close to Europe, questions arose whether measures were required to protect human health and secure European food supply. This article analyses the public debates on the characteristics of the risk and on the interventions needed. The mass media in two EU member states, the UK and the Netherlands, were studied for this purpose. With the help of qualitative analysis the debates were analysed as they unfolded in selected national newspapers. Arguing that risks are socially mediated realities, the article discusses how struggles on risk definitions relate to different policy decisions. Moreover, it analyses how these political dynamics are informed by the involvement of state, market, and civil society actors in European governance, and discerns their wider implications for the functioning of the EU food governance framework.

Keywords: animal health, avian influenza, food, mass media, risk governance

2.1 Introduction

In 2005, avian influenza (AI; bird flu) seemed to become the next food related public health risk facing Europe. Early that year, when the highly pathogenic AI strain H5N1 was restricted to Asia, a suspected case of human-to-human transmission of the virus sparked public attention. The concern was how to govern a pandemic that would begin once the

*This chapter has been published as: De Krom, M.P.M.M. and P. Oosterveer (2010) Contesting Risk and Responsibility: European Debates on Food and Agricultural Governance of Avian Influenza. *Nature and Culture* Vol. 5 (2) pp. 175–195.

virus had acquired the capacity to spread efficiently and sustainably among humans (Nerlich and Halliday 2007). In the following months, when AI was detected on Europe's eastern border, worries rose on the possibility that the virus would infect European poultry, and subsequently put European citizens at risk (e.g., Eurobarometer 2006a: 20–21). Questions were raised whether interventions in food supply were required, making AI and its related risks an important issue for European food and agricultural governance (European Commission 2005a).

Food scares of the 1990s as Bovine Spongiform Encephalopathy (BSE), *E. coli*, and dioxin residues had triggered substantial transformations in the EU food governance framework. These transformations were intended to: (i) standardise national legislations to guarantee the highest possible level of food safety throughout the EU; (ii) incorporate consumer trust as a standard practice; and (iii) ensure the effective functioning of the EU internal market (European Commission 2000; Flynn et al. 2003; Knowles et al. 2007). AI emerged as a risk after this reformed regulatory regime had just become operational. In the absence of experience with the functioning of this regime, AI offers the opportunity for analysing its operation in practice. This article raises the question whether this revised EU framework was able to cope with the unfamiliar risk of AI by studying the initial response in two EU member states: the UK and the Netherlands.¹ For this purpose it analyses the public debate in these two countries as reported in the public media. The public media constitute an arena where interpretations and discussions on how governments should handle the unknown risk of AI are clearly expressed. The article discusses how differences in risk definitions relate to different policy decisions in these countries and how this creates tensions within the EU framework. Before reporting on these empirical findings we will discuss, in the next section, the conceptual approach underlying this study, followed by a presentation of the methodology. We will then analyse the UK and Dutch media debates and the implications for AI governance. Finally, we examine the relations between these debates and the responsibilities ascribed to different actors in the European food safety regulation framework.

2.2 Mass-mediated risk governance

Highly pathogenic avian influenza H5N1 constitutes a complicated food-related risk. First, the risk emerged in the early 2000s and for a long time it remained unclear how to categorise this danger: as an animal health risk, a human health risk, an agricultural risk, or a food safety risk. Second, the pathogen escapes everyday sensory experiences, and therefore is undetectable without the help of specialised scientific instruments. Finally, the pathogen has sources that are distant in space (Adam 1998).² Consequently, neither the definition of the risk nor the adequate policy response were clear and in different European countries public debates emerged. The need to find the correct response to this seemingly imminent threat put a pressure on this debate. Thus in the public discussion the process of defining the risk was closely related to the policy-making process. In this debate different perceptions on the risks related to AI and on the necessity and possibilities to act surfaced, including discussions on the responsibilities of different actors (Dean 1999; Hajer and Versteeg 2005). Governance actors were challenged to transform AI from an unknown to a known risk. This raises the question whether they were successful in overcoming ignorance and constitute a reliable base for policy making and what ‘non-knowledge’ remained. Non-knowledge here is referred to as the “type of knowledge where the limits and the borders of knowing are taken into account for future planning and action” (Gross 2007: 749).

The starting point for analysing risk governance can be found in how the risk is determined, in its ‘relations of definition’ (Beck 2009: 29 ff.). This process includes questions such as: ‘Who is responsible for determining a risk?’ ‘What (non-)knowledge is involved in its determination?’ ‘What will count as ‘sound proof’?’; and ‘Who is responsible for regulating the risk?’. Science used to possess the monopoly in supplying ‘universal’, ‘objective’ information on food risks to policy makers but different incidents in the 1990s eroded the self-evidence of this position (Knowles et al. 2007). The public became aware that: (i) the firmness of scientific evidence was debatable, as scientists repeatedly disagreed what evidence was correct or relevant; (ii) science did not only solve problems, but contributed to creating unanticipated risks as well; and (iii) science in itself did not justify political, value-laden choices, including the quintessential question in risk governance of what risk level is acceptable (Beck 2009; Oosterveer 2002). Consequently, risk assessment

and management processes have opened up for different actors struggling to have their perspectives recognised as well (Mol and Bulkeley 2002).

Mass media form an important arena where such struggles are staged (Adam 1998; Beck 2009). They are ranked consistently as the main sources of information on science and politics by Europeans (Eurobarometers 2005, 2007, 2008). For actors aiming to gain public support for their perspectives, mass media are vital arenas to appear in, because there they can legitimate their perspectives and decisions (Allan 2002; Mol 2006; Peters et al. 2008). In the mass media actor coalitions ('discourse coalitions') are likely to emerge in relation to certain storylines, which are "narratives on social reality through which elements from many different domains are combined and that provide actors with a set of symbolic references that suggest a common understanding" (Hajer 1997: 62). These storylines consist of narratives on the nature of risks that put abstract phenomena into scientific, cultural, economic, and political contexts (Hajer and Versteeg 2005), facilitating a reduction of discursive complexity that allows actors to demonstrate how their knowledge fits in wider knowledge frames and what role is given to non-knowledge. Moreover, storylines position actors in relation to risks and their possible solutions, designating which actors should be regarded as experts or lay persons, and which as problem-causers or problem-solvers. This way, discourse coalitions legitimate specific definitions of risk, and delegitimize others—either informally through internalisation of a storyline by actors, or formally when a storyline becomes translated into policies and institutional arrangements. Hence, the more a storyline is discursively and institutionally enacted, the more 'real' it appears (Beck 2009).

2.3 Methodology

The UK and Dutch debates on food and agricultural governance of AI were studied as covered by national newspapers. The choice for this medium was based on their importance as source of information on science and politics for the general public,³ combined with the practical availability of full-text newspaper articles. For the UK case, the *Guardian* (*G*) and the *Times* (*T*) have been selected; for the Dutch debate, *De Volkskrant* (*VK*) and *NRC Handelsblad* (*NRC*) were included. These national newspapers—traditionally positioned

left and right of the political center, respectively—have been selected to incorporate a wide range of views on the governance of AI within the UK and the Netherlands in the sample.

Newspaper articles were found through the Internet-based archive LexisNexis, using search terms *bird flu*, *avian flu*, or *avian influenza* in the UK; *vogelgriep* (bird flu), *vogelpest* (bird plague), and *aviaire influenza* (avian influenza) in the Netherlands. Articles published between 11 August 2005 and 11 August 2006 were selected.⁴ On the first of these dates, outbreaks of highly pathogenic H5N1 AI in poultry in the Russian Federation and Kazakhstan were reported about in European mass-media. This signified the beginning of substantial public debates on how to deal with the food and agricultural risks from AI (European Commission 2005a). Because of our focus on governance this selection was further refined to include only those articles which contained: (i) reasons underlying the emergence or (potential) spread of AI to and among poultry, and from poultry to humans; (ii) food and agriculture-related definitions of (potential) problems for the UK, the Netherlands, or the EU; and (iii) arguments on solutions for these (potential) problems. After applying these criteria a total of 131 UK and 280 Dutch newspaper articles remained.

The selected articles have been coded on the occurrence of elements of storylines (scientific, cultural, economic, and political contextualisations of risks, and arguments positioning actors in relation to these risks and their solutions), and the composition of discourse coalitions subscribing to these storylines. Our focus was on the arguments applied to legitimate risk perspectives ascribed to specific governance actors. The analysis of the selected articles was initially steered by theory-informed categorisations, but other categorisations were allowed to emerge during the research process. Through iterative interaction between the investigator and the data (Altheide 1996) the resulting storylines and discourse coalitions are identified to reflect the main developments in both countries. The storylines have been connected with the relevant policy developments in the UK, the Netherlands, and the EU.⁵

2.4 The Dutch debate

2.4.1 *Setting the stage: wild birds, animal health, and economic risks*

Russia and Kazakhstan reported outbreaks of (H5N1) AI in poultry in late July and early August 2005 (OIE n.d.; WHO 2006). In reaction, Dutch parliamentarians demanded that the minister of agriculture order all poultry indoors to prevent the infection of domestic poultry (*VK* 12 August 2005, *NRC* 17 August 2005). After consulting the national committee of scientific experts on AI, the minister imposed a temporary measure to keep all commercial poultry indoors or under cover (*VK* 17 August 2005; *NRC* 7 August 2005; Ministry of Agriculture, Nature and Food Quality (LNV 2005a). The scientific experts could “not rule out”⁶ the possibility that migratory birds would infect Dutch poultry (*NRC* 17 August 2005; LNV 2005a). This precautionary measure was essentially justified by referring to a previous AI epidemic that hit the Netherlands in 2003, which involved a highly pathogenic H7N7 virus. To fight that outbreak, approximately 30 million birds (30% of the Dutch flock at that time) were culled creating wide-spread concerns in Dutch society. Moreover, one veterinarian deceased after becoming infected with the virus.

A prominent member of the Dutch scientific expert committee,⁷ virologist professor Ab Osterhaus, stated that they had advised the confinement of poultry because “one [infected] bird suffices. We know that the bird flu outbreak in the Netherlands in 2003 came here via geese. We simply cannot run that risk” (*VK* 27 August 2005). He added that the massive culling to fight the previous epidemic had left “many scars” in Dutch society, which further legitimated the precautionary stance (*VK* 26 August 2005). Minister Cees Veerman emphasised that the Netherlands had learned its lesson from the 2003 epidemic (*VK* 17 August 2005). To avoid having to fight a new one, he chose to take measures “rather one week too early than fifteen seconds too late” (*NRC* 21 September 2005). The chairman of the Dutch Union of Poultry Farmers agreed: “We must aim at avoiding an outbreak by all means. The sector will not survive a new bird flu epidemic” (*VK* 17 August 2005).

However, veterinary experts in other EU member states assessed in August 2005 that the risk of the AI virus spreading by migratory birds was remote or low. Imports of live poultry and fresh poultry products would pose greater risks, but these were already

regulated via EU bans of imports from countries where the virus was detected. The hypothesis that wild birds spread AI was considered valid, yet unproven, making an EU ban on keeping poultry outdoors “disproportional”, according to the European Commission (*VK* 26 August 2005; *NRC* 26 August 2005; see also European Commission 2005a). European Commissioner of the Health & Consumers Directorate-General (DG-SANCO) Markos Kyprianou warned the Netherlands that its unilateral action disturbed coordination within the EU (*VK* 21 September 2005). Nonetheless, the Dutch government persisted in applying the precautionary measure (*VK* 26 August 2005; *NRC* 26 August 2005), making use of exceptions included in EU regulations.⁸ Osterhaus defended the Dutch measure because, unlike their dissenting European colleagues, Dutch experts realised that infected migratory birds could bring AI to the Netherlands (*NRC* 6 September 2005). Furthermore, the Netherlands would be particularly at risk due to its high poultry densities (allowing the virus to infect large numbers of poultry in little time), coupled with large amounts of poultry kept outdoors near resting places of migratory birds (*VK* 26 August 2005; *NRC* 6 September 2005).

In October 2005, an AI virus relatively similar to the one found earlier in Russia and Kazakhstan was detected in Turkish and Romanian poultry (OIE n.d.; WHO 2006). Also according to many non-Dutch experts seated in the EU Standing Committee for the Food Chain and Animal Health this similarity would indicate that the virus was spread by migratory birds (*NRC* 13 October 2005; *VK* 14 October 2005; see also European Commission 2005c). Commissioner Kyprianou became convinced that “we have to work with the hypothesis that migratory birds can carry the virus” (*NRC* 14 October 2005). However, the Commission did not issue a general requirement to confine poultry indoors. Situations differ significantly within the EU, so the member states were to assess themselves the risks of virus transmission from wild birds to poultry on their territory based on commonly agreed risk factors,⁹ and to implement appropriate measures correspondingly—including the confinement of poultry in high-risk areas (*VK* 15 October 2005; *NRC* 15 October 2005; see also European Commission 2005c).

As AI was knocking on the “gates of Europe; in Romania and Turkey” (*NRC* 14 October 2005), questions arose whether such infected European poultry would entail a human health risk. Osterhaus stated that, as long as the virus had not mutated into a form more pathogenic for human beings, it mainly formed an animal health and economic risk

within Europe, rather than a human health concern. Intensive, unhygienic contact between infected poultry and humans would be necessary for the virus to jump the species barrier, which he considered far less likely in Europe than in Southeast Asia and Africa (*VK* 14 October 2005). The Dutch Food and Consumer Protection Authority (VWA), as well as the European Food Safety Authority (EFSA), communicated that there was no evidence that AI would be a food safety problem. Nevertheless they suggested that cooking poultry products would be prudent, also to avoid other infections such as salmonella (*VK* 27 October 2005; see also EFSA 2005; VWA 2005). Dutch consumers' trust in poultry products remained high during this episode: no larger falls than 5 percent to 10 percent in poultry sales were reported (*VK* 22 February 2006; *VK* 21 March 2006).

The view that AI might become an economic and animal health risk if migratory birds come into contact with poultry, dominated the public debate in the Netherlands. Therefore the policy of confining poultry was widely accepted, although dissenting voices remained.

2.4.2 Dissenting voices

In the Dutch debate, two alternative perspectives were advocated, both focusing on the role of wild birds in spreading the virus. First, a group of ornithologists contested that wild birds could infect poultry in the fall of 2005, making it doubtful whether the Dutch mandatory confinement of poultry was proportional (*NRC* 17 August 2005; *VK* 27 August 2005; *NRC* 14 October 2005).¹⁰ A second alternative storyline was communicated by a group of scientists who deemed international poultry trade (*VK* 27 August 2005; *VK* 10 February 2006), combined with high poultry densities in intensive holding systems (*VK* 25 February 2006), more significant risk factors than wild bird movements. They claimed that live turkey imports from Italy and not wild geese had introduced AI in Dutch poultry in 2003 (*VK* 19 October 2005). These arguments were endorsed by interest groups of organic farmers and animal welfare campaigners. Whereas “the real problem is the enormous density of large factory-farms with a great deal of animal movements” (*VK* 17 August 2005), organic and free-range farmers were forced to alter their farming practices, significantly reducing animal welfare levels (*NRC* 22 September 2005). Conversely, intensive poultry farmers were allowed to continue business as usual. According to this

view, the Dutch minister of agriculture “meets the wishes of the factory farming industry” (*NRC* 19 August 2005) at the expense of organic farmers and their animals’ welfare (*VK* 18 October 2005).

Despite these dissenting voices, migratory birds dominated the Dutch public debate as the main source of potential virus spread to the Netherlands. Moreover, Dutch government institutionalised this storyline by recurrently ordering poultry indoors during bird migration seasons and when outbreaks occurred relatively near to Dutch territory.¹¹ Nevertheless, practical problems in implementing the measure and concerns about possible failure contributed to a search for an alternative policy instrument.

2.4.3 Preventive vaccination: an alternative policy instrument?

According to the minister of agriculture, preventive vaccination would be more effective to control AI than confining poultry (*VK* 23 November 2005). Moreover, the minister considered this a possible alternative to “preventive culling of millions of healthy animals during an outbreak of bird flu [which] is out of date. The societal resistance is very large” (*VK* 23 February 2006). A majority of Dutch parliament members propagated preventive vaccination as an economically rational alternative to mass culling (*NRC* 19 October 2005). They were joined by a coalition of free-range poultry farmers, animal welfare campaigners, and hobby-poultry holders who viewed preventive vaccination as an animal friendly alternative to confining poultry (*NRC* 22 August 2005; *NRC* 8 October 2005; *VK* 22 February 2006).

The minister refrained from implementing this measure, because “Brussels does not allow it” (*NRC* 14 October 2005; Council of the European Union 1992). To avoid an EU ban on Dutch poultry products, preventive vaccination in the Netherlands would only be feasible if accepted and implemented by the entire EU (*VK* 23 November 2005). The EU, however, did not allow preventive vaccination against AI because it would be difficult to differentiate between vaccinated and infected animals, as both carry antibodies against AI. This would mean that vaccinated infected animals could still spread the virus “by stealth” (*NRC* 22 February 2006). Dutch scientists responded that effective methods to differentiate between vaccinated and infected animals existed (*VK* 22 February 2006).¹² Another argument against vaccination was the possible refusal by third countries to import

meat of vaccinated poultry. In response, Dutch politicians argued that the costs of culling to fight an outbreak would be higher than averting it by vaccinating preventively and losing these export markets (*VK* 27 February 2006). European consumer resistance against vaccinated poultry products, inciting supermarkets to refuse selling such products (*VK* 19 October 2005; *VK* 27 February 2006), was a third reason for the EU ban. A Dutch expert, conversely, argued that the “consumer wants poultry—once put in shackles to protect its health—to return in the meadows. Then it is at risk of the bird flu, it is as simple as that. Therefore you will have to protect the birds with vaccines” (*NRC* 23 February 2006). Other experts emphasised that products of vaccinated poultry have no negative human health effect at all (*VK* 29 November 2005; *NRC* 23 February 2006).

Despite the resistance, in December 2005 the European Council allowed preventive vaccination under specific circumstances (Council of the European Union 2006). In February 2006, the Netherlands submitted a plan to offer voluntary vaccination of hobby-poultry and laying hens in free-range and organic production systems. Vaccination was voluntary, because vaccinating could endanger poultry trade, and the minister of agriculture considered keeping poultry indoors an effective preventive measure (*VK* 21 February 2006). A day after submittal, the European Commission approved the Dutch plan (*NRC* 22 February 2006; *VK* 23 February 2006; see also European Commission 2006a; LNV 2006b). According to Commissioner Kyprianou, “Recent cases of avian flu in wild birds in the EU have compounded the need to explore every possible option to protect our poultry from this virus” (*NRC* 22 February 2006; European Commission 2006a).¹³

The EU permission to start vaccinating preventively was considered a breakthrough by the minister (*VK* 23 February 2006), who was praised by Dutch parliament for this success (*NRC* 23 February 2006). Yet the outcome was less positive—or, according to a Dutch parliament member, a “big fiasco” (*VK* 13 April 2006). Although farmers in principle favoured preventive vaccination, they would only implement it if they could continue to market their products, the chairman of the Dutch Organic Poultry Farmers Association explicated (*VK* 22 February 2006; *VK* 1 May 2006). Officially, vaccinated poultry products could be sold throughout the EU if the official EU criteria were met (*NRC* 22 February 2006; *VK* 23 February 2006; see also European Commission 2006a). Although Dutch supermarkets reportedly agreed to put products of vaccinated poultry on their shelves (*VK* 22 February 2006; *VK* 1 May 2006), German supermarket chains refused out of fear of

consumer backlash (*NRC* 21 March 2006; *VK* 1 May 2006). Because approximately one-third of Dutch poultry meat and 90 percent of Dutch eggs were destined for export to Germany, preventive vaccination was not an option for most farmers: “If the export fails, you go bankrupt, so you do not vaccinate” (*VK* 1 May 2006).

2.5 The UK debate

2.5.1 Setting the stage: wild birds and their potential threat to animal health

The decision by the Dutch to order commercial poultry indoors in August 2005, pressured UK actors to define their position on how to protect British poultry (*T* 23 August 2005). According to the UK Department for Environment, Food and Rural Affairs (Defra), the presence of AI in Russia signified an increased risk of virus spread by migratory birds to the UK. However, ordering poultry indoors would not be “proportional to the risk” (*T* 23 August 2005)—a risk which, in accordance with the assessment of the majority of European experts, was held to be “remote or low” (*G* 26 August 2005). The head of the British Veterinary Association (BVA) Bob McCracken stressed that the UK had “to prepare for the fact that the virus will eventually come here” via proactive surveillance of birds in risk areas (*G* 26 August 2005). After meeting with industry bodies, Defra stated that they were preparing measures cooperatively (*G* 24 August 2005). Aiming to learn from the mistakes made while handling the foot and mouth disease outbreak that hit the UK in 2001, and from the Dutch AI outbreak in 2003, Defra was planning rapid mass culling to confine a possible outbreak (*G* 26 October 2005).

Organisations representing organic and free-range poultry farmers supported Defra’s stance for different reasons. The British Free-Range Egg Producers Association feared that bringing poultry indoors would lead to a consumer backlash: “What is the consumer going to think, who pays a premium for free range eggs?” (*T* 23 August 2005). The Soil Association—representing organic farmers—argued that confining poultry “would be a nightmare from a cost, welfare and disease point of view” (*T* 23 August 2005). In the UK, it was argued, many free-range farmers do not possess facilities to house birds, requiring costly sheds to be built if poultry has to be confined; housing poultry would significantly decrease their welfare and would, while combating AI, “increase the chance of

other diseases spreading” (*T* 23 August 2005; *G* 19 October 2005). Such problems were considered more significant in the UK than in the Netherlands, as the number of birds kept outdoors is approximately three times as great in the UK compared with the Netherlands (*T* 23 August 2005; *G* 19 October 2005).

Like in the Netherlands, it was also communicated in the UK that the AI threat to Europe was primarily an economic and animal health risk. The UK health secretary Patricia Hewitt argued that “This is a bird disease. There is no reason for people to stop eating poultry” (*G* 18 October 2005). According to the UK Food Standards Agency no evidence existed that eating poultry products involved any AI-related human health risks (*G* 27 October 2005; *G* 8 April 2006; see also ACMSF 2005). The government’s chief scientific adviser, professor Sir David King, backed by “one of the world’s leading influenza epidemiologists” (*T* 3 March 2006) professor Neil Ferguson, added that AI in Britain would not pose a public health risk, because British people do not interact with birds as in Asia where bird-to-human infections had occurred through close contact (*T* 3 March 2006). The UK poultry industry was keen to repeat such reassurances. The president of the National Farmers’ Union (NFU) argued: “Scaremongering will destroy the British poultry industry ... Remember eating chicken, meat and eggs, cooked properly, is safe” (*T* 27 February 2006). Moreover, the NFU urged consumers to “buy British”, so they would know what they were eating (*T* 16 February 2006), and support UK farmers (*T* 17 February 2006). The four largest UK supermarket chains reported no fall in demand for poultry products (*G* 28 October 2005; *G* 8 April 2006), “so obviously the message is getting through to consumers that this isn’t a food safety issue” (*G* 8 April 2006), a supermarket spokesperson argued.

2.5.2 To confine or not to confine poultry

Critics of the UK policy commented on the decision not to confine poultry, but they did not extensively discuss alternative routes of AI introduction as in the Dutch public debate.¹⁴ Human health scientists—most notably the renowned authority on influenza (Nerlich and Halliday 2007) professor John Oxford—argued for bringing UK poultry indoors because “It is not out of all possibility that we could be at risk” (*T* 23 August 2005). The NFU expressed willingness to support a potential governmental move to bring poultry indoors, if the government would guarantee free-range produce could still be sold with a premium,

because “the costs of avian influenza striking here just don’t bear thinking about” (*T* 23 August 2005). The Soil Association strongly opposed such a possibility: “You have a situation where you are being told avian flu could reach here in a year, or five or 10. Do farmers have to keep their poultry inside all that time? If you do this you would be destroying the most successful part of the farming sector—the growth of free range and organic” (*G* 19 October 2005). Making use of the political room for manoeuvre within the EU, Defra decided that ordering poultry indoors was disproportional (*G* 14 October 2005).

When AI-infected wild birds were reported by Germany and France in February 2006, and the Dutch government ordered the confinement of outdoor poultry (LNV 2006c), Animal Health minister Ben Bradshaw argued that “the risk according to vets is still low” (*T* 18 February 2006). He pointed out that areas where infected birds were found were not situated on migratory routes toward the UK (*G* 20 February 2006; *T* 20 February 2006). This provoked professor Oxford to argue that, although British officials would be very capable to handle an outbreak, “the gaping chasm seems to me that they are not prepared to act to stop one coming” (*T* 20 February 2006).

On 5 April 2006, AI was detected in a wild swan in Fife, Scotland. The Scottish executive reacted by ordering all poultry indoors or otherwise separated from contact with wild birds in a 2,500-square kilometre Wild Bird Surveillance Zone around Fife (Scottish Government 2006). Immediately voices were calling for the confinement of birds across the UK. For instance, one veterinarian stated: “If I were a poultry keeper, if it were possible I would be moving my birds indoors before it becomes mandatory to do so”, while stating further that the “time is fast approaching when we will need to order birds inside throughout Britain” (*T* 7 April 2006). Yet in the absence of evidence that this single dead swan would signify the beginning of wider infections in the UK, the government judged that ordering poultry indoors as a general measure was not yet necessary (*T* 7 April 2006; Defra 2006). The NFU Scotland applauded “the proportionate nature of the response” (*T* 8 April 2006). When no further AI infections were found within the UK, restrictions in the Wild Bird Surveillance Zone were lifted.

2.5.3 Preventive vaccination: an alternative solution to a future problem?

Despite the government's reluctance to order the confinement of all poultry in the UK, the repeated discussions on the possibility of such a measure instigated fear about the future of outdoor farming practices. To preclude confinement, free-range and organic farmers advocated preventive vaccination as an alternative (*G* 21 February 2006; *T* 21 February 2006). Vaccination could avoid "medieval" mass slaughter, a spokesperson from the Soil Association posed (*G* 26 October 2005). Also organisations representing countryside businesses favoured preventive vaccination to assure that these businesses would not suffer from an AI outbreak: "During the foot and mouth outbreak countryside businesses lost money hand over fist, with many jobs and livelihoods lost. That must not happen again" (*G* 21 February 2006).¹⁵

The UK government did not consider preventive vaccination of British free-ranging poultry a viable option. Primarily because "the logistics would be very difficult. Every bird would have to be vaccinated twice, with stress on the birds and the handlers" (*G* 21 February 2006). Second, professor King claimed that vaccination could "mask" the presence of AI: "I would be very concerned about the spread with the current vaccine. What it means is that every time you vaccinate you have to increase surveillance because signs of the disease are not very obvious" (*G* 6 April 2006). Based on these arguments, Defra preferred to rely on early detection, movement control, and slaughter of infected birds to eradicate potential AI outbreaks swiftly. Defra added not to have a principled objection to preventive vaccination "but currently available vaccines are too limited to provide a general solution" (*G* 21 February 2006).

Whereas farmers in the UK were prohibited to vaccinate preventively, Dutch products of vaccinated poultry could enter the UK market according to EU legislation. The UK supermarkets, however, would not market these products. The director-general of the British Retail Council stated: "retailers will wish to shore up confidence in chicken sales and will not damage customer confidence by mixing meat from vaccinated birds with their normal supplies" (*T* 24 February 2006).

2.6 Discussion: contesting food and agricultural risks and their governance

When the AI outbreaks in Russia and Kazakhstan showed the real possibility of a new food and agricultural risk in Europe, this unknown danger had to be defined and adequate (policy) responses developed. Our analysis of the public debates as expressed in the media showed that in the Netherlands and the UK it was consistently communicated that no evidence existed that AI entailed a food safety risk, nor that it was likely to become a human health risk under European conditions. However, the nature and governance of the animal health and economic dimensions of AI were subject to considerable discursive and institutional struggles.

With regard to the determination of the nature of the risk, both in the Dutch and UK debates, scientists promoted their knowledge as a sound base for policy making. However, their views differed in some important respects. In the Netherlands, the committee of scientific experts on AI, as well as experts in migratory birds, argued that wild birds were to be considered significant vectors of the virus, which could ‘realistically’ be expected to bring the virus to Western Europe. In the UK, on the contrary, scientists advising government considered the actual chance that wild birds would infect UK poultry minimal. In the Dutch debate some scientists developed a radically different storyline, focusing on poultry trade as a more likely route of infection. However, when the AI outbreaks occurred in Romania and Turkey, corroborating the hypothesis that wild birds spread the virus, the European status of the ‘wild birds hypothesis’ changed from valid, yet unproven, to one ‘we have to work with.’ This move by the EU undermined the legitimacy of alternative storylines.

Besides allowing scientists to assert their authority in defining the risk, the discursive and institutional importance of the wild birds hypothesis also had important implications for struggles on the legitimacy of political choices in risk management. Instead of relying on technical legislation to establish political closure at EU level (Donaldson 2008), member states accepted particular local circumstances in the decision-making process. The European Commission handed over to them the responsibility “to take the appropriate measures, according to national circumstances, to reduce the risk of AI being spread from wild birds to domestic birds” (European Commission 2005c). The uniqueness

of wild bird movements and their poultry farming practices could therefore be used by the Dutch to legitimise their decision to confine poultry, and by the British not to confine them.

Although these ‘national circumstances’ were defined in principally technical, natural science-based risk factors, our review showed the prevalence of other, notably political, social, and economic, factors in discussions on governance measures. In the Dutch debate, scientists, politicians, and poultry farmers, argued for the confinement of poultry to forestall another economically detrimental and socially undesirable mass slaughter of poultry. In the UK public debate, scientists, politicians, and free-range poultry farmers defined the AI threat as a future one, which would make confining poultry only proportionate if the risk level had grown higher. This assessment was for an important part legitimised by referring to the consequence of confining poultry: the end of UK free-range and organic poultry farming. Keeping in mind the UK response to the 2001 foot and mouth disease (Ward et al. 2004), the political risk of taking disproportionate measures was portrayed as higher than the risk of AI outbreaks spreading out of control. Hence, the Dutch and UK governments legitimised their decisions partly in reference to country-specific political, economic, and socio-historical concerns, while claiming increased authority in defining risks applying technical procedures harmonised at EU level. Further possibilities for legitimising differentiation in animal health legislation between member states became institutionalised when “cases of avian flu in wild birds in the EU ... compounded the need to explore every possible option to protect our poultry from this virus” (European Commission 2006a), and the EU allowed member states to carry out preventive vaccination against AI. In the Netherlands this permission was celebrated as a breakthrough, and the measure was advocated as scientifically sound, as well as economically rational and socially more responsible. In the UK—where free-range farmers advanced a similar stance—this argument was not followed as the government argued that vaccination would be a possible alternative only if more scientifically sound and more practically administrable vaccines would be available.

Consumers (and their organisations) were largely absent in the debates on governing AI. Yet due to different decisions in animal health governance between the member states, market differentiation within the EU’s common internal market emerged. Consumers could encounter, on the supermarket shelves, free-range poultry products stemming from unvaccinated or vaccinated animals kept outdoors, and from poultry kept

(temporarily) indoors. These products could, according to EU legislation, all be sold as ‘free-range’, without any further information. Informed consumer choice in this respect hinged on private market actors’ willingness to supply additional information. Notably, UK supermarkets intervened by promoting their private “hierarchy of quality definitions” (Flynn et al. 2003), arguing they would not sell poultry products stemming from vaccinated birds to retain consumer confidence. The power of the supermarkets in defining the risks of AI had a significant impact on the regulatory outcomes. Most free-range poultry farmers in the Netherlands would prefer preventive vaccination, but this option was unviable because supermarkets located in other countries would refuse to sell their products if vaccinated. Accordingly, the Dutch government’s decision to allow vaccination only created a shift in the justification of why most Dutch free-range farmers were to confine their poultry and not in their actual practices: free-range poultry was no longer to be confined on the government’s order, but due to decisions by non-Dutch supermarkets. The reduction of the harmonisation in food and agricultural regulation within the EU, resulting from the increased opportunities for member states to develop their own policy, augmented the possibility for market actors to legitimately develop their own private regulation.

2.7 Reflection

The case of avian influenza in Europe proved instructive in furthering our understanding of contemporary ways of handling risks. AI was known as a biological phenomenon but the chances of affecting poultry and humans in the European context or the way the virus spread were not known. These unknown dimensions had to be addressed to allow regulation. Within a few months in 2005, the unknown aspects of AI had to be reduced to limit non-knowledge to the time and place where AI would surface, and build knowledge about its spread and the measures to handle incidents. Scientists and politicians engaged in public debates and exchanged scientific, but also economic, political, and social arguments in their effort to determine the correct decisions and to acquire public support for them. From our analysis, we can make three key observations on the way both governments handled this food and agricultural risk in the context of a reformed regulatory framework in the EU.

First, science remained central in the policy making on AI as policies were for an important part justified by referring to expert knowledge. However, the scientific community was not unanimous particularly on the key issue of assessing the chances of the virus spreading via migrating birds where different scientists publicly expressed their contradictory assessments. Although this is conform to the EU's intention to base its reformed regulatory regime on the highest level of scientific knowledge, scientific uncertainty is more clearly expressed nowadays than in the past. Consequently, the 'closure' of contestation on defining the risk is difficult to achieve and governments cannot rely on an accepted definition of the risk as a basis for policy making.

Second, scientists legitimated their policy advice not only based on natural-scientific arguments as they did in the past, but also on political, economic, and social arguments. This is sensible in view of their attempts to provide a knowledge base to inform risk policy that centres on the question which socially acceptable policy measures to take. Also this change is conform to the EU's intention to incorporate consumer trust as a standard practice in policy making. Yet such non-scientific arguments can be contested and there is little justification for the privileged role of scientific experts in this debate. Consequently, policy decisions legitimated through scientific advice are opened to further contestation.

Third, the EU created room for differentiation between the member states on their food and agricultural policy decisions based on natural-scientific knowledge and technical standards. Yet the UK and the Netherlands applied this leeway to seek public support for their risk policies in reference to not only scientific and technical arguments, but also to country-specific societal concerns. Whereas this seemed sensible in the search for consumer trust in their risk governance decisions, it complicated the effective functioning of the EU internal market. Policies on animal health and food safety started to differ between member states, challenging the common EU market. This situation allowed private actors, such as supermarkets, to take their own decisions and gain legitimacy for an increased involvement in risk governance.

This study on the initial response in two EU member states to the unfamiliar risk of AI shows how the EU's reformed regulatory regime of food safety is implemented in practice and has to face several new challenges. Particularly the intentions to incorporate consumer trust, while at the same time securing the EU's internal market proved difficult to

combine, in particular if social, economic, and political considerations are allowed in risk politics in conjunction with scientific arguments. Our study shows that this hybrid combination of arguments may differ considerably between different countries making a harmonised EU regulatory framework rather elusive.

Notes

1. The UK and the Netherlands are interesting to study in this regard, as previous research indicated country-specific differences between their handling of the BSE crisis (Oosterveer 2002), allowing for an assessment of the merits of the new EU food regime in terms of the co-ordination and harmonisation of legislation at the EU level.
2. The implicated AI strain first emerged in southeast Asia (WHO 2006).
3. Newspapers rank second behind television (Eurobarometers 2005, 2007), or third behind television and Internet (Eurobarometer 2008), in lists of most important information sources for Europeans.
4. The initial selection of yielded 206 UK and 626 Dutch newspaper articles.
5. Because of reasons of space, in this article we focused on how to deal with highly pathogenic AI risks. Cases of low pathogenic AI outbreaks in the UK (Norfolk, April 2006) and the Netherlands (Voorthuizen, August 2006) are thus left out of the discussion. The entrance of H5N1 into the UK in October 2005 via the import of infected pet birds is also omitted; this incident took place in quarantine facilities, and did not affect the UK's official disease-free status.
6. All quotes having Dutch newspapers as sources are the authors' translations.
7. Osterhaus's prominence is exemplified by the sentence: "Say 'bird flu,' or just 'flu,' and you say 'Ab Osterhaus'" (*VK* 27 August 2005). The Guardian referred to Osterhaus as "the world expert on avian flu" (07 April 2006).
8. One of these exceptions is that produce may be labelled as 'organic' or 'free-range' if they stem from animals kept indoors temporarily on recommendation of veterinary authorities (*VK* 18 August 2005, cf. LNV 2005a).
9. These risk factors included "the location of farms along migratory flyways, the distance of holdings from wet areas where migratory water fowl may gather and the keeping of poultry or other domesticated birds in open-air farms" (European Commission 2005c).
10. Articles reflecting voices arguing that wild birds did not yet pose a significant threat to Dutch poultry in 2005 numbered ten, all in the months of August, September, and October of that year.
11. This requirement was, after being annulled from January 1 on, reissued from 20 February 2006 until 1 May 2006 (LNV 2005b, 2006b, 2006c).

12. In the corpus of Dutch articles, only one Dutch expert argued against preventive vaccination, because vaccination could mask the presence of the virus in poultry (*VK* 25 February 2006).
13. In February 2006, the list of Western European countries in which infected wildlife was detected included Austria, France, Germany, Greece, Italy, and Switzerland (OIE n.d.).
14. In the corpus of UK articles, only five articles incorporated actors aiming to define the avian influenza threat as a result of intensive farming and poultry trade practices.
15. Voices arguing in favour of preventive vaccination of UK poultry were included in ten of the UK newspaper articles.

3

Understanding Consumer Rationalities: Consumer Involvement in European Food Safety Governance of Avian Influenza^{*}

Abstract

Avian influenza is one more of the recent food scares inciting shifts in European food safety governance, away from a predominantly science-based approach towards one involving scientists, policymakers, actors in the food-supply chain and consumers. While these shifts are increasingly receiving scholarly attention, sociological insight into the involvement of consumers and other actors across the multiple levels of today's food safety governance requires further development. This article aims at contributing to the understanding of consumer perspectives on food safety governance by expounding the results of an explorative research among Dutch consumers, which focused on food risks related to avian influenza. To give ample room for the construction of contextual knowledge, consumers of poultry meat were questioned at various retailers by applying a qualitative interviewing method. From this research, it is concluded that multiple consumer rationalities about food safety governance exist. As a consequence of the existence of these multiple consumer rationalities, a differentiated governance approach to restore or retain consumer confidence in food safety in view of food-related risks is more likely to be pertinent than a 'one-size-fits-all' approach.

3.1 Introduction

Avian influenza is one more of the recent food scares inciting shifts in the EU approach to food safety.¹ In the aftermath of various food crises at the end of the 1990s, the EU intended to "contribute fundamentally to enhancing consumer confidence in EU Food

^{*}This chapter has been published as: De Krom, M.P.M.M. (2009) Understanding Consumer Rationalities: Consumer Involvement in European Food Safety Governance of Avian Influenza. *Sociologia Ruralis* Vol. 49 (1) pp. 1–19.

Safety policy” by establishing a “radical new approach” to food safety (European Commission 2000, pp. 3, 5). In line with this transition, the EU moved from prohibiting towards selectively allowing preventive vaccination of poultry for the control of avian influenza (Council of the European Union 2006). The Dutch government, which put much lobbying effort in creating this change, implemented its EU-approved preventive vaccination plan in March 2006 because “while fighting animal diseases, [it] wants to take societal feelings into account as much as possible” (Dutch Ministry of Agriculture, Nature and Food Quality [LNV] 2006d, p. 10, my translation). These aims expose intentions to replace the conventional science-based food safety approach made up of the three separate stages of scientific risk assessment, political risk management and risk communication to the general public by one that is more responsive towards consumer concerns. Yet, these intentions tend to get stuck in discourse first before reaching governance practices (Dagevos et al. 2006; Oosterveer 2002).

This lack of actual governance practices that are responsive towards consumer concerns can partly be explained through the ingrained perception of experts (government officials, scientists and food suppliers) that consumers suffer from a ‘knowledge deficit’ when it comes to assessing risks. Here the idea is that “experts do this thing well and consumers do not” (Hansen et al. 2003, pp. 111–112), because consumers lack the scientific knowledge on which experts base their risk assessment and management. Education of consumers would be able to undo this ‘knowledge deficit’, and herewith avoid ‘irrational’ public unease (Hansen et al. 2003). However, various studies indicate that consumers deal with risks in complex, context-sensitive processes involving not only scientific data, but also other socially valued aspects—processes that cannot be put aside as irrational simply because they differ from risk assessment based on scientific rationality (Beekman 2006; Halkier 2001b; Hansen et al. 2003; Slovic et al. 2000; Van Kleef et al. 2006; Warde 1997; Wynne 1996, 2001). The inadequacy, yet persistency of the ‘knowledge deficit’ model urged the European Consumers’ Organisation (BEUC) to stipulate that “Consumer policy has to be shaped generally in terms of how consumers actually are and not in terms of how we might like them to be, if only they were better informed and educated” (BEUC 2005, p. 9).

But what are consumers like? If they do not (merely) apply scientific rationality when dealing with risks, what rationality or rationalities do they apply? And what

challenges do such consumer rationalities entail for the shape of food safety governance that aims to be responsive towards consumer concerns?

In this article we aim to explore consumer rationalities concerning the governance of avian influenza among Dutch consumers, and to indicate the consequences that these rationalities entail for food safety governance that aims to be responsive towards consumer concerns. Firstly, we conceptualise the notion consumer rationality. Secondly, we describe our research methodology, in which social practices of consuming form the centre of analysis. We then discuss our empirical findings, from which different consumer rationalities can be distilled. These different consumer rationalities bring along different challenges for European food safety governance that aims to be responsive towards consumer concerns.

3.2 Conceptualising consumer rationalities

After Max Weber, a rationality can in its most general form be defined as a type of mental processes that serves to systematically master diffuse realities by ordering them into comprehensible regularities. These mental processes may introduce “conscious regularities of action” (Kalberg 1980, p. 1148, emphasis omitted) to master reality in daily practice. Depending on sociological and historical factors, such regularities of action can become sociocultural patterns of action of groups or larger sociological entities that may persist without a conscious reflection on the rationality that initially introduced such patterns, but in time become legitimised based on a different rationality (Kalberg 1980). In this conceptualisation, a ‘rationality’ is not limited to its scientific definition. Rather, as Weber (1962, pp. 77–78) argues: “one may ... rationalize life from fundamentally different basic points of view and in very different directions”. Consumers may thus rationalise their dealing with food-related issues from different points of view and in different directions than those used by experts.

But what constitutes a consumer rationality? Given the above conceptualisation of a rationality, a consumer rationality concerning food safety governance (hereafter: consumer rationality) is here defined as types of mental processes that guide regularities in consumer behaviour in relation to food safety. Put differently, a consumer rationality

consists of arguments that consumers apply to legitimise the reasons for their actions in dealing with the intricacies of food safety.

Consuming is, by definition, a situational act that often involves habitual behaviour (Spaargaren 2003). As such, consumer behaviour can be interpreted as a social practice (Reckwitz 2002, p. 249): “a routinized type of behaviour which consists of several elements, interconnected to one other: forms of bodily activities, forms of mental activities, ‘things’ and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge.” Following from this definition, a consumer rationality (a mental activity) is tied up with a consumer practice. Consumer rationalities are intrinsically connected to the context of consuming, which, among other things, entails the social institutions of selling food and of governing food safety.

The arguments constituting a consumer rationality refer both to the goals² of food safety governance, and to how to achieve these goals. To start with the former, a consumer rationality pertains to those issues that consumers deem important to be governed, which are their consumer concerns. In relation to food safety, consumer concerns can be product related, involving the monetary and material characteristics of products themselves (such as price, taste, freshness and nutritional value), and process-related, involving the effects of food production, trade, processing and retailing on, for instance, the environment, animal welfare and social equity.

Consumers’ arguments on how these concerns should be met entail the second main element of a consumer rationality, consisting of their perspectives on food safety governance. These include the degree to which and reasons why consumers hold themselves responsible³ for responding to their concerns, and the degree to which and reasons why consumers hold other governance actors responsible for responding to their concerns. Because responsibility always presumes decisions (Giddens 1999), the notion of trust comes to the fore: trust that bearers of responsibility make good decisions.

Under conditions of modernity most social relations relating to food governance practices are disembedded from local contexts and reorganised across indefinite spans of time–space. Before food is consumed, many different actors across distant times and spaces have taken decisions that impact on the safety of the products. Trust that particular food meets specific qualities can hence no longer be based on familiarity with all actors involved in food provisions. Rather, to bracket distance in time and space, relations of trust between

consumers and food providers can be recontextualised at access points, where abstract food systems meet consumers via interpersonal interactions (facework commitments) and/or symbolic tokens (faceless commitments) (Giddens 1990). What follows from this is that consumer trust is contextual. It is constitutive of and constituted in the situational and often routinised practice of consuming. Fateful moments (Giddens 1991)—experiences directing attention to the existence of an undesirable risk—cause consumers to rethink such routinised and often implicit thought patterns and consumption practices, making latent rationalities more discursive. With respect to food safety, a food-related threat like avian influenza is such a fateful moment that forces consumers to rethink and reformulate their ideas and practices regarding food safety and food safety governance.

The theoretical position taken in this article thus emphasises the relevance of the social perception and construction of a food-related risk such as avian influenza. Following Beck (2000, p. 213 original emphasis), the concept of risk characterises the intermediary state between security and accident “where the *perception* of threatening risks determines thought and action”—a perception that is by definition contextually constituted. As such, risks are a social “materialization in particular mediations, be it scientific, political, economic or popular” (Van Loon 2000, p. 176).

This is why the realist approach to risk governance that underlies the knowledge deficit model may fail in addressing consumers as they actually are. Trust in one’s wellbeing in the present, which is strained in the face of a possible future accident, can be enhanced only if risk definitions and governance practices resonate to consumers’ contextually constituted perception, which is not necessarily a scientifically constituted perception.

In sum, we define a consumer rationality as an interrelated and more or less coherent set of consumer concerns and consumer perspectives on the responsibilities and trustworthiness of different governance actors. Such a consumer rationality explains why consumers act as they do in dealing with the intricacies of food safety (see Figure 3.1).

Following Weber, we apply consumer rationality as a sociological concept related to consumer groups, rather than interpreting it as a psychological concept related to individual consumers. As such, we intend to explore the spectrum of different rationalities that consumers apply in dealing with food safety, and thus the different consumer

rationalities that governance actors have to deal with when designing and implementing food safety governance.

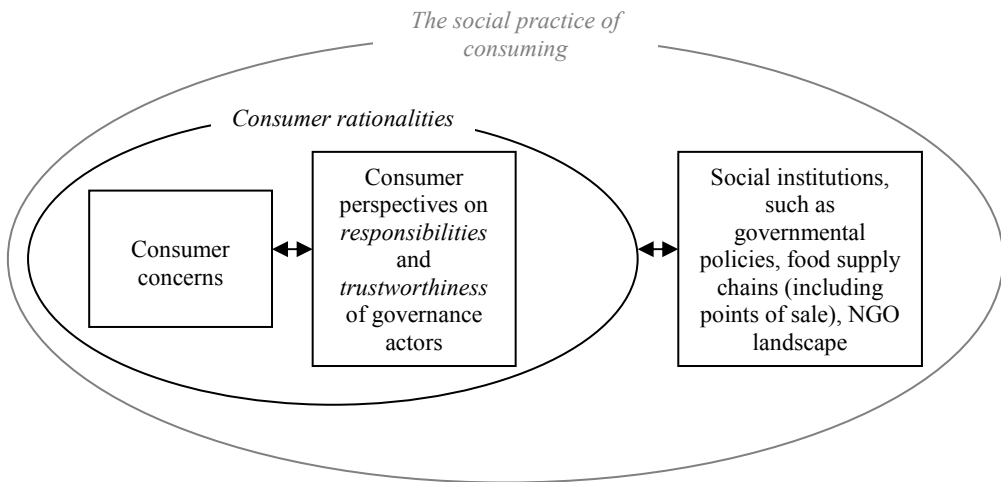


Figure 3.1. Analytical framework: the concept of consumer rationality within the social practice of consuming

3.3 Methodology

Following our conceptualisation of ‘consumer rationality’, our empirical research focuses on consumer concerns and on consumer perspectives on their trust in relevant actors and the responsibilities of these actors to (help them) meet these concerns.

To explore these consumer attributes in direct relation to the act of consuming, rather than exploring individual attitudes that are disconnected from behaviour (see Fishbein and Ajzen 1975), consumption behaviour needs to be operationalised as a social practice. In practical terms, this resulted in our conducting qualitative in-store interviews with consumers as soon as they had paid the cashier, in order to create “maximum opportunity for the construction of contextual knowledge” (Mason 2002, p. 64). Given our aim to explore consumer rationalities concerning European food safety governance, the

research was, for practical reasons, conducted in The Netherlands, which is one of the EU Member States.

We selected Dutch consumers buying poultry meat, as buying poultry meat during the threat of avian influenza was a social practice in relation to a fateful moment. This provided the best opportunities to disentangle the various aspects of (distinct) consumer rationalities. Our interviews were held from 13 January 2007 up to and including 7 February 2007. By this time multiple events had been and were still directing the attention of Dutch consumers to the avian influenza threat.

Since the introduction of highly pathogenic H5N1 avian influenza in domestic poultry in Turkey and Romania in October 2005, by February 2007 European countries had reported outbreaks of avian influenza in domestic poultry.⁴ These included countries situated relatively close to The Netherlands, such as Germany and France (Empres 2006; World Organisation for Animal Health [OIE] n.d.). Not only is H5N1 avian influenza highly pathogenic for domestic poultry, but it has also been the cause of many severe human diseases and deaths after bird-to-human infections, including four fatalities in Turkey in January 2006 (World Health Organisation [WHO] 2006a, 2006b). In a press release issued late November 2006, the Dutch Minister of Agriculture stressed that the avian influenza threat was to be considered a long-term concern for the country (LNV 2006e). Moreover, during the interview period infections in domestic poultry were reported by Hungary (January 24) and the UK (February 3), which immediately triggered policy measures by the Dutch Ministry of Agriculture to avoid Dutch outbreaks (LNV 2007a, 2007b).

To ensure that a wide range of potential consumer rationalities would be included in our empirical exploration, the selection of interviewees was based on variance in purchasing contexts (retailers of poultry meat) and in types of purchased product (types of poultry meat). The application of these criteria resulted in the choice of a supermarket (Albert Heijn XL, part of a leading supermarket chain in The Netherlands [Bijman et al. 2003]) as a first purchasing context. In this supermarket, four types of poultry meat products are available: (i) 'conventional' poultry meat products—meat products that are neither organic nor a luxury specialty, and which primarily compete with other meat products on the basis of their relatively low price; (ii) convenient poultry meat products—meat products that primarily compete with other meat products on the basis of being easy to

prepare; (iii) poultry meat specialties—meat products that primarily compete on the basis of their high, refined quality and (iv) organic poultry meat products. These four types of products mirror the four Albert Heijn homebrands (Albert Heijn n.d.). These four types also resemble more widely used sociological classifications of contemporary consumer behaviour (Dagevos 2005; Hansman and Dagevos 1999; Pellizzoni 2005). Besides the supermarket, three specialised shops were selected as purchasing contexts. These were a market poulturer selling conventional chicken meat, a butchery selling meat specialties and an organic butchery.⁵

The number of consumers to be included was based on the achievement of saturation during interview sessions (see Mason 2002). This was reached when the information provided by the interviewees did not further improve insight into the consumers' line of reasoning when buying particular types of products in specific contexts. Subsequently, no more consumers were interviewed. This resulted in the selection of a total of 41 interviewees, described in Table 3.1. To avoid an undesirable bias in our sample, within the above-defined context product categories we aimed to select interviewees with different observable background variables. This resulted in the inclusion of 25 female and 16 male respondents of ages ranging from 18 to 74 with an average age of 51.

Table 3.1. Numbers of consumers interviewed according to retailer and types of poultry meat products

Product-type	Convenient poultry meat	Conventional poultry meat	Poultry meat specialties	Organic poultry meat
Shop				
Super-market	7	8	5	5
Market poulturer	NA	6	NA	NA
Specialty butchery	NA	NA	5	NA
Organic butchery	NA	NA	NA	5

Note: NA means not applicable.

The interviewees were questioned using a semi-structured interview guide dealing consecutively with: their reasoning underlying their actual and overall choices of poultry

meat products and retailers; their prioritisation of their concerns; their perspectives on the responsibilities of and trust in different governance actors to meet their concerns; and the impact of H5N1 avian influenza on their consumption practices and perspectives on food safety governance. Data obtained from these interviews were set out in consumers' arguments underlying their actual consumption practices, their perspectives on responsibilities and trust in food safety governance and the impact of H5N1 avian influenza on these. Finally, these consumer features have been constructed into more or less coherent consumer rationalities based on resemblances between sets of these features, as expressed by the consumers across the range of different product types in different purchasing contexts.

3.4 Buying poultry meat: an empirical exploration

The following subsections provide the empirical data obtained from the interviews with Dutch consumers of poultry meat. We first describe their consumer concerns and the arguments they used in dealing with these concerns in consumption practices. Subsequently, consumer perspectives on responsibilities of and trust in actors to (help them) meet their concerns are described. Finally, the question of the likeliness of consumers changing their consumption practices in view of the threat of avian influenza is addressed.

3.4.1 Arguments underlying actual consumption practices

All interviewees buying conventional and convenient poultry meat products based their choices solely on product-related concerns. These included the taste of the products, their freshness, appearance, fat content and other human health-related characteristics,⁶ their price–quality ratio and the quantity of meat in the package. Consumers of conventional products emphasised the taste, fat content and price–quality ratio most, while consumers of the convenient products mainly stressed the ease of preparing it: “you cook to eat, not to spend loads of time in the kitchen”⁷ and its taste.

The aim to respond to product-related concerns also prevailed among consumers who bought poultry meat specialties. These interviewees argued that their desire for high

quality meat, especially in terms of taste and appearance, was the most important reason underlying their choice. Four out of 10 interviewees who bought organic poultry-meat products did so primarily to meet human health concerns. These consumers held organic meat to be healthier than meat stemming from intensive production systems: “noxious substances that are present in conventional meat enter your body and add up in there, which results in people falling ill, like my wife did. ... When my wife fell ill, we decided to stop eating rubbish.”⁸ Moreover, these consumers expressed a conviction that animals kept under organic conditions are less susceptible to animal diseases such as avian influenza, bovine spongiform encephalopathy (BSE) and foot-and-mouth disease than animals kept in intensive farming systems, which added to their feeling that organic meat is healthier to eat than conventional meat.

The remaining six interviewees buying organic poultry-meat products stressed they were responding to process-related concerns. All six were concerned about the welfare of poultry reared for human consumption. Additionally, four of them mentioned having environmental and social equity concerns. Unlike intensive farming methods, organic farming would neither contribute to negative social consequences in “other parts of the world” that result from European demands for crops to feed farm animals, nor to excessive manure and hormones entering the environment.

Overall, 18 interviewees stated that they did not (always) intend to respond to some of these process-based concerns through their consumption practices. Two interviewees mentioned that they regarded large-scale animal rearing systems to be problematic, because these would result in nothing but environmental problems and outbreaks of animal disease. The remaining 16 interviewees had animal welfare concerns mainly based on altruistic reasons. Two of these interviewees, however, related large-scale animal rearing directly to a product-based concern: “I often buy organic meat, because you can taste the difference: it really is tastier”. These concerns were not reflected in their consumption practices at the time of the interviewing session, for various stated reasons: (i) the large price difference between organic and conventional poultry meat; (ii) family pressure: “my children do not like vegetarian meals” and (iii) a lack of trust in labels indicating animal welfare levels: “we should be better informed about the workings of the meat business, and about what all labels mean. The government should take up this task—

not someone who has an interest in selling meat. Otherwise I become suspicious right away.”

The interviewees' choice to shop in the supermarket was without exception based on its large assortment of goods that allowed them to purchase all the groceries they needed in one stop. Reasons for buying poultry meat at an open-air market poulterer included trust in the market poulterer based on their personal experience and the perceived freshness of the meat. The customers of the specialty butchery preferred this point of sale because of the high quality of the meat, its personal service, allowing for trust based on regular personal interaction and the customers' intention to support this artisan shop, because “if small shops like this one disappear, we will be at the mercy of the pagans of the supermarkets who care about nothing but making money”. Customers of the organic butchery preferred it because they trusted the organic butcher more than impersonal supermarkets in delivering meat products that met their requirements.

3.4.2 Responsibilities and trust in food safety governance

Among the interviewees different perspectives on the responsibilities and trustworthiness of governance actors could be discerned. A first category of interviewees, consisting of consumers purchasing conventional, convenient or specialty poultry meat at the supermarket outlet, the market poulterer or the specialties butchery, “fully believe[d] in the workings of the market”. These interviewees vested trust in abstract food supply systems, because actors working in these systems cannot afford not to conform to food safety requirements. Doing so would lead to bad publicity and subsequent loss of custom. For this mechanism to work properly, governmental institutions were held responsible for scientifically assessing product safety levels and taking action when unsafe levels were detected by communicating this to the public or removing the product from the market if necessary: a minimum level of food safety was regarded as a non-competitive issue. Consumers were held responsible for voting with their feet and wallets by “simply buying something or somewhere else if you are disappointed” in a product or shop, while food-supply chain actors were to respond to consumer demand. Non-governmental organisations (NGOs) were not considered to play any important role in food safety governance by these

interviewees. NGOs would either lack influence on market actors, or “only exaggerate things” and “are not nuanced, too opportunistic, and therefore are by definition unreliable”.

A second category of interviewees, involving consumers purchasing organic meat in the supermarket or the organic butchery, and clients of the market poulterer and the specialties butchery emphasised the responsibility of consumers in food safety governance. They held retailers and governmental institutions responsible for ensuring a minimum level of food safety via well-functioning monitoring systems. But these interviewees were not satisfied with a minimum level of food safety.

Among these interviewees, some (encompassing clients of the organic butchery, of the market poulterer and of the specialties butchery who predominantly expressed product-based concerns) actively searched for trustworthy suppliers of high quality and healthy food. Their trust was mediated by interpersonal contact because “you can only trust people as long as you see someone” face to face. These interviewees held retailers responsible for providing transparency in food supply chains and government responsible for controlling food-supply chain actors on whether these actors delivered what they claim to deliver. They regarded NGOs as additional monitoring actors who informed consumers about the food safety management efforts of food-supply chain actors and governmental agencies.

Another section in this category of interviewees (those who bought organic meat in the supermarket or the organic butchery principally to meet their process-based concerns) emphasised the consumers’ responsibility to improve, via their consumption practices the quality of life of others, including both human beings of present and future generations, and animals. “Consumers should take up responsibility themselves by buying sustainably produced meat” so as to avoid contributing to the negative record of the conventional farming system, which “has reduced animals to production machines”, “contaminates the environment with hormones and manure while extracting nutrients [feed] from other continents”, and “obstructs a just distribution of food over the world by importing feed”. Their trust in food supply systems was mediated by both abstract (labelling) methods and face-to-face (specialised shops) commitments.

In addition to applying their purchasing power to achieve these goals, these interviewees held themselves responsible for educating others about the benefits of free-range or organic production methods. They argued that food-supply chain actors were responsible for facilitating sales of this kind of food by making it widely available,

advertising it, and offering it at a discount so as to encourage “the majority of consumers” who “are currently not inclined to purchase this food” to start buying it as well. Yet some of these interviewees thought that the food-supply chain actors were part of the problem and could not be entrusted with the responsibility of being part of the solution, making it unlikely that desired transformations could be purely market driven. Government was held responsible for stimulating the production and consumption of organic and free-range meat products using legal, economic and educational policy instruments. NGOs were held responsible for (i) informing and educating people about the product- and process-related qualities of different food products; (ii) lobbying for a shift towards free-range or organic farming methods among food-supply chain actors and governmental agencies and (iii) monitoring food supply chain actors to ensure that only truly free-range or organic food was sold as such.

A final perspective on responsibilities and trustworthiness of governance actors was found among interviewees buying with the market poulterer and conventional, convenient, or specialty poultry meat in the supermarket. These interviewees held, above all, that governmental institutions and retailers were responsible for food safety governance. They considered that the principal actor responsible for improving animal welfare levels and downscaling intensive animal rearing systems should be the government. To do this, the government should create economic incentives to stimulate the production and consumption of organic meat products, and set and strictly enforce stronger animal welfare rules. Additionally, they held the government responsible for controlling food-supply chain actors on their compliance to food safety legislation. They held retailers responsible for ensuring that food in their assortment was safe to eat by keeping track of problems in the food supply chain and removing products that are found to contain pathogens. Moreover, these interviewees emphasised that retailers must be honest: “As a consumer, I have to trust that the shop owner delivers what he says he delivers. I have no influence on that. I cannot check the history of every product in every shop.”

NGOs were regarded as welcome watchdogs that can help to ensure that actors in the food-supply chain and governmental actors refrain from misconduct, and that can inform the public if something is wrong. No responsibility was assigned to consumers by these interviewees, apart from treating bought meat products hygienically. Various arguments for this were put forward. They said that consumers lacked the knowledge

needed to take up an active role in this respect—“consumers cannot control what happens to food before it is sold” and that most consumers had too many budgetary restrictions to be able to vote with their wallets: “if you do not have much money, you cannot exert political pressure”. Some also thought that consumers were simply unwilling to apply purchasing power if this cost them money, noting that most consumers “will not start to behave better, like I do not either. As the Germans say: *‘Erst das fressen, dann die Moral’* (‘first food, then morality’).”

3.4.3 Changing consumption: avian influenza

The interviewees reacted in different ways to the H5N1 avian influenza threat. One category of interviewees—largely corresponding to those who stressed consumer responsibility in food safety governance most strongly—held their routinised self-governance to be sufficient. This self-governance consisted of one or more of the following strategies. They always purchased organic meat, which, due to the very nature of its production process would hardly ever contain pathogens, they always purchased in retailers they felt are worthy of their trust or they treated these products in such a way that they avoided food-related risks: “if you cook the meat properly there can be no problem”.

These interviewees thought that the emergence of the avian influenza threat confirmed their perspectives on food safety governance. These perspectives were that consumers need to continuously make sure that they purchase food that meets their concerns with vendors they trust, that consumers are responsible for treating bought meat hygienically, and that consumers as well as other governing actors need to bring about a “change in the farming system so animals become less susceptible to disease”.

Another category of interviewees, primarily involving those who vested a good deal of trust in the working of the market, were also not inclined to change their poultry consumption practices. These interviewees considered that the safety of all the poultry products that ended up in stores was adequately monitored by food-supply chain actors, scientists and governmental agencies, leaving little need for consumers themselves to take any action. The interviewees who expressed this view tended to be annoyed by the attention given to avian influenza: “in our society everything is controlled to such an extent that no

danger existed. The government overreacted so as to be able to push through measures they wanted to push through.”

The interviewees who stated that they did alter their consumption practices in view of the threat of avian influenza (who were largely the same individuals who overall held governmental institutions and retailers principally responsible for food safety governance) said they refrained from eating meat altogether, bought types of meat other than poultry, or ate poultry meat bought at times and places in which the risk of avian influenza was low. In the long run, all these interviewees started to consume poultry meat again when they thought the threat posed by avian influenza was over⁹. This was either because they trusted the reports in the media of governmental agencies, scientists, or journalists who informed them on this issue, or when the subject of avian influenza died down in daily conversations and the general public debate and buying poultry meat “crept in again”. The perspectives of some of these interviewees on the responsibilities of food safety governance actors did not change in view of the threat posed by avian influenza. According to them, it was the actors in the food-supply chain and governmental agencies who remained responsible for ensuring that all foodstuffs were safe to consume. Others claimed they have become more aware about what they regarded as the responsibilities of the government (“I started to think that the government should also control feed companies”) or of retailers (“it made me realise that it is important for butchers to know where their meat comes from”).

3.5 Constructing consumer rationalities around food safety governance

Based on the empirical data presented above, four consumer rationalities have been constructed. These rationalities are more or less coherent academic constructions derived from our empirical research into the consumption practices of poultry meat. They are not specific to context (shop) or product type, although some rationalities are more likely to be related to consumption practices for specific context–product combinations. Neither are these consumer rationalities attributes of individual consumers. Individual consumers may shift between different rationalities at different times and in different purchasing contexts involving different food products. But together, these four consumer rationalities delineate

the playing field in which consumers are likely to operate with respect to food safety governance.

3.5.1 *The rationality of the invisible hand-lers*

The first consumer rationality that can be discerned from our empirical material centres on the notion of the invisible hand in the market. In this rationality, market actors are held principally responsible for ensuring that food safety is secured and for being responsive towards further consumer concerns. Trust that these responsibilities are taken up adequately by market actors is vested in abstract, faceless food supply systems, reasoning that their failure to meet consumer demands would lead to the loss of their customers and hence their own economic losses. This possibility provides a sufficient incentive for market actors to take up their responsibility.

However, in order for this incentive to work adequately, mechanisms need to be in place to ensure that food-supply chain actors are well monitored and that consumers are informed. Governmental institutions are held responsible for assessing food suppliers and their products, basing these assessments on scientific methods, and for taking action if misconduct by any market actors has taken place. This action should most principally take the form of disclosing their misconduct to the public. Moreover, governmental institutions should order products to be removed from the market, if necessary, to ensure a minimum level of food safety, which is thought of as a non-competitive issue.

Consumers following this type of rationality hold the current offer of food products to be satisfactory. Changes in this offer may be brought about via the dynamics of supply and demand without any major steering efforts of non-market actors such as governmental institutions or NGOs, as that would distort the working of the invisible hand. These consumers buy the products they like from the retailers they like. Which products and retailers they like may vary, as in principle they regard all food products on sale to be 'safe and good food'. Acting in terms of this rationality, consumers are not likely to refrain from buying products just because they are at the centre of a food scare. They trust the scientific evidence underlying institutionalised food safety governance practices. As a result, the conventional approach to food safety governance is likely to meet these consumers' concerns. If science provides adequate risk analyses that food-supply chain

actors and policymakers respond to by implementing risk management measures and risk communication to consumers, business as usual can continue for the consumer.

3.5.2 The rationality of the centrality of the self

In the second consumer rationality that can be distilled from our empirical data, individual consumers and their self-centred concerns are the pivotal variables. Consumers acting in this rationality framework hold themselves to be primary responsible for dealing with their concerns. These concerns are principally product related. Process-related concerns, such as whether or not food products are produced organically, are deemed important only to the extent that they affect the quality and healthiness of food, rather than being necessary to meet wider environmental, animal welfare and social concerns.

From the point of view of this rationality, the current offer of food products is acceptable, because high quality and healthy food (such as organic meat and meat specialties) is available for those who are willing to search for it. To ensure that such food remains available, food-supply chain actors are held responsible for being responsive to the demands of consumers and for making food-supply chains transparent so consumers can keep as much control over the food they eat as possible. In this rationality framework, relations of trust with retailers are mainly based on facework commitments, which consumers find in specialised, small-scale shops. Being able to vest trust in a person in 'real life' with whom one is familiar is preferred to relying on abstract control systems of food-supply chain actors and governmental agencies alone. Nonetheless, such control systems are deemed to be advantageous, but only as additional means to help these consumers find appropriate foodstuffs. Therefore, retailers must ensure a minimum level of food safety by complying with food safety regulations and governmental agencies are held responsible for ensuring that retailers are held liable if they fail to comply with food safety regulations or do not sell what they claim to sell. NGOs are regarded as watchdogs that inform consumers if food-supply chain actors or governmental agencies fail in their duties.

Previous food scares have influenced consumers following this rationality by making them more critical about where they buy which products and how they handle these products once purchased. As a result, they consider that their risk of consuming substances or organisms that are detrimental to their health is small, and they are not inclined to shift

their consumption practices in view of food scares, such as avian influenza. If, however, evidence emerged that the product they always buy may entail dangers for their health—evidence that is more likely to be provided by a trustworthy acquaintance than by representatives of abstract expert systems—they would be likely to change their consumption practices. The individual consumer is, in this case, still held to have the primary responsibility for taking care to consume healthy food. The liability of food-supply chain actors after one has fallen ill from a food-born pathogen is simply too little, too late. As a result, institutionalised food safety governance plays a minor role in meeting these consumers' concerns. Trust in faceless governance actors is barely present, and it is unlikely that such trust will be gained without facework commitments.

3.5.3 The rationality of one for all

A third consumer rationality that can be distilled from the empirical material is based on the idea that consumers are responsible for applying their purchasing power to create a better world for all, including human beings and animals. Consumers' concerns are world concerns. Besides for voting with their wallets by buying only animal friendly and sustainably produced food (such as free-range and organic products), these consumers hold themselves responsible for educating their acquaintances about how to apply their purchasing power to improve their own lives and those of others. Food-supply chain actors are held responsible for responding to and stimulating consumer demand for such food by supplying it, reducing its price and advertising it.

However, they deem that most consumers are unwilling to change their consumption practices for everyone's greater good, and that the food-supply chain actors who they consider to be accountable for the current poor state of animal welfare and the environment are not likely to change without external pressure. They hold government responsible for further stimulating a shift from conventional farming systems towards more sustainable and animal friendly ones. Government should do this by using economic incentives directed at food producers and consumers, by enforcing animal welfare and environmental legislation more strictly, and by educating the general public about the benefits of alternative farming methods vis-à-vis conventional ones. NGOs are also ascribed an educational role, and are, moreover, held responsible for pressuring

governmental and food-supply chain actors to shift towards alternative farming methods, and for keeping a close eye on these actors' efforts to manage food safety.

Within this rationality framework, trust is vested in food-supply chain actors in various ways: mediated via facework commitments, which materialises through shopping in specialised organic butcheries, and through the symbolic tokens of organic labels, including those found in supermarkets, which refers to faceless mediation of trust. The consumers' firm conviction that they currently buy 'good' food makes them unlikely candidates for a swift change in consumption practices. Food scares such as avian influenza are unlikely to trigger them into not buying free range or organic produce. Instead, this makes them strengthen their view that conventional farming methods are unsustainable and that we need to move away from such farming systems. Thus, food scares reinforce their view on the responsibilities and trustworthiness of actors involved in food safety governance, and encourage them to make more strenuous demands for stronger governance measures that stimulate free-range, organic production and consumption.

3.5.4 The rationality of the mediators

A fourth consumer rationality that can be discerned from the empirical data centres on arbitrating between multiple, often contradictory, concerns. These concerns involve the price of products, their taste, peer pressure, habits, tradition, consumer health, and animal welfare and environmental issues. Due to the perceived need to make trade-offs between these concerns, combined with limited financial means and limited knowledge about the issues at hand, they hold that consumers are incapable of taking much responsibility for governing food safety themselves as, in practice, most of them tend to opt for the cheapest or most convenient foodstuffs. Therefore, governmental agencies and food-supply chain actors are principally held to be responsible for ensuring that food safety is governed adequately, and for being responsive to animal welfare and environmental concerns. NGOs are regarded as additional, independent guardians of food safety levels, who should inform consumers if problems in the food-supply chain or in governmental institutions occur. Moreover, NGOs are expected to lobby for improvements in production processes regarding animal welfare and environmental performance. In line with consumers' perceived lack of influence on food-supply chain actors and governmental institutions, trust

is principally based on abstract, faceless commitments. There might be some preference for face-to-face contacts with vendors, such as a market vendor or supermarket personnel, who can inform consumers about the characteristics of products, but such 'faces' are expected to have very little influence on food-supply systems. Abstract food supply systems, which are beyond the direct control of consumers, essentially govern the safety of the food that consumers buy.

When facing a food scare like avian influenza, consumers following this rationality framework are, despite their perception that consumers have little overall influence on food safety governance, likely to react by shifting their consumption patterns away from the products that are at the centre of such scares. In this way, they seek to avoid becoming victims of food-related risks, even if there is no objective, scientific reason to do so, in order to be safe. When they stop hearing about such food-related risks in the media and from their acquaintances, or when experts and acquaintances whom they trust send messages that no reasons for concern exist, these consumers are likely to return to their old habits.

This pattern of self-governance in view of a food scare indicates the normally acquiescent nature of these consumers' trust in abstract food systems. Given their perceptions that having to deal with abstract food systems is inescapable, their trust in these systems is generally routinely incorporated in their day-to-day consumption practices as a tacit acceptance of the situation, rather than as a choice between alternatives (see Giddens 1990). When encountering a fateful moment such as avian influenza, routinised trust relations become open for contestation. Yet, when (negative) attention shifts away from the product that is at the centre of a food scare, trust in any one particular abstract system governing a specific product is perceived to be no longer more or less sensible than trust in any other abstract governance systems, allowing routinised behaviour and trust to become gradually restored. Food safety governance that aims to be responsive towards such consumer concerns will have to deal with the social dynamics underlying the mediation between the different concerns. The outcome of such mediation results from daily social interaction with a range of others, rather than only from risk communication by experts. Experts are only one among the many forces influencing their mediation between different concerns.

3.6 Reflection

In order to meet the aims of the EU to contribute fundamentally to enhancing consumer confidence in EU food safety policy, and of the Dutch government to ‘take societal feelings into account as much as possible’ while dealing with animal diseases, food safety governance must, to paraphrase the BEUC, be shaped generally according to how consumers actually are. In this article, we explored what consumers actually are like in terms of the rationalities concerning food safety governance that they apply in their shopping practices. Our empirical research was limited to consumers buying poultry meat in different shopping contexts in The Netherlands and hence, we should be careful in generalising the consumer rationalities constructed from this empirical base. What can be concluded is that consumers can be differentiated as regards their rationalities. With respect to Dutch consumers of poultry meat, at least four consumer rationalities concerning the governance of avian influenza could be discerned. A selection of other countries, other food products or other consumers may result in somewhat different categories of consumer rationalities, but are not very likely to change our main conclusion on the differentiation of consumer rationalities.

Following our analysis, the inefficiency of the conventional science-based approach to food safety in enhancing consumer trust does not primarily lie in its inability to address consumer concerns because it does largely address the concerns of consumers following what we have termed the rationality of the ‘invisible hand-lers’. Its inefficiency lies in addressing the consumers in a one-sided way. Undoing this does not entail doing away with the merits of the conventional approach to food safety, but it does necessitate supplementing the conventional box of governance tools, approaches and actors with additional governance instruments and arrangements.

Overall, the other consumer rationalities see consumers (and also, for instance, retailers) more or less consistently as co-governors, instead of merely as agents to be governed by experts. Hence, such actors should get a more central place in creating and implementing instruments and arrangements for food safety governance. In both the phases of assessing and managing food-related risks more instruments and arrangements creating, facilitating and validating different flows of information between consumers and other

governance actors are needed so as to move from expert interpretations of risks towards a shaping of problem definitions and solutions involving different consumer perspectives.

Instead of a narrow focus on scientific information flowing from government and scientists to consumers around fateful moments, we have to acknowledge the existence of continuous, multiple directional flows between different governance actors, accompanied by constant assessments of the trustworthiness of the information so exchanged. Consequently, we need to facilitate these multiple channels, to enable consumers to utter, and other governance actors to appreciate and act upon, their preferences via feet and wallets (such as product differentiation via diverse labelling arrangements, differentiation of retailers, disclosure and transparency systems, and rating systems) and mouths (by public debates, consumer panels, opinion polls, NGO campaigns, and the inclusion of consumers on risk assessment and management panels). If they fail to be responsive to such 'votes', consumers will perceive these governance actors to lack responsibility and will therefore lack trust in food safety governance. Therefore, not only should governmental agencies focus on controlling and communicating the safety of products, but additionally they should allow for and stimulate, as well as ensure the validity of, multidirectional information flows between the different governance actors.

This is not to say that we here argue for an unbridled differentiation of European food safety governance in an attempt to meet each consumer rationality. Fundamental questions concerning the compatibility of different consumer rationalities, and of consumer rationalities with other food-related rationalities prevailing in European societies remain topics for future research and debates. Yet consumption practices are increasingly a force to reckon with in contemporary European societies, and need to be addressed in food safety governance. Especially at fateful moments of food scares, governance actors face the need to address the diversity of rationalities in their coping strategies. This cannot be left to experts applying a one-size-fits-all approach, but requires a European food safety governance that reflects the diversity of consumer rationalities. Involving all governing actors through multiple channels would be a preferable strategy, but it needs to be based on trust that has been built up during 'routine' consumption practices before and after such fateful moments.

Notes

¹ In line with the EU integrated approach to food safety (DG SANCO n.d.), in this article we define food safety governance as all efforts to ensure the production and consumption of food that prevents food-borne illness (i.e. food safety in its narrow definition) as well as a high level of animal health, animal welfare and plant health.

² Goals can refer both to values and abstract rules as well as to pragmatic interests, referring respectively to Weber's substantive and practical rationalities.

³ Pellizzoni (2004, 2005) argues that the use of the concept of 'responsibility' requires a definition of this term, because 'responsibility' can have different meanings. While it is beyond the scope of this article to discuss theoretical conceptualisations of responsibility, inspired by Pellizzoni's writings, we distinguish between different meanings of responsibility when delineating consumer rationalities.

⁴ These countries were Albania, Austria, Azerbaijan, Denmark, France, Germany, Hungary, Romania, Russian Federation, Serbia, Turkey, Ukraine and the UK (Empres 2006; OIE n.d.).

⁵ A shop selling 'convenience' poultry meat products was not included in this research as a location for selecting consumers, because compared with the supermarket context no additional information was expected from customers of a shop that specialises in selling this type of poultry meat product.

⁶ Some interviewees, for instance, mentioned that they wanted to avoid meat that contained colouring agents or aspartame.

⁷ All quotes from the interviewees are the author's translations.

⁸ Some unhealthy substances mentioned were growth hormones, colouring agents, and prions.

⁹ Given our research design of interviewing consumers buying poultry meat, this finding is fairly self-evident. Previous research indicates that most (76 per cent) of European citizens who declared that they had changed their consumption pattern in response to avian influenza did so only temporarily (Eurobarometer 2006b).

4

Food Risks and Consumer Trust: Avian Influenza and the Knowing and Non- Knowing on UK Shopping Floors^{*}

Abstract

Irrespective of major food crises in the 2000s consumer trust in food seems to remain high in Western Europe. Transparent information provision to consumers on food risks is a central strategy of the EU, its Member States and private food providers to build food trust among consumers. But can the interpretation of such information by consumers explain high levels of trust in food safety? Following recent outbreaks of avian influenza in the UK, this paper investigates the constitution of food trust among UK poultry consumers by focusing on the place where consumer decisions are made: the shopping floor. In-store qualitative interviews with consumers of a variety of poultry products at different shops are used to reveal the use of information in constructing trust. Besides on knowledge inducted from information provision, trust depends as much on consumer strategies to handle non-knowing of food risks. Three main forms of trust relations are distinguished, which together at a system level result in high levels of consumer trust in food.

Keywords: trust; food risks; consumers; UK; non-knowing

4.1 Introduction

To re-establish consumer trust following a series of food emergencies in the 1990s, EU, Member State, and private governance approaches to food safety were revised. Transparent information provision to consumers is now a pivotal strategy in the new approaches, which

^{*}This chapter has been accepted pending minor revisions as: De Krom, M.P.M.M. and A.P.J. Mol (forthcoming) Food Risks and Consumer Trust: Avian Influenza and the Knowing and Non-Knowing on UK Shopping Floors. *Appetite*.

finds its institutionalisation in independent bodies such as the European Food Standards Agency (EFSA) and the UK Food Standards Agency (FSA), and in reinforced traceability and labelling provisions (European Commission 2000; MAFF 1998; Wales et al. 2006). Despite newly emerging food incidents (e.g. Van Kleef et al. 2009), relatively high levels of consumer trust in food are reported in the UK from 2002 onwards (Berg 2004; Kjærnes et al. 2007; Wales et al. 2006). Are we, hence, witnessing the effectiveness of transparency and information provision as a means to elicit high levels of consumer trust?

Following Georg Simmel, Giddens (1990) and Möllering (2001) stipulate that information provision in itself cannot (fully) determine consumer trust. But what, then, constitutes high levels of consumer trust in present food in the UK? And to what extent, and with what effect do information provision and food scares impact on this trust? This paper argues that consumer trust in food is to an important degree constituted in the situated practice of purchasing food, and hence dependent on its context. The paper aims to explore which elements of such purchasing practices—including consumers' dispositions, physical settings in shops, providers of food—contribute to consumer trust. We reveal such factors through in-store, qualitative interviews with UK consumers purchasing different types of poultry meat products in different retail-settings, just after UK avian influenza (bird flu) outbreaks.

The following section contains a conceptual framework for this study. Next, we will briefly introduce avian influenza, and elaborate on the methodology underlying our empirical exploration. We then present the data obtained from the in-store consumer interviews, to be concluded by an analysis of how consumer trust is enacted in different purchasing practices.

4.2 Theorising food trust in practice

Much current thinking on consumer trust in food focuses on risk communication as a key strategy to incite consumer trust. By linking trust to risk perception (Gstraunthaler and Day 2008; Mazzocchi et al. 2008; Slovic 1998) or to perceptions of effective risk management practices (Van Kleef et al. 2009), consumer trust is essentially conceptualised as a cognitive feature. Given the impossibility for consumers to assess food risks through inspecting

offered food, risk communication becomes quintessential for consumer trust and concomitant “informed consumer decision-making” (Dreyer et al. 2009, p. 7). Yet, successful communication is itself dependent on trust in sources of information (Kjærnes 2006). This makes trust both condition and outcome of such communications. Moreover, since full information would annul the need to trust (Giddens 1990; Möllering 2001; Simmel 2004), information in itself cannot (fully) explain enactments of trust in ‘consumer decision-making’. What then (co-)constitutes consumer trust in food?

To explore this question, this paper starts from the perspective that trust is required in situations when full information on actions of others is lacking (Giddens 1990; Kjærnes 2006; Möllering 2001; Sztompka 1999). Bound up with the contingency of everyday life, trust differs from weak inductive knowledge serving to predict future events by entailing—in addition to such a cognitive understanding—a commitment with possibly unreliable agents (Giddens 1990; Simmel 2004). When making this trusting commitment, we anticipate that actions of these agents meet our expectations, while momentarily dismissing the risk that the future might prove differently. Information-based interpretations and acceptance of risks are often important in sustaining trust—trust is hardly ever totally blind. But such interpretations fall under the heading of inductive knowledge. Since complete knowledge would eliminate risk and the need for trust, trust necessarily entails an additional element of suspending or bracketing non-knowing—all trust is to some degree blind. Only by bracketing non-knowing weak inductive knowledge becomes momentarily ‘certain’ enough to support a trusting commitment (Giddens 1990; Gross 2007; Möllering 2001). To understand consumer trust in food, hence, research should capture consumers’ expectations, their interpretation of information on food, and the means by which consumers bracket or suspend their non-knowledge.

This all means that trust in food only derivatively concerns trust in food-objects themselves. In essence, it connotes trust in agents’ conduct impacting on food characteristics—such as of food supply chain actors, food regulators, experts, and NGOs (Kjærnes 2006). Trust between consumers and these actors is mediated to an important extent at shopping floors, where food system rationalities meet consumer rationalities in the practice of purchasing food (De Krom 2009; Oosterveer et al. 2007; Spaargaren 2003). In-store, food supply chain and governance strategies enable and constrain consumers’ food choices. Consumers, in turn, bring with them general background knowledge, and lifestyle-

and context-specific routines of knowledge and behaviour (Reckwitz 2002). These latter co-determine food choices and thus influence the success of food supply and governance strategies. When choosing food, trust relations between consumers and these other actors are ‘activated’, as then commitments between consumers and these actors are enacted.

Trust can be expressed or sustained through *facework* commitments, entailing interpersonal mediation in circumstances of co-presence, and *faceless* commitments, involving mediation via symbolic tokens as money or labelling arrangements (Giddens 1990). Differences in forms of mediation through physical and informational settings in stores can lead to differences in consumers’ interpretation of information and their concomitant suspension of non-knowing underlying consumer trust. Moreover, different types of food products (e.g. free-range/organic or ‘standard’ products, processed or unprocessed) involve different expectations and interpretations by consumers of food characteristics such as quality, health, animal welfare, social fairness and environmental sustainability (see Kjærnes 2006). Hence, it can be hypothesised that consumer trust enacted in purchasing practices is dependent on forms of information mediation implicated in retail-settings and on types of food products involved.

Belonging to the unspectacular side of consumption, food purchasing practices tend to involve many routines (Mol and Bulkeley 2002; Warde 1997). This includes routinised trust relations, where it is “routinised practices whose comforting presence suspends the arbitrary character of reality” (Miształ 2001, p. 315). At the same time, food consumption is particularly sensitive because it entails an intimate relationship between man and nature through the act of incorporation (Oosterveer 2007). This act not only relays social interpretations of distancing and belonging, but also co-determines our bodily experiences and health (Fischler 1988; Halkier 2001a). Food-related incidents as avian influenza outbreaks are, therefore, likely to serve as fateful moments (Giddens 1991), triggering a discursive rethinking of once routinised food purchasing practices and trust relations (Bildtgård 2008; De Krom 2009). The extent to which and reasons why fateful moments as avian influenza outbreaks incite change in purchasing practices, has been subject of our empirical exploration. The operationalisation of this empirical exploration will be discussed below, after a brief introduction of avian influenza.

4.3 Avian influenza: a brief introduction

In 2005, the highly pathogenic avian influenza strain H5N1 caught the European public eye as the next significant health and food-related threat facing Europe. Detected in Asia in 2003, the virus remained confined to this area until it started to spread towards Russia and Kazakhstan in July 2005, and into Europe in October 2005. From that moment onwards, multiple European countries have detected H5N1 in wild birds and poultry. The first UK H5N1 case involved a single dead wild swan in Cellardyke, Scotland, in April 2006. In February 2007, the UK experienced its first outbreak of H5N1 in poultry, in a large commercial turkey premise of the *Bernard Matthews* company in Suffolk.

H5N1 avian influenza is highly pathogenic and lethal for poultry. Moreover, in Asia it has caused multiple bird-to-human infections, often resulting in human casualties. Experts feared that a highly fatal pandemic could commence once the virus has acquired the capacity to spread efficiently and sustainably among humans. No evidence exists that humans can become infected with avian influenza by ingesting poultry products; standard advice is that proper cooking will destroy all viruses. Direct contact with infected birds is considered the main route of bird-to-human infections (FSA 2007a; Scientific Panel on Biological Hazards 2006).

To poultry, avian influenza is thought to spread via migratory birds (making outdoor poultry susceptible to infection via these birds), agricultural trade and human travelling (World Health Organisation 2006). The most likely route of infection to the Suffolk premises was considered to be imports of poultry meat products from Hungary (Defra 2007). To prevent virus spreading, depopulation of flocks infected with either high or low pathogenic avian influenza is mandatory according to EU legislation—in cases of low pathogenic avian influenza so as to avoid mutation of low pathogenic viruses into highly pathogenic ones (Council of the European Union 2006). The Suffolk outbreak was contained by culling approximately 150,000 birds (Defra 2007).

The avian influenza outbreak was selected as a case to study de-routinisation of UK consumer trust in food. Firstly, since experts feared that avian influenza could cause a human pandemic, it was anticipated that consumers would consider possible health risks linked to poultry products. Moreover, besides human health concerns, wider consumer

concerns were expected to trigger a rethinking of consumers' food purchasing practices and food trust. These wider concerns related for instance to food provenance (imported poultry meat from Hungary being the most likely source of infection in the Suffolk incident) and animal welfare (due to the massive culling of infected flocks). Such rethinking was especially expected since prior to the first UK H5N1 outbreak causes of virus spread and policy measures had been contested in the UK.

4.4 Methodology

Following our conceptualisation of consumer trust in food, we conducted interviews with consumers directly after the moment that they chose a product in a retail setting. Practically, this entailed interviewing in supermarket alleys after consumers selected a poultry product, or after consumers paid for a poultry product at a market vendor. Starting from the perspective that trust is contextually embedded in the enactment of social practices, we conducted on-the-spot qualitative interviews to reveal relevant situational and contextual factors (Mason 2002).

Interviews were conducted in June 2007. Prior to this, different avian influenza outbreaks had occurred within the UK. In February 2007, the UK experienced its first outbreak of highly pathogenic H5N1 avian influenza in poultry, in a large commercial turkey premise from *Bernard Matthews* company, in Suffolk. Moreover, low pathogenic avian influenza outbreaks were detected on a small farm in Cowny, North-Wales, and on a non-commercial small-holding in Merseyside, England, both in May 2007 (Cabinet Office 2009).

To include in our sample different facework and faceless commitments involved in consumer trust in food, we selected consumers buying different types of poultry meat products at different points-of-sale. To cover points-of-sale where commitments are likely to be primarily faceless, we interviewed in two supermarkets in which we expected to find different forms of these commitments: a superstore of one of the 'big four' UK supermarket chains, which promotes itself by emphasising its overall low prices; and a supermarket belonging to a smaller, upmarket chain, which promotes itself by emphasising food quality and service, and corporate social responsibility (Competition Commission 2000).

Within these supermarkets, we selected consumers buying different types of poultry meat products. Product differentiation was based on distinct marketing classifications within the supermarkets, which resemble more widely applied sociological categorisations of contemporary consumer conduct (Dagevos 2005; Pellizzoni 2005). These classifications are: (i) standard, unprocessed poultry meat products; (ii) ready-to-eat poultry meat (e.g. rotisserie products); (iii) specialty products, sold with a premium based on their exceptional taste (e.g. due to added seasoning or stuffing); and (iv) products whose premium price is based on added value of the farming process, including ‘intermediary segment’ products (signifying more animal friendly production methods than those of standard products, but below free-range or organic standards), and free-range and organic products. Within the superstore, we selected consumers buying products falling within one of the first three categories;¹ additionally, we interviewed consumers selecting Bernard Matthews products, to explore consumer trust in this brand involved in the Suffolk outbreak. Within the upmarket supermarket, which only marketed ‘intermediary segment’, free-range/organic products, we distinguished consumers buying either outdoor reared free-range or organic poultry (arguably more susceptible to avian influenza infection by wild birds than poultry kept indoors), or indoor reared ‘intermediary segment’ poultry.

To cover retailers where trust relations are likely to involve facework commitments, we selected a market vendor offering standard poultry meat products, a market vendor selling free-range/organic poultry meat, and a farmer selling ‘exceptionally high quality’, ‘farm fresh’ duck meat directly to consumers at a farmers’ market.

The amount of interviews conducted was established during interview sessions, when interviews ceased to contribute to a further understanding of the nature of consumer trust in relation to specific retailer/product combinations. Based on this principle of ‘saturation’ (Mason 2002), we interviewed a total of 52 consumers² (see Table 4.1). To avoid an undesirable bias in this sample, we selected consumers with different observable background variables. This resulted in the inclusion of 33 females and 19 males, ranging in age from 25 to 83, with an average age of 50.³ This sample is not meant to be quantitatively representative for UK consumers, but does include consumer diversity in relation to specific purchasing practices (retailer/product combinations), essential for the explorative aim of this paper.

Table 4.1. Number of interviewees according to type of (faceless and facework) retailer and type of poultry meat products

		Standard	Convenient	Specialties	Bernard Matthews	Inter-mediary segment	Free-range organic
(primarily) Faceless	Upmarket super-market					5	6
	Superstore	6	6	4	3		
(primarily) Facework	Standard market vendor	5					
	Farmers' market			9			
	Organic market vendor						8

Consumers were questioned using a semi-structured interview guide. This guide dealt with: (i) consumers' reasoning for their choices for products and retailers; (ii) consumer perspectives on responsibilities for food quality; and (iii) the influence of avian influenza outbreaks on poultry meat purchasing practices of consumers. Data obtained from the interviews were analysed in terms of consumers' general and/or situation specific expectations on food quality, interpretations of information, and mechanisms to handle non-knowing regarding food of their choice.

4.5 Consumer trust in food: empirical exploration

In this section, we discuss the empirical material derived from our interviews with consumers purchasing different types of poultry products at different points of sale. This discussion is structured per retail-setting, while relevant references to product-specific consumer-attributes are included. The paragraphs in each section deal subsequently with the arguments underlying consumer choices for retailers and products, consumer perspectives on which actors should fulfil which tasks and responsibilities to ensure that consumers can purchase safe food, and the influence of avian influenza outbreaks on routinised buying behaviour.

4.5.1 Consumers at a free-range organic market vendor

Consumers appreciated the market vendor offering free-range organic produce for his excellent, long-standing reputation, service (“if asked, they will do everything they can for us”), friendliness, detailed information on his suppliers, the cleanliness of the shop, the perceptible proper treatment of the meat, and because the vendor only sells local, free-range organic products. These products were liked for its flavour, texture, freshness, and freedom from pesticides, chemicals, and other ‘contaminations’. Additionally, animal welfare, environmental (reducing food miles), and social (stimulating local economies) concerns were expressed as reasons to buy at this vendor.

All interviewed consumers expected from food suppliers that they take key responsibility for ensuring that food meets consumers’ requirements. Supply chain actors should communicate honestly among one another; the vendor is to provide correct information on the origin of products to consumers. Consumers inferred that this vendor supplied correct information from his good reputation, friendliness, good service, and the cleanliness of the shop. Consumers were additionally given significant responsibility by interviewees, as with their demand consumers determine which products are supplied, and which (respectable or less-respectable) vendors are supported. Five interviewed consumers blamed government for stimulating imports rather than local farmers, and cheap instead of high-quality food. Three assumed that government’s legislative framework and its health inspectors help to assure that food is wholesome and traceable—although health authorities would tend to enforce laws too strictly: “too much [is] too politically correct in this country”. NGOs, finally, are regarded as organisations adding just another layer to bureaucracy, or—according to two interviewees—commendable information providers on benefits of local produce and the downsides of factory farming.

UK avian influenza outbreaks influenced the purchasing behaviour of only one interviewee. She stopped buying Bernard Matthews products for her children, because the Suffolk outbreak made her realise how little she knew about the product origin: “Due to all imports, it’s difficult for us to know where the meat comes from and whether it’s safe. And I doubt whether Bernard Matthews itself knows where all their meat comes from”. Three interviewed consumers stated that due to lessons learned from previous food scares, they did not worry about the avian influenza outbreaks. Two started to buy at this “reputable” vendor after the BSE crisis, considering it unlikely that they purchase affected meat; and

the third thought that reorganisations in law and government following previous food scares assured that new contingencies as these outbreaks are amply dealt with. The remaining four interviewees considered quick governmental reactions following outbreaks sufficient, making changes in their purchasing practices unnecessary. Moreover, all considered that by buying only free-range organic, British or local products they were likely to be safe, as avian influenza was considered linked to factory farming and opaque imports.

4.5.2 Consumers at a farmers' market

Consumers buying duck meat at the farmers' market held this meat to be tastier, cheaper and fresher than other (especially supermarket) products. Willingness to support local farmers and animal and environmental friendly production methods were additional reasons to buy here. The farmer was regarded as a "trustable source", because local, small-scale farmers keep control over the entire food supply process—unlike supermarkets, which deal with food supply chains consisting of four to five processes that are all handled by different actors. And in supermarkets different staff members are present at different days. Therefore, the farmers' market should "not get too big; then it would change". Moreover, the fact that "the people seem very nice" was regarded as a sign of trustworthiness. As one interviewee noted: "I guess we have a level of trust that they are OK producers", as "quite little" information on the production process was presented. Based on his general idea of a farmers' market, which was corroborated by the friendly, personal atmosphere at the market, his "perception is that no farmer here has a big factory farm" and that the duck meat was free-range.

The interviewed consumers expected from local food suppliers that they "make the best product that they can and market and sell it". Consumers are to be discernable about which products they buy, and therewith support (local) farmers offering the best produce. Moreover, consumers should inform farmers about desired improvements in their food supply so that they can adjust this and be assured that they meet consumer demand. Farmers and consumers are to countervail the power of supermarkets, which pay unfair prices to farmers and incite declines in product quality. Government is to provide more support to local, and free-range organic farmers by means of marketing assistance, advice, standardising labels, and limiting supermarket power over suppliers. Two interviewees held

independent organisations, such as the Soil Association, responsible for setting and checking food standards, since government would fail in this respect. NGOs are to promote niche markets and educate the public on food provenance, although one consumer thought NGOs should not interfere with consumers' free choice because "in the end it's the free market system; the free market makes it all much stronger".

The Suffolk outbreak put one interviewee off eating chicken meat for two weeks, similar as the BSE outbreak stopped her from buying beef: she feared that her child would fall sick from consuming affected meat. Because chicken is a staple food, and because British meat is "the best in the world" since government learned from previous contingencies (BSE and foot-and-mouth disease), she decided to start buying—only British—poultry meat again. The other consumers indicated that the Suffolk outbreak reinforced their reasoning on food: this incident was related to imports, processed meat, and intensive poultry rearing practices, and it strengthened their choice to buy only local or British, little processed products from free-range farmers. Moreover, they vested trust in government's ability to monitor animal health, and to respond adequately to contingencies, as demonstrated by the swift culls in response to the Suffolk outbreak.

4.5.3 Consumers at a standard market vendor

Consumers visiting a market vendor offering standard poultry meat products purchased this meat because it is lean, easy to prepare, part of their varied diet, and liked by family members. The vendor's products were especially appreciated for being cheaper, fresher, and containing less chemicals than supermarket products. Additional reasons to visit this vendor were the nice atmosphere on the market, acquaintance with the vendor (which is impossible in supermarkets where "you can't trust what you are buying"), the vendor's personal service, and the fact that the market stall was the only place where one interviewee—who normally buys free-range products—could find the chicken product needed for a special recipe.

Consumers overall held government to a large degree responsible for assuring food quality, by regularly controlling whether vendors abide to health and safety regulations. The interviewed consumers knew this vendor was regularly inspected due to inspection certificates displayed in the stall. They also held health and safety agencies to be "strong in

this country—stronger than ever”. One consumer, however, feared that government protects businesses, not consumers, and therefore preferred buying free-range organic products that are free from chemicals and hence safer. Shops are held responsible for choosing and treating meat well; consumers for being on their guard by keeping an eye on how clean a butcher works and if meat is still fresh. NGOs are regarded either as welcome additional guardians of food standards and independent sources of information for consumers and government; or—according to one interviewee—as animal welfare campaigners that annoyingly interfere with his free-choice.

Avian influenza did not affect the buying practices of these consumers. Three interviewees linked avian influenza to imports and they “don’t tend to buy meat that comes from abroad”, or they linked avian influenza exclusively to Bernard Matthews and had never bought these products. One interviewee argued that if you worry about “avian influenza, BSE... you cannot eat anything anymore”. She had “confidence in what they have here. If it’s infected, they won’t bring it to the market”. The remaining interviewee held that government has good control over chicken farms, and that even if poultry is infected, good cooking will kill the virus.

4.5.4 Consumers at a superstore

Consumers opted for this supermarket—belonging to one of the ‘big four’ UK supermarket chains—because it provides good value for money, has a large variety of products, or is “the nearest supermarket” to home. Consumers selecting standard poultry meat appreciated the low price, freshness, taste, texture, and colour. Two consumers bought it to please their (grand)children. Convenient products were selected because these were tastier than other poultry products available in the store, and easy to prepare for consumers being “too lazy to cook”. Those purchasing poultry meat specialties celebrated their excellent flavour, good price, and easiness in preparation. Consumers buying Bernard Matthews products, finally, appreciated their “quite good” price and low calorie levels, and ability to please family members for whom “it’s always kept in the fridge, that’s a habit”.

All interviewed consumers argued that the supermarket and its suppliers are to a large degree responsible for assuring that food meets consumers’ requirements. These actors should provide accurate information on the origin of products: “with the meat

scares...we need to know how it is reared, and where—the country of origin”. Products should preferably be nationally or locally sourced, so that UK and local economies are supported, and food safety can be assured through well-functioning traceability mechanisms. Supermarkets should, moreover, guarantee that its suppliers meet applicable standards, and assure that shelved products remain up to standard. Failing to do so results in court cases damaging the supermarket’s reputation, as happened recently. The supermarket will therefore avoid repetition of history by learning from this mistake, interviewees argued.

Ten out of the 19 interviewees—five buying standard products, two buying convenient meat, two buying specialities, and one buying a Bernard Matthews product—held government responsible for upgrading animal welfare standards, for preventing monopolisation of supermarkets, and for stamping out animal disease. Moreover, government should inspect food quality against standards, and inform the public on contingencies—like it did recently, when the supermarket was taken to court. The other nine interviewed consumers thought of government as “crap, you cannot trust”, or held governmental intervention to be redundant because the prospect of “a hell of a lawsuit” will deter supermarkets from failing to meet “edible standards”. NGOs were regarded as welcome additional watchdogs of food suppliers and as independent information providers to consumers; or NGOs were believed to play no role because interviewees never thought about this issue before, or because NGOs “already have too much on their hands”. Consumers, finally, should handle purchased meat hygienically, and buy what they like. Consumers’ influence on product supply is limited according to most interviewees: “we should vote with our feet, but I do not do so either”, and consumers “don’t know what goes on behind the scenes”. This makes it impossible to make an informed choice. It is up to the supermarket’s marketing department: “if they get us to buy it, they are doing a good job”. Some interviewees, however, argued that consumers “can tell [the quality of a product] by looking at it” and can check information on packages and follow the news, allowing them to make an informed vote with their feet.

Six interviewees—four buying standard poultry products, one buying specialty meat, and one buying a Bernard Matthews product—altered their consumption patterns in reaction to the Suffolk avian influenza outbreak. They either lowered the amount of poultry products purchased, or stopped buying Bernard Matthews products. Two reasons prevailed:

avian influenza was “big news” causing a scare to emerge that made them doubt if poultry meat was up to food safety standard, and the outbreak “makes you think about what is going on” in poultry meat production. In the latter case, interviewees felt betrayed by Bernard Matthews, because its turkey meat was not purely British while they believed it was, and they didn’t want to support their “bad practices” and “poor standards” concerning animal welfare. Once the media reported that the outbreak was contained or media coverage “died down”, consumers started to buy poultry meat with normal frequencies again. Four of the six consumers, however, permanently refrained from buying Bernard Matthews products, because “you just don’t know if it’s okay” and they didn’t want being betrayed again.

The remaining interviewees did not alter their consumption patterns in face of avian influenza. Reasons to continue routinised poultry consumption were various: (i) the supermarket will not sell unsafe products, for reasons discussed above; (ii) government reacted quickly by culling infected poultry and avoiding affected meat entering the food chain; (iii) news media and officials had not reported any ‘nearby’ problems with avian influenza; (iv) the outbreak only hit turkeys and interviewees never bought turkey meat; v) consumers “believe that you cannot get it from eating”; (vi) consumers lack any control over avian influenza, making changes in consumption patterns futile; and/or (vii) general consumer dispositions: “I am an optimist, you know: you catch it if you do. I do not worry. Everybody dies”; and: “You hear so much about what should worry you...I don’t want to be paranoid. Then you can’t live anymore”.

4.5.5 Consumers at an upmarket supermarket

Consumers visiting the upmarket supermarket classified this store as “ethical”, because it supports high animal welfare standards and local farmers and suppliers, instead of only its profits. Additional reasons to shop in this supermarket were its proximity to home, and—for one interviewee—appreciation of its spacious design with broad aisles, providing room to manoeuvre “like the free-range chickens have”. Consumers purchasing intermediary segment products commemorate the freshness, leanness, reduced price, and/or animal welfare: “the animal is less ill-treated, I am led to believe” and “well-treated animals taste better”. All consumers purchasing free range or organic poultry meat expressed animal

welfare concerns. Moreover, they appreciated that these products were locally sourced, which would help assure fresh products, limit their carbon footprints and support local farmers “who have been hit hard after foot-and-mouth”. Additional reasons to opt for free range and organic products were their taste, their price, and the amount of meat in a package suiting a meal for two.

Consumers at this store held the supermarket responsible for assuring that its shelves only contain safe products, for regularly inspecting its suppliers via farm visits, and for supplying “what they say they supply”. Interviewees purchasing free-range or organic products additionally stressed the responsibility of supermarkets for sourcing locally among farmers producing in an animal and environmental friendly manner, and for paying these farmers a fair price: “[this supermarket chain] is expensive, so they have to deliver on ethics”. Perceptions that the supermarket fulfils these roles well were based on positive media coverage of the supermarket chain, and on ideas about the supermarket’s self-interest: “if a product needs to be taken off the shelves, it is their problem. They cannot fail to inform people, because people will then lose confidence”. One interviewee with a food allergy, moreover, experienced that this supermarket meticulously labels all product-ingredients, unlike other supermarkets.

Five interviewees—two purchasing intermediary segment products, three purchasing free-range or organic—held government responsible for setting hygiene standards and monitoring food suppliers. Two interviewees buying free-range or organic products held government responsible for issuing tighter animal welfare and environmental legislation. The remaining interviewees took issue with government because “we are living in a nanny-state” that may well turn into “the boy crying wolf”, held government to be too “money-oriented” to contribute to improved animal welfare and environmental standards, preferred a free market system without government involvement, or had no idea what government could or should do. NGOs should ideally keep an independent eye on food suppliers and government, inform consumers on deceit, and raise public awareness about the drawbacks of intensive farming. However, little can be expected from NGOs because they fight an “uphill battle” against government and big corporations. Consumers, finally, should treat bought meat well, and vote with their feet by selecting products and retailers carefully: “we try and buy natural food ... organic when we can. The trouble is that you

never know what actually is going on. I believe that would be OK with [this supermarket], but other outlets may not be so fair”.

Four interviewees—two buying an intermediary segment product, and two buying free-range chicken meat—altered their consumption patterns following UK avian influenza outbreaks. Three of them stopped eating poultry meat in response to the Suffolk outbreak “to be on the safe side, as with every scare”. They resumed eating poultry meat again once government lifted contingency measures. Yet, as the outbreak originated from imports and intensive farming practices, they decided to carefully “choose the right place to shop”—such as this and another upmarket retailer that both source locally and score high on food quality and animal welfare issues. The fourth interviewee, on the other hand, eagerly bought discounted Bernard Matthews products after the Suffolk outbreak. He saw no danger as government mass-slaughtered all infected animals, supermarkets will not offer unsafe products to avoid reputation damage, and supermarkets informed him that well-cooked poultry is safe to eat.

The remaining interviewees did not alter their purchasing patterns in face of avian influenza. Those purchasing intermediary segment products held that fear for legal action and reputation damage dissuades supermarkets from retailing “dangerous” products. Moreover, two of these seven interviewees had never bought Bernard Matthews anyway. Free-range and organic consumers argued that avian influenza was “another lot of scaremongering”, and that “the chance to die by being hit by a car is bigger” than the chance to die from avian influenza. Moreover, these interviewees held their product and retailer choice to be an extra safeguard: “It is the duty of farmers to handle animals well, so I try to buy from suppliers that I think will be good”; “I want to know what is in it, so I don’t buy processed meat”; and in intensive farming circumstances “with so many birds, every disease will become an epidemic” whereas “free-range birds are more resistant” to disease.

4.6 Consumer trust in food: knowing and non-knowing on shopping floors

As theorised at the start of this paper consumer trust in food is constructed in relation to other actors in the food system. Consumer trust builds upon consumer expectations, his/her

interpretation of information (inductive knowing), and the suspension of non-knowing. These elements are to an important degree mediated at shopping floors where food system and consumer rationalities meet in the social practice of consuming. At shopping floors we see the construction of consumer trust in food ‘at work’: via the selection of food products and in the forms of faceless and facework commitments. In this section, we analyse our empirical data on the basis of this conceptualisation.

As apparent in the presentation of the empirical material, consumer food choices and related expectations of how other actors deal with food of their choice, tended to be partly rooted in their general background knowledge and lifestyle-specific routines. Poultry products were often chosen in line with general preferences in dietary patterns, and routinely incorporated in purchasing practices (chicken meat being a UK staple food, to please family members). Yet, in addition to these dispositional factors, context-specific factors co-determined food choice, such as daily schedules (time to shop, geographical locations), the event for which food was bought (daily supper or special event), and the way in which food was offered (the physical lay-out and atmosphere of points-of-sale, the amount of meat in a package, discounts). Having taken ‘snapshots’ of individuals’ consumption patterns, we do not intend to analyse individual consumer choices for stores and food, which contextually depend on many different aspects and hence may change according to different places and times. Our analysis concentrates on the constitution of consumer trust in relation to particular purchasing practices, located in specific spaces and time, and involving interaction with the present material and interpersonal settings.

In purchasing practices, consumers tended to expect from retailers, and to a lesser extent from farmers and other food supply chain actors, that they take up primary responsibility for assuring food qualities. Food products on display at shopping floors are more or less black boxes, since consumers cannot (fully) assess food qualities. Retailers, farmers and other supply chain actors are therefore held responsible for supplying safe and high quality products that are up to prevailing standards, and fair communication on the source and origin of products. Based on the empirical material, three analytically distinct forms of trust relations can be discerned, which make that consumers trust food suppliers in meeting these expectations.

The first form of trust relations involves facework commitments with retailers, as found in relations with market vendors. Consumers’ interpretation of information here

revolved not primarily around rendition of targeted information provision from vendors, but focussed on 'reading' information from interaction with vendors. In this way, consumers chose retailers based on directly perceptible conduct of vendors (friendliness, meat handling, cleanliness of shops), or on appreciation of interpersonal relationships (personal service by vendors, consumer support for specific vendors and their suppliers, interpersonal information exchange). Although long-standing consumer-vendor relations tended to entail high levels of consumer trust, evidence of past proper conduct (such as a good reputation) does not seem to be the primary factor motivating consumer trust in these situations. Instead, the contingency of non-knowing as regards food supply activities beyond the shopping floor was fundamentally suspended based on a store-centred heuristic: trustworthiness of food supply actors in distant places and across time can be extrapolated from in-store frames of reference (compare Goffman 1975). Thus, the free-range organic market vendor's service, friendliness, the cleanliness of the shop, and the perceptible good product treatment build consumer trust in (information on) his suppliers; and the farmer's friendliness and full representation of the food chain combined with the farmers' market reputation and atmosphere underlay a leap of faith in product characteristics. In face of the avian influenza outbreaks, different interviewees held that purchasing at such estimable retailers warrants trust that food is safe.

The second form of trust relations involved faceless mediation with food supply chain actors. Here consumers opt for an 'ethical' retailer (the upmarket supermarket, the free-range market vendor, the farmers' market) offering only products labelled and priced as premium products, or consumers believe that in a free market, retailers cannot afford to offer below-standard products. Consumers trust food supply actors through their choice for product types and symbolic tokens linked to them. Premium, free-range/organic, British/local, or unprocessed food was purchased to meet specific consumer concerns and expectations of food supply actors' conduct. With mediation through retailer or product characteristics, consumers inclined to trust food supply actors, without much reference to third-party involvement such as of NGOs or state authorities. Such trust was partly based on system-level information provision (media coverage, labels, etc.), but was additionally 'informed' by heuristics that made consumers suspend their non-knowing. These heuristics included:

- that retailers' self-interest to retain consumer trust incites them to deliver only products that justify consumer trust;
- that the farm-to-fork chain of free-range/organic products allows for connotations of benevolent suppliers, high levels of animal health and welfare, environmental sustainability, and food safety and quality (see Buller and Morris 2003);
- that British or local food implicates good traceability, trustworthy food supply chain actors, (nationally or locally based) social equity, and high levels of food safety and quality, animal health and welfare, and environmental sustainability (see Weatherell et al. 2003);
- that unprocessed products allow one to sensory determine 'what is in it'.

Trust through these heuristics co-explains the overall limited impact of avian influenza outbreaks on purchasing patterns of consumers. Interviewed consumers regarded avian influenza as a confirmation of, or a trigger to activate, these heuristics on free-range/organic, British/local, and unprocessed products, especially since their frame of reference—the highly pathogenic avian influenza outbreak in Suffolk—involved intensively reared turkey, a foreign source of infection, and processed products. In similar vein, interviewees inferred from the Suffolk incident that they would be on the 'safe side' or would avoid being betrayed by refraining from purchasing Bernard Matthews products or turkey meat. Finally, different interviewees held that retailers' self-interest to retain clientele (and thus consumer trust) refrain them from delivering risky food. As such, trust in food products is based on interpretations of information and suspensions of non-knowing, both mediated via faceless retailer and faceless product characteristics.

The third form of trust relations on the basis of which consumers anticipate that food suppliers meet their expectations of safe food did not directly involve trust in food supply actors. In these relations, consumers base trust in food on faceless trust arrangements involving third-party mediation. Such mediation concerned legislative, monitoring, and information provision activities of governmental agencies, the functioning of the judicial system, and (to a lesser extent) information provision, monitoring and blaming and shaming by NGOs. Ideas that third parties influence how food suppliers deal with food product quality is sometimes based on in-store information provision (display of inspection certificates as in the standard market vendor), and on past practices and performance (the superstore which was taken to court, personal experiences with

governmental agencies). Yet, often interviewees did not refer to specific cases or actions on which they based trust in such third party involvements. Rather, they bracketed lack of knowing through general reference on the independence of governmental agencies, juridical agencies, and NGOs, or following lessons learned from previous food emergencies as institutionalised in reorganisations of government and legislation. As such, consumer trust was often not so much based on knowing about specific cases or actions, but on suspensions of non-knowing as embedded in conceptions of institutionalised relations between food suppliers and third parties, and how these relations ‘materialise’ in characteristics of food.⁴

In face of avian influenza outbreaks, this latter mechanism (co-)constituted different consumers’ trust in chosen food. Notably, information on the relatively quick containment of these outbreaks by mass-culling of infected poultry after the Suffolk incident, as well as information that avian influenza cannot be transmitted through consumption and that well-cooked poultry is safe to eat, were reasons for consumers to continue routine poultry meat purchasing patterns—or even specifically purchase products discounted after the Suffolk outbreak. In interpreting risks these consumers did not interpret information on avian influenza separately, but linked avian influenza to other food incidents (BSE, foot-and-mouth disease) and the institutional handling of these incidents. Based on such linkages, these consumers could bracket unknowns on avian influenza food risks: because government has institutionalised lessons from past food incidents, British food is safer than ever before.

Apart from these three forms of trust relations, arguably a separate category of handling risks on food consumption can be distinguished. Here, worrying about all alleged food risks would make one paranoid and then “you can’t live anymore”, while worrying is redundant since “everybody dies”. These consumers (partly) retreat into the adaptive reaction to risks, which Giddens (1990) termed pragmatic acceptance: since “much that goes on in the modern world is outside anyone’s control... temporary gains are all that can be planned or hoped for” (p. 135). In absence of any expectations or information interpretations on the impact of actors on food, this reasoning seems to fully bracket the existence of risks rather than constitute trust relations. Yet, our empirical material with few interviewed expressing such reasoning cannot discern whether this reasoning exclusively underlies how consumers deal with uncertainties in food risks, or is instead an additional

way to bracket unknowns connected to one of the above trust relations (for instance, by coining it to conceptions of checks and balances institutionalised in food risk governance on the basis of which chances to actually suffer from food accidents are considered small).

4.7 Conclusion

Consumer trust in food is constituted and reproduced in situated practices of buying food. In these practices the interplay of consumer dispositions, physical settings in shops, and relations with food system actors constitute trust. From our empirical research on the construction of consumer trust in poultry products on UK shopping floors we have discerned three main forms of trust relations through which consumers bracket non-knowing and continue to trust poultry products, even after a major outbreak of avian influenza. The first form involves facework commitments with retailers, where information interpretations and suspensions of non-knowing are largely based on vendors' directly perceptible conduct, from which trustworthiness of distant food suppliers is extrapolated. The second form of trust relations follow retailer- and product-based faceless commitments with food supply chain actors, and bracketing of non-knowing through heuristics based on these. In the third form of trust relations, food trust is vested through faceless commitments with third parties outside the food supply chain, such as governments and NGOs. These consumers also apply heuristics to bracket non-knowing of food and food quality, but these heuristics have a less specific origin and rather refer to general trust in institutions such as the state and NGOs, and in how their functioning materialises at shopping floors.

Information provision does play a role in constituting consumer trust in food. But as trust in food is trust between consumers and the food system actors, information provision contributes especially to food trust when it refers to the roles of relevant actors in the food system. And which actors are perceived to be relevant differs among consumer categories. For some consumers information of state organisations and their adaptive strategies is reassuring, for others information of primary producers and retailers is key in building trust.

At fateful moments of food incidents basic trust is called into question and consumers have to rethink trust in their food using and bracketing (lack of) information.

Consumers meet fateful moments either by adapting their food purchasing strategies (products, retailers), by reconfirming earlier made risk minimisation choices, or by rationalising continuing ‘risky’ behaviour. Such (re)constitutions of trust allow consumers to continue living and consuming in a food risk society and—on a system level—show as high levels of consumer trust in food.

Notes

¹ This supermarket did offer free-range and organic poultry, but consumers (willing to be interviewed on) buying this product in this store were not available during the interviewing weeks.

² The sample includes six couples consisting of one female and one male, whom we interviewed as a couple so as to not disturb this contextual factor in the shopping practice.

³ Five female interviewees refused to give their age, and are not included in this calculation.

⁴ In this light, remarks made by consumers as that government is ‘too politically correct,’ and that NGOs are just adding another layer to bureaucracy, are not to be simply dismissed as expressions of distrust in such actors, but may instead express conceptions of institutionalised checks and balances in food risk governance, and as such incite trust.

5

Social Interests and Values in European Food Risk Governance: The Case of Avian Influenza*

Abstract

A recent series of food and animal health crises in Europe brought home the idea that social interests and values should be incorporated in EU food risk governance to foster consumer trust. Implementing this idea through the renewed European food policy framework seems, however, still rather undetermined. Particularly how the incorporation of social interests and values takes place within the EU and its Member States, and what impacts this has on the relationship between both levels of governance, is not clear. This paper studies the governance of avian influenza ‘H5N1’—a major risk facing Europe after renewing its food policy framework. The inclusion of social interests and values in avian influenza food risk governance are analysed in the Netherlands, France, the UK, and at EU level. Furthermore, this paper discerns the effects of including social interests and values on public trust and the functioning of the EU internal market.

5.1 Introduction

During the last 15 years, Europe witnessed different farm animal disease crises, including classical swine fever, bovine spongiform encephalopathy (BSE), and foot-and-mouth disease. These crises triggered extensive public and policy debates on the European approach to animal health and its corollary food safety. A key topic of debate centred on the role of public interests and values in European food and farming policies. The ‘conventional,’ science-based, top-down policy approach proved unable to retain public

*This chapter has been submitted to *Environment & Planning C: Government & Policy* as: De Krom, M.P.M.M., P. Oosterveer and A.P.J. Mol (forthcoming) Social Interests and Values in European Food Risk Governance: The Case of Avian Influenza.

trust in face of the crises. To restore this trust, further incorporation of sensitivity to the experiences, knowledge, and consciousness of citizen-consumers was propagated (Mol and Bulkeley 2002). According to a renewed EU food policy framework, “[l]egislation implies a political decision and involves judgements not only based on science but *on a wider appreciation of the wishes and needs of society*” (European Commission 2000, pp. 15–16, emphasis added).

Mid-2005, this renewed policy framework was put to the test when the highly pathogenic avian influenza H5N1 emerged in the Ural region neighbouring Europe. Experts feared that migratory birds and agricultural trade would spread the virus to European poultry farms, with potentially significant animal health, economic, and social consequences. So, in the face of this new risk, we may ask: How were the ‘wishes and needs of society’—or social interests and values—incorporated in European food risk governance? Is such incorporation at EU level—where managerial standardisation based on consensual science and the single market-orientation is dominant—different from incorporation at Member State level—where culturally and historically mediated social interests and values enter the equation more easily (Cohen 2009; Jasanoff 2005; Vogel 2003)? And does inclusion of societal interests and values at Member State level challenge the “fully harmonised EU legal framework for trade in live animals and animal products [that] has enabled the single market in animals and animal products to function properly” (European Commission 2007, page 4)?

To gain insight into how social interests and values are incorporated at these multiple levels of European food risk governance, this paper examines food governance of avian influenza at the community level, as well as in three Member States. In the following section, we discuss the conceptual framework of our study, followed by our methodology. We then analyse the incorporation of social interests and values in avian influenza food risk governance in the Netherlands, France, and the UK, as well as at EU level. Finally, we conclude with reflecting on the institutional and practical dynamics enabling and restraining the incorporation of public interests and values in the multi-level European food policy framework.

5.2 Conceptualising social interests and values in multi-level food risk governance

Under the previous European food regime, food risk governance belonged to the domain of science-based, technocratic, and top-down policy making. Such conventional practice involved the three stages of natural-scientific risk assessment, political risk management, and finally risk communication to the public. In the first of these stages, risks were defined through technical, calculative assessment procedures. Subsequent risk management decisions took little account of wider risk perceptions and concerns present in society, and were legitimated to the public as choices resulting from objective, verifiable cost-benefit analyses (Dratwa 2002; Oosterveer 2007).

In face of different European food crises, this conventional approach increasingly lost public acceptance as a legitimate framework for policy-making (European Commission 2000). For an important part, this loss of acceptance has been ascribed to its inability to consider the social character of public risk perceptions (Mol and Bulkeley 2002). These perceptions are found to depend not only (or even primarily) on technical-objectivist risk factors. Instead, public risk experiences also depend on psychological factors as the ‘controllability’ and ‘voluntariness’ of risk exposure (Hansen et al. 2003; Slovic 1992), and on wider socio-contextual factors as cultural values and the social relations in which citizen-consumers are embedded (De Krom 2009; Giddens 1991; Wynne 1996). As these social and psychological characteristics lead to (partly) different risk sense-making frames, the mono-rationalities of natural science and cost-benefit analysis cannot fully appreciate social interests and values (Beck 2009).

The EU’s intention to base food legislation also on an appreciation of social interests and values indicates its willingness to overcome the conventional regime’s denial of the social character of risk experiences and risk policies. The definition of what the EU calls the ‘wishes and needs of society’—or ‘other legitimate factors’ (European Commission 2000, p. 9)—that are to be appreciated is, however, not straightforward. Following the above analysis, we can infer that social interests and values can primarily be defined ‘negatively’ vis-à-vis scientific risk assessments, in the sense that they involve those public interests and values that are not met in science-based risk policy making. Furthermore, because of the influence of socio-contextual factors on public risk

experiences, and their inherently dynamic nature, social interests and values evolve and differ in distinctive social contexts. The nature of social interests and values is, therefore, necessarily a topic of empirical investigation.

Aside from the definition of social interests and values, the manner in which these are to be inserted in food governance is rather undetermined. Theoretically, the interests and values of society could be incorporated in the renewed EU food policy regime in two distinct ways (Figure 5.1). First, they can be incorporated in risk management practices, by involving wider social arguments besides scientific reasoning as bases of political decision-making. Such an extension may force decision-makers to reflect on their routine assumptions and on possible regulatory problems. This increases chances of securing public backing for management decisions, while the scientific basis for food risk policies remains relatively unchanged. Alternatively, social interests and values can be incorporated in the scientific risk assessment procedures themselves. This entails the incorporation of public sense-making frames as factors that co-determine the scope of scientific risk assessments, and hence the risk definitions in the first place. By doing this, political risk management decisions based on this risk definition inherently appreciate wider risk perceptions and concerns present in society (Dratwa 2002; Jasanoff 1999).

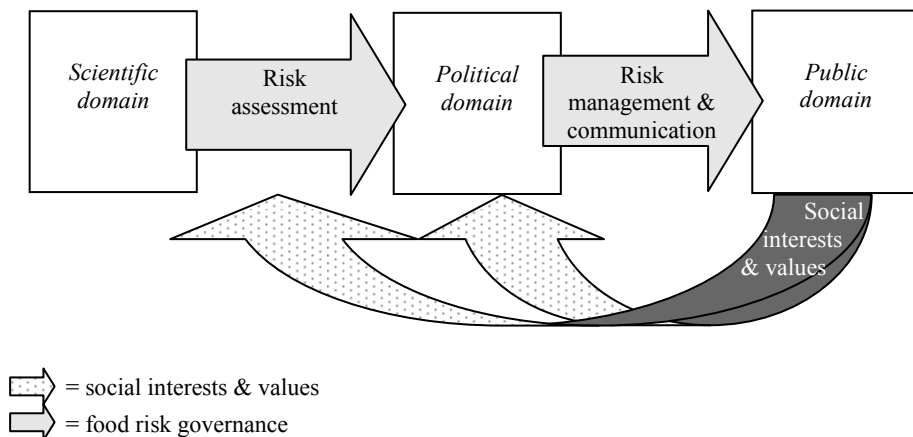


Figure 5.1. Conceptual possibilities to incorporate social interests and values in food risk governance

These conceptual options for including public interests and values in food risk assessment and/or management become complicated in the case of EU multi-level governance. Culturally and historically influenced risk perceptions are relatively easy included in country or lower level food risks policy frameworks (Jasanoff 2005; Oosterveer 2007; Vogel 2003; Wynne and Dressel 2001). Yet, the EU's aim of policy harmonisation to safeguard a proper functioning internal market restricts country-level differentiation of food and farming policies, and requires a minimum standardisation of risk assessment and management procedures. Conventionally such standardisation is rooted in natural-science's claims of objectivity and universality. Hence, the renewed EU food governance approach is faced with the challenge to incorporate science and the interests and values of the wider (European) society at Member State and at EU-level and to balance EU-level harmonisation and Member State-specific differentiation.

5.3 Methodology

To gain insight in this balance, we studied the inclusion of social interests and values in the avian influenza food risk governance as developed in the Netherlands, France, and the UK, as well as at the EU level. The choice for avian influenza (hereafter: AI) as a case to study food risk governance was based on two reasons. First, highly pathogenic H5N1 AI was one of the first major food and agricultural risks facing Europe after the implementation of the renewed European food policy framework. Second, the risk not only received much attention in scientific and political arenas, but also became the topic of broad public debates in Europe, whereby different social interests and values were expressed (De Krom and Oosterveer 2010). This case, therefore, provides ample opportunity to study how the renewed European policy framework allows for the incorporation of social interests and values in food risk legislation.

The reason that H5N1 received much attention in different social domains stems for an important part from its unprecedented character. The outbreak in the Ural in August 2005 was related to a chain of outbreaks that started already in 2003 in south-east Asia; by March 2006, H5N1 was detected in different European as well as in several African countries. Herewith, this chain of outbreaks was the largest on record in terms of

geographical spread. Moreover, for the first time wild birds were considered important vectors of international spread of highly pathogenic AI, next to well-known vectors as agricultural trade and movements of people (WHO 2006). After the detection of the virus in the Ural, experts anticipated that the virus would spread into Europe via wild birds or agricultural trade, and could cause outbreaks among European poultry. This could have dire animal health, economic and social consequences, as evidenced by the epidemic of highly pathogenic AI H7N7 in the Netherlands in 2003. Consequently, the question which food risk policy measures were to be implemented received much public and political attention.

The choice to study the food risk governance in the EU Member States the Netherlands, France, and the UK was mainly based on the fact that all three countries encountered farm animal disease crises in recent history. These crises triggered distinct socio-political responses (Oosterveer 2007; Wynne and Dressel 2001), making it likely they would react differently in face of AI as well. Moreover, these EU countries are traditionally important stakeholders in food and agricultural policy at the EU community level, and their positions carry substantial weight in EU-level decision-making.

To discern the nature of social interests and values at EU and Member State level, we reviewed scientific literature and policy documents on societal responses to (the governance of) previous food crises in the selected Member States. To gain insight in EU and Member State policy approaches to AI, we performed qualitative content analyses of key official publications and press releases in the three Member States and on EU level. Additionally, we analysed reports and press releases from relevant NGO and food supply chain actors. Relevant documents were selected and triangulated with information obtained via in-depth interviews with 40 representatives from international (OIE) and EU (DG-SANCO, EFSA) bodies, as well as from Member State institutions (agricultural ministries, food agencies), poultry supply chain actors (poultry producers' associations, supermarkets), consumer and animal welfare NGOs, and scientists.

In the following four sections, we analyse the position of social interests and values in AI food risk governance in the Netherlands, France, the UK, and at EU level, respectively. In each section, we firstly discern public concerns that emerged in face of previous food crises. Subsequently, we discuss if and how these public concerns were incorporated in AI risk assessment and management practices, and analyse the effect of this incorporation on public trust and the functioning of the European internal market.

5.4 The Netherlands: governing with society

Since the late-1990s, the Netherlands faced different large-scale farm animal disease outbreaks, including classical swine fever (1997), foot-and-mouth disease (2001), and highly pathogenic AI 'H7N7' (2003). To contain these outbreaks, large numbers of animals were slaughtered: ±10 million to fight classical swine fever, 270.000 to fight foot-and-mouth disease and 30 million to fight AI. Social resistance to this measure grew (Den Boer et al. 2004) and progressively mass-slaughtering was challenged on ethical (animal welfare, wasting food) grounds. At the same time, these outbreaks and slaughters were considered indicators of the unsustainable character of intensive Dutch farming practices and policies that were held responsible for facilitating quick and large-scale virus spread. Following the AI H7N7 epidemic, the future of Dutch intensive farming became subject to a broad public debate. Hobby (amateur) holders emerged as a prominent special interest group during the foot-and-mouth and AI crises. Many lost their animals to mass-slaughters during these crises because viruses would not differentiate between commercial and hobby animals. Hobby holders, however, disputed the epidemiological underpinning of such slaughters, and questioned why they were to be the victims of commercial farmers' problems. Increasingly, hobby holders hindered the slaughter of their animals, for instance by hiding them from officials. To restore and retain public backing, the Minister of Agriculture concluded, the government and the livestock sector should act socially responsible: they should assure high levels of animal welfare, differentiate between policies aimed at commercial and hobby-animals, and vaccinate where possible to forestall mass-slaughtering (LNV 2003).

After the detection of H5N1 in the Ural, the Minister of Agriculture asked the independent Dutch committee of AI experts (set up after the 2003 AI outbreak) to assess the risk. As the committee could not rule out that migratory birds would infect Dutch poultry, it recommended the confinement of commercial poultry to avoid contact between wild and domestic birds. The risk of infection of and spread by hobby-flocks was assessed as small, so the committee suggested cooperation between the Minister and amateur holders on how to handle the risk. The Minister, subsequently, ordered precautionary confinement of commercial poultry during the bird migratory season, and cooperated with hobby-

holders to formulate advice for these stakeholders (LNV 2005a). By February 2006, however, all outdoor poultry was to be confined (LNV 2006a). Not *if*, but *when* AI would enter Dutch territory was considered the pivotal question, making the risk too large to withhold this general measure.

Next, backed by this expert committee, Dutch government asked the EU permission to preventively vaccinate against AI. Explaining the rationale underlying this request, the government emphasised different country-specificities: (i) the Dutch geographical location along various bird migration routes; (ii) its high poultry densities; (iii) its large number of hobby-birds kept in backyards unsuitable to build covering, which creates problems in enforcing confinement; and (iv) its large population of free-range and organic poultry whose confinement has serious “consequences for animal welfare and trade” (European Commission 2006b). After the EU’s acceptance (based on Council Directive 2005/94/EC) in February 2006, commercial and amateur outdoor poultry holders could voluntarily vaccinate their animals as an alternative to poultry confinement, and possibly to mass-slaughtering.

In practice, few commercial and amateur holders actually chose to vaccinate (Capua et al. 2009). Amateur holders withheld from vaccinating mostly because of (i) practical difficulties (such as administrative burdens); (ii) high costs; (iii) vaccinated flocks could still be mass-slaughtered in case of veterinary necessity; (iv) and the lacking scientific reasons to vaccinate given the small risk to hobby-flocks according to the AI expert committee (NBvH 2006). Commercial farmers feared that through vaccination they would lose export markets, including within the EU. Although Member States could not erect trade-barriers on products of fowl vaccinated according to EU legislation, supermarkets (particularly in Germany and the UK, representing a large share of the export market) refused to retail them fearing consumer backlashes (De Krom and Oosterveer 2010). Despite this limited willingness to vaccinate, EU permission to preventively vaccinate was an important instrument “to take societal feelings into account as much as possible” in animal health governance, according to the Ministry of Agriculture (LNV 2006d).

AI had little impact on Dutch consumer behaviour (De Krom and Oosterveer 2010). No large information campaigns were set up to inform consumers, but the Dutch Food and Consumer Product Safety Authority (VWA) did emphasise that normal cooking

eliminates the AI virus. Having experienced the 2003 AI outbreak that did not involve food safety risks, this arguably sufficed to maintain public trust in poultry products. Moreover, the government's precautionary order to confine poultry and subsequent proactive vaccination policy, allowed for the integration of different social concerns in Dutch food risk governance and strengthened public trust in food (De Krom 2009).

Dutch AI governance incorporated different social interests and values in risk assessment and management practices. Following the 2003 public debate on the future of Dutch farming, three main issues were identified: high animal welfare levels, implementation of vaccination as an alternative to animal unfriendly and food-wasting mass-slaughters, and differentiation between policies for commercial and hobby holders. Both the expert committee's risk assessments and the Minister of Agriculture's risk management decisions initially differentiated between commercial- and hobby-poultry. The experts assessed the risk to hobby-poultry as significantly smaller than the risk to commercial outdoor poultry, and therefore recommended the confinement of the latter only. The Minister adopted this differentiated approach in his policy decisions—until heightened risk levels would necessitate the confinement of hobby-poultry as well.

After putting measures for commercial- and hobby-poultry on a par, however, voluntary preventive vaccination was offered to hobby, as well as to commercial outdoor poultry holders. This measure, which was advocated at the EU level both by the AI experts and the Minister, was advanced as an alternative to confining outdoor poultry, with its possibly negative impact on their welfare. Moreover, such vaccination could possibly forestall mass-slaughtering during a future AI epidemic. While few commercial and amateur holders chose to vaccinate, its mere possibility shifted responsibility for actual poultry keeping circumstances away from Dutch government and commercial farmers, to foreign supermarkets that refused to retail products from vaccinated poultry, and to hobby-holders. Resultantly, few incentives to challenge commercial farming practices remained, and these hardly became subject of further public contestation (see also De Krom and Oosterveer 2010).

5.5 France: governing consumer trust in food and government

Public trust in the French governmental approach to food safety came under severe pressure during the BSE crisis. Even when government knew about the BSE problem, French cattle had received contaminated feed. The Ministry of Agriculture would have withheld from issuing precautionary measures because of lack of firm scientific evidence of the spread of the disease. Only when consumer trust in French beef declined sharply, decisive governmental action was taken (Borraz et al. 2006; Oosterveer 2007). Public trust in government came under further pressure in face of a ‘chikungunya’ outbreak (a zoonosis spread by mosquitoes) on the French island territory Réunion (Ledrans et al. 2007). Starting in March 2005, the Réunion outbreak peaked early February 2006. By then, the disease was also imported into metropolitan France by overseas travellers. Announcing firm measures to control chikungunya only in February 2006, French government was criticised for responding too slow to the disease.

Since 1998 France’s food and agricultural governance is based on a separation of risk assessment and risk management—scientific assessments being the remit of the French Food Safety Agency (AFSSA), and management of the Ministry of Agriculture (Borraz et al. 2006). From October 2005 to February 2006, the French approach to AI was characterised by a discrepancy between AFSSA’s advice and the Ministry’s policy decisions (Sénat 2006). In October 2005, AFSSA advised that the level of risk did not justify enclosure of outdoor poultry in France, and that enclosure should not be ordered before this was practically possible on farms. The Ministry, however, ordered the confinement of outdoor poultry (or, alternatively, implementation of strict biosecurity measures) in 22 of the 96 continental departments. In January 2006, the measure was extended to 58 departments, while AFSSA still considered confinement unjustified based on the actual risk level. Moreover, AFSSA noted differences between its assessment of high risk zones, and the 58 designated departments. In February 2006, the Ministry ordered the confinement of poultry in all continental departments—this time conform AFSSA advice.

In February 2006, France also submitted a preventive vaccination plan to Brussels (European Commission 2006c). Based on AFSSA advice following H5N1 outbreaks in Greece early February and the “confused situation regarding the origin of the first outbreaks

in Africa” (Capua et al. 2009, p. 250), the government wanted to preventively vaccinate 900.000 ducks and geese. Confining these birds was impossible because of a lack of buildings (large enough) to house them, and welfare problems of housing such species. After EU permission to vaccinate (European Commission 2006c), nearly 500.000 free-range waterfowl—98% ducks reared for force-feeding—were mandatorily vaccinated (Capua et al. 2009). The campaign, which started late February, was already terminated late March, for two reasons. Firstly, the risk situation evolved favourably. Secondly, the direct and indirect costs of vaccination proved very high—partly due to loss of foreign markets, which instigated resistance against vaccination among farmers (Sénat 2006).

In November 2005, government mandated a large-scale information campaign, which communicated that “[i]n France, consumption of poultry meat does not present infection risks for humans because of the virus AI H5N1 originating from Asia” (CIV 2006, p. 1, our translation). Moreover, the campaign stipulated that EU and national measures were in place to avoid that AI would enter food chains, and to minimise virus spread once it would enter French territory. Domestic poultry consumption nonetheless dropped significantly late 2005 and early 2006—markedly following the governmental orders to confine poultry. These successive orders, mostly lacking scientific backing by AFSSA, would have instigated a public sentiment that government improvised and lacked control (Sénat 2006). The Agricultural Ministry countered that, since October 2005, it expected AI to enter French territory sooner or later. To prevent this, or—alternatively—to prevent public perceptions of a lax governmental response once the first French AI case would occur, it issued precautionary measures. The decline in poultry consumption following these measures were therefore the price to be paid to avoid future larger declines in public trust in food (Sénat 2006).

Late February 2006, France was the first EU country with H5N1 in commercial poultry. The infection remained restricted to one farm. Yet, despite this swift containment and the above-discussed preventive and informative measures, domestic poultry sales dropped more than 30%. To counter this decline, a TV-information campaign was started, in which different stakeholders (from a farmer to the head of AFSSA) informed consumers about the safety of French poultry produce. The poultry sector, furthermore, set up promotional campaigns (Magdelaine et al. 2008). In absence of further cases in French

commercial poultry, domestic consumption levels largely recovered in the second quarter of 2006 (Office de l'élevage 2006).

French AI governance was characterised by the Agricultural Ministry's aim to retain public trust in food and government. To meet this aim, the Ministry issued a national risk communication campaign, which informed consumers that AI did not entail a food safety risk, and that measures were put in place to prevent its emergence and spread. The Ministry took these pro-active management decisions to prevent public concerns about a slow and complacent governmental response—public criticism that befell the governmental approaches to BSE and chikungunya—and concomitantly retain public trust in food and itself. Counter-effectively, the public seemed to conceive the measures as signs of a lack of governmental control, leading to consumer backlashes.

When scientific uncertainty about AI risks increased in February 2006, the risk assessment and management bodies aligned in legitimating preventive measures for all of France, including mandatory preventive vaccination in specific departments. The preventive vaccination strategy was primarily legitimated on the basis of scientifically assessable risk factors, rather than on social interests and values. In practice, the strategy was hindered by (farmers fearing) loss of export markets for products of vaccinated fowl, which co-instigated protests among farmers and a rapid abandonment of the vaccination strategy—an abandonment that did not portray much Ministerial control. The AI outbreak in a commercial French poultry farm in February 2006, moreover, triggered a significant consumer backlash, while the Ministry's pro-active risk management approach was developed to prevent such a public response. The Ministerial attempt to incorporate public concerns in top-down risk management decisions, hence, proved unable to retain public trust in food, and overall seemed to contribute to rather than meet public concerns.

5.6 The UK: governing conventionally through a transformed institutional setting

The UK encountered different farm animal disease crises during the last two decades. Most notably, in 1996 the BSE crisis took off when UK scientists and government, after years of framing BSE as an animal disease only, had to inform the public on the probable link between BSE and the new, lethal human disease *variant Creutzfeldt-Jacob Disease*.

Because of this radical turn, consumers felt betrayed and lost trust in beef, science and the government (Oosterveer 2007). In 2001, the UK faced its largest foot-and-mouth epidemic in history. Large parts of the countryside were closed to avoid virus-spread by visitors, leading to grave economic damage to the rural economy. Moreover, about 6 million animals were slaughtered to contain the epidemic. These measures met much public protest, centred on the agricultural-productivist rationale underlying the country-side closure and the animal unfriendly mass-slaughtering strategy (Anthony 2004; Ward et al. 2004). A broad public debate ensued in which intensive farming and its focus on cheap food production were challenged, as it would facilitate the emergence of major food and farming crises (Nerlich 2004).

To restore consumer trust in food, science and government after these crises, the UK food policy framework was fundamentally transformed. In 2000, responsibility for consumer protection in relation to food was transferred from the Agricultural Ministry to the newly established Food Standards Agency (FSA), which operates at arms' length from government. In 2001, the Ministry of Agriculture, Fisheries and Food was replaced by the Department for Environment, Food, and Rural Affairs (Defra), which—as evidenced by its name—is to consider not primarily agricultural, but wider rural and environmental interests in managing food and farming. In 2004, Defra presented a new *Animal Health and Welfare Strategy for Great Britain* (Defra 2004), which provided “a route map for regaining public and consumer confidence in the food we produce and the restoration of our international reputation for the highest standards of animal health and welfare” (p. 5). This reputation was traditionally retained via reactive approaches including mass-slaughtering to secure national disease freedom (Woods 2004). Because “[t]oo much of what we have done recently has been reactive and not proactive” (Defra 2004, p. 5), the maxim ‘prevention is better than cure’ was now adopted as the central strategy.

In face of AI, Defra implemented prevention primarily via enhanced surveillance programs and contingency planning. Defra indicated that during an AI outbreak the countryside would not be closed, because it had learned its lessons from the foot-and-mouth epidemic. These lessons were implemented in “new and up-to-date contingency plans which are risk-based, proportionate and flexible”, and AI was assessed as being less contagious than foot-and-mouth (Defra n.d.). Moreover, Defra did not order the confinement of outdoor poultry, except when H5N1 was detected within UK territory. The

organic poultry sector strongly opposed confinement due to its animal welfare, practical, and economic consequences. UK scientists assessed that wild birds would, sooner or later, bring AI to UK territory. Yet, actual risk levels were too low to make a general ban on outdoor poultry—and its concomitant problems for free-range and organic poultry holders—proportionate (De Krom and Oosterveer 2010).

Neither was preventive vaccination against AI implemented. Small, organic, and free-range poultry holders who feared a future ban on outdoor poultry advocated this measure (Elm Farm Research Centre 2006). UK government, however, opposed preventive vaccination, for three reasons. First, vaccination entailed practical difficulties (for instance, birds would have to be individually injected, making vaccination labour-intensive and costly). Second, the UK did not have dense poultry populations near gathering places of wild birds, like the Netherlands and France. Finally, Defra followed UK experts' advice "that under the current conditions, it is not yet appropriate to carry out preventative vaccination of the UK's domestic poultry flocks as it may severely compromise the ability to recognise and react quickly to any introduction of the virus to our domestic poultry" (BVA 2007).

Since 2005, H5N1 was detected on UK territory on multiple occasions. Twice, H5N1 hit commercial farms: in February 2007, it was detected in a large commercial turkey premises in Suffolk (De Krom and Mol forthcoming); in November 2007 in a free-range turkey, ducks and geese farm and a free-range organic turkey grower unit in Norfolk. Both cases were contained relatively quickly. The Environment Secretary summarised the government's approach in response to the Suffolk outbreak as: "to stamp out the disease, protect public health, to protect animal health and welfare, and to regain disease-free status for the UK" (BBC 2007).

AI had little impact on UK domestic poultry sales—with the exception of turkey meat sales, which dropped following the Suffolk outbreak (De Krom and Mol forthcoming; Magdelaine et al. 2008). No large-scale information campaign was started, but FSA did communicate that "[p]roperly cooked poultry and poultry products, including eggs, are safe to eat" (FSA 2007b). The Environment Minister invoked UK consumers' superior understanding of AI as an explanatory factor of the overall stable consumer behaviour: "British consumers have proved themselves to be much more sensible and less hysterical than some in other countries because they know that there is absolutely no risk from eating

poultry products” (Which? 2007). Farmer representatives stipulated that the “British industry invested in building consumer confidence through the respected Chicken Assurance Scheme and through industry funded promotion that has helped to sustain demand. Other member states’ [Italian and French] industries have suffered a loss of consumer confidence, and as a consequence have been dumping chicken meat onto the UK market...severely damaging British companies who supply into these markets” (NFU and BPC 2006, p. 5). To support UK farmers, and be assured to eat high standard products, consumers were urged to buy British.

In the transformed UK institutional landscape, AI risks were governed rather traditionally. The new rationale *prevention is better than cure* was operationalised primarily in preparations for effective, *reactive* measures. Moreover, the legitimacy discourse supporting the UK policy approach included many references to the traditional idea of British ‘superiority’ in animal health governance—ranging from excellent scientific possibilities to quickly detect AI viruses (while the Netherlands and France risked masking viral presence by vaccinating), to superior understandings by UK consumers of the AI risk.

The recent institutional separation of food safety remits (FSA) from animal health ones (Defra), however, substantially contributed to the effectiveness of the UK approach—including its effectiveness in the citizen-consumers’ eye. The independent FSA that is strictly responsible for consumer protection related to food, assessed and communicated that no significant AI food safety risks existed, and hence that—in contradiction to BSE—consumers did not need to be concerned about a possible link between their health and AI. Further public concerns regarding countryside closure and animal welfare were largely obviated by UK scientists’ assessments that large scale closures of the country-side and a general ban on outdoor poultry would not be proportional to the AI risk. Notably, the risk assessment on poultry confinement took into account social interests and values concerning the negative impact of this measure on the viability of outdoor poultry farming, and on animal welfare. Basing its management decisions on these risk assessments, Defra incorporated these social interests and values by not ordering disruptive preventive interventions, and by providing ‘proof’ for the effectiveness of its approach via the relatively quick containments of AI outbreaks.

5.7 EU food risk governance: between harmonisation and differentiation

In the latter half of the 1990s, Europe faced different food-related crises, of which especially BSE proved to be a watershed-event for EU food policy. Until 1996, the European Commission primarily relied on an advisory body chaired by a UK scientist. This body mainly reflected the UK government's perspective that food safety was not an issue in the BSE problem. Therefore, the Commission had placed only minor restrictions on the sale of British beef. When the crisis broke in 1996, public trust in the European Commission and its advisory bodies was undermined, as Europeans were made aware of the gap between the functioning of the single market and the limited ability of EU institutions to guarantee the safety of food available on this market (Oosterveer 2007; Vogel 2003). To "re-establish public confidence in [EU] food supply, its food science, its food law and its food controls" (European Commission 2000, p. 7), responsibility for risk assessment and communication was institutionally separated from that for risk management. In 2002, risk assessment and communication became the remit of the then established European Food Safety Authority (EFSA), while risk management remained a Commission responsibility. This institutional setting was designed to provide transparency concerning the extent to which policy makers base regulation on EFSA's independent scientific advice. At the same time, this new arrangement allowed policy makers to take, next to science, also the interests and values of the public into account (European Commission 2000; Vogel 2003), as visualised in Figure 5.2.

At the time H5N1 was detected close to Europe, existing EU legislation (Council Directive 92/40/EE) focused on fighting, rather than preventing outbreaks. Council directives designed to prevent the introduction of animal diseases via trade were in place, but not directives to handle the threat from wild birds (LNV 2005a). In this lacuna, the Netherlands was the first EU country to order preventive measures to protect outdoor poultry against infected wild birds. The Commissioner of the Health and Consumers Directorate-General (DG-SANCO) considered this move a threat to a harmonised EU approach, and questioned its scientific backing—especially because Dutch experts assessed the risk only as 'low' (European Commission 2005b). The Commission's Standing Committee on the Food Chain and Animal Health (SCFCAH) subsequently considered this

risk to be remote to low as well, and regarded a European ban on outdoor poultry disproportionate. The proportionality of on-farm biosecurity measures should be based on case-by-case risk assessments carried out at local level. Only from October 2005, when H5N1 was detected within Europe, the Commission explicitly included poultry confinement as a possibly proportional measure (De Krom and Oosterveer 2010).

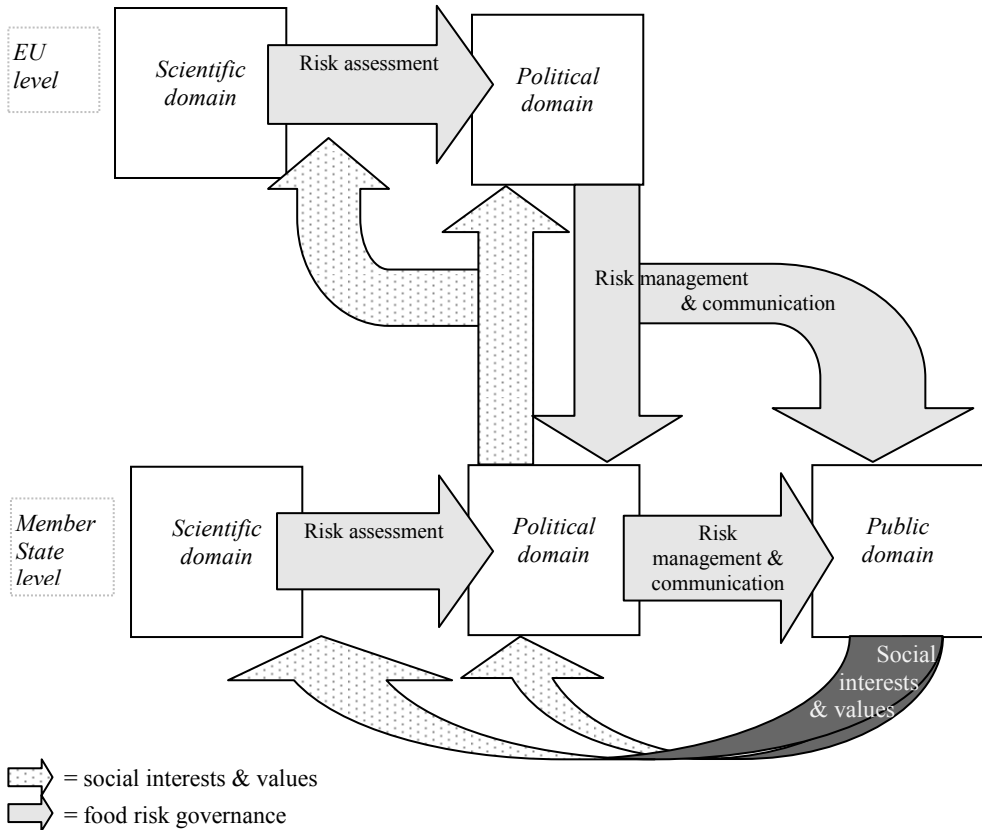


Figure 5.2. Incorporation of social interests and values in European food risk governance

In December 2005, the EU adopted Council Directive 2005/94/EC, repealing Directive 92/40/EE. Notably, under the old directive (Article 16) preventive vaccination against highly pathogenic AI was prohibited. Following an EFSA recommendation “preventive vaccination can be considered if a high risk of virus introduction is identified in

densely populated poultry areas” (European Commission 2006b, p. 1). Under the new directive, Member States can ask for approval to vaccinate if they deem this necessary on the basis of a risk assessment (Council of the European Union 2006). In approving the Dutch and French vaccination plans, the DG-SANCO Commissioner argued that the prevalence of infected wild birds within Europe necessitated exploration of all available options (European Commission 2006d). Permission for the Dutch plan was additionally legitimated in reference to the “significant risk that [during epidemics] hobby and pet birds are hidden and constitute an ongoing risk of infection. This occurrence should be considered, and instead of mass culling of such birds...vaccination may be considered” (European Commission 2006b, p. 1). The Commission additionally legitimated the “more flexible approach to vaccination” as a “response to ethical concerns and the growing demand for improved animal welfare” (European Commission 2007, p. 22).

From 2005 onwards, EU institutions addressed (potential) public concerns through risk communication. In 2005 and 2006, EFSA communicated that no evidence exists that AI is transmittable through food consumption. The Commission stipulated that consumers can safely eat poultry products, because measures to protect domestic poultry and to avoid entrance of affected products into the European food chains are in place, while thorough cooking kills the virus (De Krom and Oosterveer 2010). According to the Commission “good communication on risk to stakeholders/consumers is of utmost importance, as an incorrect public perception of risk may force the regulator to take unjustified or disproportionate measures in the case of a crisis” (European Commission 2007, p. 11).

EU level risk assessment and management practices focussed on maintaining an effective, harmonised EU approach to AI, in face of Member State pressure to allow for differentiated risk policy measures. Essentially, this EU level harmonisation was maintained by allowing Member States to make differentiated, context-specific management decisions, while requiring that such Member State decisions were based on EU and Member State level risk assessments. First, SCFCAH allowed Member States to differentiate in their on-farm biosecurity measures, if such measures were justified by place-based risk assessments. Second, following an assessment from EFSA, the Commission gave Member States the option to implement preventive vaccination if countries deemed this necessary. In effect, this created room for Member States to incorporate social interests and values in their decision-making. Management decisions,

however, still needed to be based on scientific risk assessments (for instance the decision whether or not to confine poultry that was to be based on place-specific risk assessments), or on social interests and values assessed as risk factors in themselves (for instance the risk that Dutch hobby-holders would hide their animals and form sources of concealed virus spread).

5.8 Conclusions

In this paper, we analysed the incorporation of social interests and values in European food risk governance of AI. Up to the moment of writing, the AI H5N1 risk has not developed into a major European farm animal disease crisis, but the anticipation to this crisis had significant transformative capacity. Backed by EU level justification, Member State approaches differed substantially, for an important part due to differences in ‘wider appreciation of the interests and values of society’ in risk assessment and management practices. However, these differences created unanticipated tensions at the level of the EU.

The renewed EU food policy regime allowed for the incorporation of social interests and values in AI food risk governance provided that such interests and values could be justified by scientific risk assessments. This arrangement entails the obvious benefit that science retains its position as the bedrock for EU food risk policy, while Member States possess some leeway to incorporate context-specific social interest and values. Moreover, it prevents too wide a discrepancy at the EU level between risk management decisions and the scientific risk assessment underlying these decisions. Such a discrepancy would rather trigger than meet public concerns, as evidenced by declines in French consumer trust after the implementation of preventive measures without full scientific justification.

The fact that Member States can appreciate their societies’ interests and values in decisions legitimated by scientific risk assessments, however, entails different (potential) elements of concern with regard to their impact on public trust and the functioning of the internal market. Firstly, because the incorporation of societal arguments in risk management decisions requires scientific (risk assessment) legitimation, risk assessors—that is, under current conditions, natural scientists—are more or less straightforwardly

'invited' to become sensitive to such societal arguments in their work. As social situations differ between Member States, this may lead to different 'objective' risk assessments, and hence the management of different risks across Europe. In view of the transboundary character of a risk as AI, it may become difficult to legitimate such differences in risk management. While risk assessment and management are institutionally separated at the EU level to enhance possibilities for the public to determine the extent to which risk managers base decisions on independent scientific advice, this incorporation of social interests and values in scientific risk assessments may rather obfuscate the position of 'sound science' in risk governance practices.

Moreover, within the EU internal market, Member States' risk management decisions do not necessarily remain restricted within national borders. Notably, the practical viability of the Dutch and French preventive vaccination plans were co-determined by the (lack of) willingness of foreign markets to retail and consume products of vaccinated poultry. While these plans received Commission approval and were co-legitimated by EFSA's advice, vaccination met resistance based on social interests and values in other Member States—namely by supply-chain actors who referred to consumer concerns. Since the rationale underlying the EU internal market involves that consumers should be able to trust all food available within Europe, country-based differentiation in risk management decisions might impede the proper functioning of the internal market as different social risk sense-making frames may clash here.

In the case of H5N1 AI, some social interests and values found a place in food risk governance of EU Member States through inclusion in risk management decisions and under certain conditions in risk assessment as well. Of the studied Member States, the Netherlands and the UK were more successful than France in this regard. However, integrating such concerns at Community level seems more problematic as pressure for change was created in the political domain via the different Member States rather than directly through a European-wide civil society (see Figure 5.2). As a consequence, tensions between inclusive but differentiated food risk policies at Member State level and common EU food policies and markets are likely to grow in the future.

6

Conclusions

6.1 Introduction

This study started with the observation that different European food risks and crises triggered a rethinking of food consumption and governance practices in two fundamental ways. On the one hand, declining levels of consumer trust in food following food risks and crises signified the propensity of these risks and crises to instigate a rethinking among citizen-consumers of the everyday practice of consuming food. On the other, drops in consumer trust in the face of food risks incited a rethinking among systemic food governance actors resulting in substantial transformations of the institutional food governance framework in Europe. Herewith, the positions of key food governance actors shifted, including those of EU level and state actors, scientists, food supply-chain actors, civil society organisations, and—notably—citizen-consumers. To overcome limitations of the ‘conventional’, natural science-based and top-down food risk policy approach in advancing consumer trust, the renewed policy framework intends to incorporate (sensitivity to) citizen-consumers and their values and interests in governance practices.

At the same time, we initially observed that it remained rather undetermined how citizen-consumers were included in food risk governance practices in the different European governance domains and levels, and what effects citizen-consumer involvement would have on public trust and the other principle aim underlying the EU food policy framework of safeguarding a proper functioning EU internal market. This study therefore aimed to contribute to the further understanding of citizen-consumer involvement in European food risk governance within and outside of the European policy institutions, and to gain insight into the constitution of citizen-consumer trust in food and food risk governance under late modern conditions. We examined these issues in four case studies

that focussed on their instantiation in the case of ‘H5N1’ highly pathogenic avian influenza—a major risk facing Europe after implementation of the renewed food policy framework. In these case studies, we determined different opportunities for and challenges to European food risk governance that aims to foster consumer trust through the incorporation of citizen-consumers in governance practices.

This final chapter reflects and builds on the case studies to elucidate theoretical and practical lessons that can be learned from our examinations. In the following section, we start with recapitulating the findings of the case studies. Next, we build on these findings to further contribute to theoretical insight into the changing positions of, and relations between, science, politics, and citizen-consumers in the different European food risk governance domains and levels. The chapter concludes by discussing policy recommendations and opportunities for further research.

6.2 European food risk governance of avian influenza: conclusions from the case studies

In this section, we recapitulate the conclusions of the case studies and set out connections between the different chapters to further identify lessons to be learned on contemporary European food risk governance of a complex risk as avian influenza. To clearly identify transformations in the handling of such a risk under the renewed EU food policy framework, the discussion is structured according to the three traditionally consecutive stages of, firstly, risk characterisation (risk assessment), followed by political decision making (risk management), and finally the conveyance of these characterisations and decisions to the general public (risk communication). Following this structure, we will discuss shifts in governance within these stages, as well as in the relations between these stages.

Characterising the risk of highly pathogenic avian influenza H5N1 (hereafter AI) to Europe proved complex and subject to substantial contestation within and between different European polities. Partly, this can be explained by the involvement of different scientific disciplines in determining the risk. Since AI is a zoonosis, relevant natural scientific expertise on AI included human health and animal health sciences—sciences that

are traditionally divergent.¹ Moreover, because wild birds were regarded as possible vectors of AI from 2005 onwards, disciplines as ecology and ornithology became relevant in addition to for instance virology and epidemiology. The involvement of scientists with different disciplinary foci in determining the risk contributed to the emergence of dissenting expert-opinions and the elusiveness of the initial risk staging, as illustrated in Chapter 2. Yet also within established epistemic communities contesting arguments were voiced. Such contestation is part and parcel of good scientific practice. However, it was not principally discussed within scientific arenas, but was—more than in the past—openly displayed in society through mass-media. This complicated discursive closure of risk assessments on the basis of which policy makers may (co-)legitimate their decisions (Chapter 2).

Establishing this discursive closure was further complicated as scientists openly defended their assessments not only in reference to their scientific expertise, but to wider social, economic and political arguments as well (Chapter 2). Not only was this reference to wider arguments informed by attempts to gain public support for their scientific policy advice. Additionally, scientists were incited to sensitise to such arguments following the implementation of the renewed European policy framework. Under this framework, risk governors are stimulated to incorporate wider social interests and values in their decisions, provided that such incorporation meets scientific commendation. This more or less explicitly summons scientists to assess social arguments while defining their policy advice (Chapter 5). Yet, social, economic and political arguments are by their very nature susceptible to ideological and interest-ridden contestation, and there is little justification for granting natural scientists a special position in assessing these arguments.

With ‘open access’ to mass-mediated, disagreeing expert-voices, other social actors were facilitated in co-creating and promoting story-lines on risk characterisations and advisable policy decisions, in which more or less dominant scientific views were combined with wider social arguments. This led to the emergence of contesting story-lines on the AI risk advocated by coalitions made up both of scientists and other social actors (Chapter 2). In the Netherlands, scientists, politicians, and poultry farmers advocated that the risk that wild birds would infect Dutch outdoor poultry was probable within a short time-span, qualifying immediate poultry confinement to prevent contact between wild and domestic birds as prudent. A radically different Dutch story-line was advanced by some scientists and representatives of outdoor poultry farmers, who focussed on poultry trade as the main

vector of AI spread, making poultry confinement a disproportionate measure. In the UK, scientists, politicians and free-range poultry farmers continuously argued that the immediate risk that AI would enter UK territory via wild birds was limited, making poultry confinement disproportionate to the risk as long as the risk level did not rise. Dissenting UK scientists, however, held the risk level high enough to legitimate poultry confinement. In the Netherlands and the UK, different story-lines became dominant. In the Dutch debate, AI came to be defined as an immediate threat that was to be governed by confining poultry, while in the UK the threat was constantly defined as a future one. Moreover, in the Netherlands preventive vaccination was broadly advocated as a scientifically and socially sound alternative to poultry confinement, while in the UK debate such vaccination was predominantly opposed to, based on scientific and practical grounds. These different story-lines became institutionally translated in different national risk management decisions (Chapters 2 & 5). It is to the shifting dynamics of these risk management practices that we turn next.

The Netherlands, France and the UK each adopted different sets of policy measures to govern the AI risk. While the Netherlands and France opted for large-scale preventive confinement of outdoor poultry, the UK was very reluctant to order such confinement. And while France implemented a mandatory preventive vaccination scheme, the Netherlands offered voluntary preventive vaccination to outdoor poultry holders, and the UK did not implement a preventive vaccination scheme at all. Notably, the European Commission allowed for such Member State differentiation—within the confines of the ‘toolbox’ endorsed by the EU—to encourage the implementation of those policy measures most applicable to manage geographic-specific risks. These risks would differ especially according to the degree to which areas are situated along migratory routes, dispose of attractive foraging areas for wild birds, and contain outdoor poultry. Additionally, the Commission indicated to aim at better responding to social interests and values by adopting a more flexible approach to measures as preventive vaccination (Chapter 5). These two lines of reasoning reflect the general notion underlying the renewed EU food policy framework that risk management judgements are to be based on sound scientific evidence as well as on an ‘appreciation’ of social interests and concerns, which brings along different tensions within the functioning of the framework.

As illustrated in Chapters 2 and 5, (the relative importance of) social interests and values tend to differ between different EU countries. Yet, the EU's aim to safeguard a proper functioning internal market and foster consumer trust in all food available within the EU requires a minimum level of policy standardisation across the EU. Therefore, a pan-European basis on which incorporation of social interests and values can be justified is a requisite. In practice, the (potential) tension between the incorporation of particularistic social interests and values, and the required minimum level of policy standardisation and harmonisation is handled by retaining primacy of the 'universalistic' scientific basis of risk management. Social interests and values were, accordingly, only allowed to be incorporated in risk management decisions provided that such incorporation was deemed justifiable by scientific risk assessments. This can, for instance, be illustrated by the EFSA's assessment that preventive vaccination was a pertinent additional tool to control AI, also in the face of the risk that Dutch hobby-holders—who advocated the vaccination of their animals—would hide these animals from officials and form sources of concealed virus spread (Chapter 5). This hybridisation of 'hard' scientific evidence and 'softer' social perspectives in the scientific basis of risk management practices may, however, make legitimisation of country-specific differences in policy decisions difficult: it threatens to obfuscate the distinction between risk assessment and management practices, which were institutionally separated at the EU level to enhance public transparency concerning extents to which risk managers base their decisions on scientific advice.

The above-discussed governance dynamics co-triggered shifts in risk governance practices to domains outside of European policy institutions. Firstly, EU-approved country-specific differences in the implementation of preventive vaccination against AI allowed retailers to gain legitimacy for an increased involvement in risk governance: supermarkets legitimated their refusal to market products of preventively vaccinated poultry in reference to their aims to meet consumer concerns and retain consumer trust (Chapters 2 & 5). Secondly, in view of different, mass-mediated AI risk characterisations and policy measures, consumers were incited to partly self-govern the AI risk. Once knowledgeable on the existence of diverting expert-opinions and national policy decisions concerning the (transboundary) AI risk, consumers were more or less explicitly imbued with the task to assess the merits of these different characterisations and decisions, and subsequently make the 'political' choice what to eat or not eat (Chapters 3 & 4).

Nonetheless, changes in consumer choices in the face of AI continued to be regarded by different institutional governance actors as irrational moves, which were to be overcome by further expert-based information provision to better educate consumers (Chapters 2 & 5). Such one-size-fits-all risk communication is, however, bound to fail in attending to the concerns of all groups of consumers, as it denies the inherently socially contextualised nature of consumer trust and their involvement in food risk governance. Herewith, it neglects the existence of varied and distinct consumer rationalities and bases for trust (Chapters 3 & 4). Due to the inherently contextual nature of risk experiences, expert and consumer risk perspectives may diverge for different reasons. Firstly, while risk assessors tend to consider risks on their particular characteristics, different consumers were found to link the AI risk to a range of other food risks and crises including BSE, foot-and-mouth disease, and the presence of possibly unhealthy substances as hormones, colouring agents, or pesticides in foodstuffs. Secondly, whereas expert-led risk communication on food risks often focuses on narrow definitions of food safety risks (that is, on foodborne impacts on human health), consumers were found to additionally link the AI risk to animal welfare issues, environmental sustainability, and impacts on local or distant economies implicated in the farm to fork chain. Finally, relations with experts through risk communication were only one among the relevant social relations in which food consumption practices and consumer trust were embedded. Chapter 3 and 4 showed that social relations with for instance food supply chain actors (most notably retailers, but e.g. also farmers), peers, NGOs, and state institutions (food safety agencies, agricultural ministries) were important factors that co-constitute consumer rationalities and consumer trust in relation to food risk governance.

Pertaining to such different perspectives on risks and their involvement in food risk governance, consumers (co-)constitute within the situated practices of purchasing food different rationalities that allow them to deal with uncertainties entailed in consuming in the face of food risks. Such rationalities range from trusting experts' risk management and communication practices, to engaging in assessments of the trustworthiness of food suppliers in face-to-face interactions; and from relying on and contributing to transparent, animal friendly and environmental sustainably production systems and healthy food, to (more or less tacitly) relying on institutionalised relations of checks and balances between food system actors. Due to these different consumer rationalities, possibilities for fostering

consumer trust lie not only—or even primarily—in top-down information provision on product-related risks, but for an important part also in information provision on the roles of different actors in food governance systems, and in facilitating active involvement of consumers in food risk governance practices (Chapter 3 & 4).

6.3 Consumer trust and involvement in food risk governance: theoretical reflections

The four case studies provided clear insight into the changing and innovative involvement of scientists, state agents, food suppliers, civil society organisations, mass-media, and citizen-consumers in European food risk governance under conditions of what can be labelled a ‘food risk society’. Moreover, the case studies determined shifting interactions between these agents in the different policy institutions and social domains of European food risk governance. This section reflects on the main findings of the cases, in order to further theoretical insight into the nature of consumer trust and involvement in food risk governance, and their relation to shifting positions of science and politics under late modern conditions.

6.3.1 *Consumer trust and involvement in risk assessments*

As evidenced in the case-studies, natural science has largely lost its ‘public’ claim to being the *a priori* trustworthy supplier of risk information, but continues to have a central position in publicly legitimating as well as contesting risk definitions. For an important part, this position can be explained by the ambiguous involvement of science in risk ‘production’. On the one hand, natural science tends to be perceived by different stakeholders, including groups of citizen-consumers, as an important contributor to physical risk production. For instance, the application of scientific progress that resulted in the intensification of animal farming practices and trade was regarded by a range of stakeholders as an important cause underlying the origins and scope of food-related risks as AI, BSE and foot-and-mouth disease. In view of this, science encounters difficulties to publicly legitimise itself in reference to its neutral ‘expert-position’.

On the other hand, the nature of risks as anticipations to undesirable future events implicates that knowledge is essential for risks to become recognised as such in the first place. Since scientists are best equipped to detect risks that escape everyday sensory experiences such as the AI virus, they tend to be first in line to put such risks on public and policy agendas, and concurrently frame them (Adam 1998; Beck 2009). In legitimating such framing, however, science has ceased to be a closed, internally referential system, but has instead become more transparent to the wider public concerning its internal disagreements and hence non-knowing. Moreover, scientific risk assessors are (more overtly) incorporating in their policy advice wider social, economic and political arguments to legitimate their perspectives on how to handle non-knowing. These tendencies involve the benefit that science-based knowledge and policy advice are more likely to be socially acceptable—an acceptability scientists risked to (partly) lose since groups of citizen-consumers became aware that implementation of scientific rationality may mismatch with their own rationalities, as evidenced by risk-producing side-effects of science-based agricultural ‘progress’. At the same time, however, these tendencies make the public more aware of contestations among scientific risk assessors and of the normative elements underlying their policy advice. Hence, it makes scientists more susceptible to public contestations of their perspectives.

As a result of this changing ‘public’ face of science, risk assessment practices open up for non-scientific actors. As scientists proliferate themselves in public arenas, such as the mass-media, to legitimate their risk perspectives and policy advice, they appear in arenas in which they do not have monopoly-positions, but in which they may encounter other social actors aiming to legitimate their own risk perspectives. As such, risk assessment practices partly move to non-scientific arenas, in which non-scientific actors aim to characterise risks, and legitimate risk management options. This shift in risk assessment practices and the changing ‘public’ face of science *de facto* signify a conflation of two previously segregated phases in the risk governance process: those of risk assessment and communication. The contestations of risk characterisations in the mass-media implicate that the ‘good scientific practice’ in risk assessment processes of doubting and contesting arguments is partly out in the open, and hence communicated to the public. This conflation of risk assessment and risk communication practices implicates that citizen-consumers can gain insight—through different information sources—in the existence of

multiple risk perspectives and characterisations, including those of dissenting scientists and non-scientific actors. Consequently, citizen-consumers are incited to become involved in risk assessment practices from which they were previously largely excluded: citizen-consumers are 'invited' or even 'forced' to form opinions on and assess the merits of different information (sources) and management options to manage non-knowing (Van Loon 2000). As a result of this, experts can expect to meet different levels of citizen-consumer distrust. Where citizen-consumers become 'micro-level' risk assessors, it appears only natural that they adopt doubting and sceptical dispositions. And hence, achieving scientific certainty, which was quintessential to the Enlightenment, becomes fundamentally undermined for citizen-consumers (Giddens 1990).

As illustrated by the prominent role scientists still play in framing the AI risk, this does not mean that in the public eye science becomes but one information source among many others. Contestations of dominant (science-based) risk definitions are often underpinned with scientific contra-expertise, illustrating the continuous relevance of science in legitimating as well as contesting risk perspectives. Yet, it does entail that room has emerged for non-scientific actors to gain legitimacy in wider—that is: also non-science-based—definitions of food risks. Moreover, it signifies that citizen-consumers can no longer simply be regarded as docile recipients of science-based risk information, as was the case under the conventional food policy regime. Rather, citizen-consumers may become actively involved in risk assessment processes in two ways: (i) through incorporation of citizen-consumer interests and values in judgements of experts seeking public backing for their risk characterisations and policy advice; and (ii) through citizen-consumers' micro-level assessments and judgements of conflicting risk characterisations.

6.3.2 Consumer trust and involvement in risk management

Related to the above-discussed shifts in risk *assessment* practices, citizen-consumer involvement in risk *management* practices is instigated in different ways. Firstly, to the extent that scientific risk assessors incorporate in their policy advice citizen-consumer interests and values for reasons discussed above, and risk managers base their decision making on such scientific advice, these social interests and values find a place in risk management. Moreover, due to the dissolution of science as the *a priori* trustworthy source

of risk characterisation, risk managers can no longer assume that they are able to legitimate policy decisions by referring only or mainly to scientific risk assessments, and cost-benefit analyses based on these. The conviction that implementing science-based food risk measures may have undesired side-effects that conflict with social interests and values, urges policy makers to base their decision making not only on scientific knowledge but also on wider social interests and values.

Such an incitement for the involvement of citizen-consumers and their interests and values in risk management practices and decisions does not implicate that risk managers consciously and openly reflect on how to involve citizen-consumers in their work as a standard practice. In a number of cases risk management still is a rather straightforward, mostly scientific, exercise. To the extent that policy-making involves meeting little-contested social interests (such as safeguarding a minimum level of public and animal health), and such policy-making can be based on European-wide accepted knowledge bases (that are for instance provided by the network of EFSA and the national food safety authorities), risk management tends to involve fairly standardised, top-down European policies. This becomes evident in, for instance, the rather uncontested European-wide import bans on risky poultry products and on susceptible imports from third countries with AI outbreaks.

Reflections by risk managers about whether and how to incorporate social interests and values in their work became especially observable when risk knowledge bases involved non-knowing and were publicly contested, and when wider social perspectives on what risk governance practices were to be considered pertinent, differed. In such situations, different risk perspectives are not only likely to emerge within one country. But also different risk perspectives are likely to become dominant in different countries, as risks become mediated through different culturally-embedded and socially contextualised sense-making frames. In these instances, meeting the European policy aim of retaining high levels of consumer trust in food seems impossible with a European harmonised and one-size-fits-all approach. Instead a differentiated approach among countries is required that allows for the incorporation of different, country-specific, citizen-consumer interests and values.

Here, European Member States—situated between EU level attempts to harmonise European food policy on the one hand, and differentiated national citizen-consumer rationalities and values on the other—(re-)emerge to take on a pivotal governance position.

Notably, against the trend of growing European standardisation in various policy domains, in European food risk governance of AI we saw a country-specific differentiation in policy decisions. And this was driven for an important part by the need to incorporate country-specific social interests and values in food risk governance. Predominantly through state-level political (and to a lesser extent, scientific) domains social interests and values were articulated on the EU agenda. While EU level food risk governance remained grounded in scientific-rational and technically-based justification, it had to open room for Member States to allow for the incorporation of these social interests and values in policy decisions.

With such EU Member State differentiation in food risk governance practices, country level policy institutions were enabled to contribute to citizen-consumer trust in food risk governance—in more (the UK, the Netherlands) or less (France) successful manners. Yet, this ‘division of labour’ between Member State-based incorporation of social interests and values and EU-level grounding of risk policies on scientific risk assessments only partly explains the constitution of citizen-consumer trust in food. The involvement of two important groups—operating outside the European policy institutions—in risk governance are equally important in trust constructions: supply chain actors (especially retailers) and consumers. Firstly, increased Member State possibilities to differentiate from one harmonised European food risk governance were paralleled by increased possibilities for private actors to become—legitimately—involved. By refusing to retail products of poultry vaccinated against AI supermarkets became strongly involved in food risk governance and were decisive in the success of vaccination. They legitimated their involvement with the argument of retaining their consumers’ trust in food.

Secondly, citizen-consumers take on roles as micro-level assessors of conflicting risk characterisations, which ‘materialises’ in consumers’ co-governance of food risks through food choices and consumption practices. With such consumer co-governance, consumption turns political, marking a partial shift of risk management practices towards places where consumers stand in ‘direct’ relation to the risk governors in the food supply and management systems: the shopping floors. We have shown that at these ‘consumption-junctions’, different consumer perspectives on risks and their governance exist, in the form of alternative rational frameworks of how to deal with food risks. Providing room for Member State-based differentiation in risk management, hence, does not necessarily mean

one addresses all consumer rationalities, as for groups of consumers such management decisions may lack congruence with their perspectives and concerns.

What is more, political and policy institutions encounter difficulties to address in their risk management decisions the socio-contextual embeddedness of consumers, consumption practices and trust. Consumers cannot be just conceptualised as individual pockets of cognitive features (attitudes, trust) that materialise—in a specific context—in predictable consumption behaviour. Without disregarding the influence of individualised psychological mechanisms on consumers' behaviour and trust, our research illustrated that consumption practices are essentially integrated in cultural, social and physical structures and actor relations, entailing among others connections to experts, state agencies, food suppliers, non-governmental organisations, journalists, other consumers, and consumers' peers. Being embedded in these structures and actor relations, significant groups of consumers do not regard themselves merely as passive recipients of food products, information flows and governance outcomes. They are self-defined co-governors of the safety and quality of food and farming—be it co-governors for a better world, for the fulfilment of peers' wishes, or for their own health. They co-construct the structures they consume through their acts of buying food and relating to actor networks. Through these relations and co-constructions consumer trust is being built: in locally produced food, in organic food, in quality supermarket food, etc. As such, European and national policy institutions may contribute to the make-up of the constraining and enabling environment of the shopping floor, but these institutions cannot fully construct and determine consumer trust.

6.4 Epilogue: policy recommendations and recommendations for further research

Having recapitulated and theoretically reflected upon the findings of this study, this final section aims to translate the results of this research into more practical terms of, first, policy recommendations for different groups of risk governance actors, and, second, recommendations for further research.

6.4.1 Policy recommendations

To clarify how our findings can contribute to improvements in the European food risk governance process, the policy recommendations put forward in the authoritative work of Dreyer and Renn (2009) provide an interesting point of departure. Dreyer and Renn advocate the institutionalisation of *inclusive governance* arrangements within the European food policy framework. This inclusive governance starts from the assumption that transparent communication between different affected and interested parties (political decision-makers, scientists, private actors, civil society organisations) during different food risk governance stages contributes to the quality and legitimacy of both scientific input and final decisions. Two main ‘inclusive institutions’ are proposed: (i) an Internet forum, incorporating accredited, affected and interested parties in the stages of risk framing and assessment; and (ii) an interface committee, involving the Commission, EFSA, and selected stakeholders in the stages of evaluating policy options, and risk management. To keep inclusive governance arrangements practicable, only in cases of high levels of scientific uncertainty and socio-political ambiguity wider participatory processes—such as formal hearings, public forums, citizen panels and juries, consensus conferences—are advised (see especially their chapter 7).

The findings of this study largely support these recommendations concerning the institutionalisation of inclusive governance. Our study corroborates that risk characterisations and policy-decisions should inherently incorporate different knowledges, interests and values. Moreover, we stipulated that in order to foster citizen-consumer trust in food these different knowledges, interests, and values should not be concealed in ‘objective’, science-based arguments. They should be made more explicit and transparent to contribute to greater legitimacy and accountability of risk definitions and policy-decisions. Formalising the involvement of different social actors in food risk governance practices through the above-discussed institutions contributes to such transparency and accountability in two main ways.

First, it allows for making explicit the social interests and values in relation to particular risks, and thus stimulates transparent, socially-relevant input and scope for natural science-based risk assessments. This enhances possibilities for retaining scientific bedrock under EU level food risk policy making, while it helps to avoid an *elusive* incorporation of social interests and values in (scientific) risk assessment practices. Second,

such institutionalisation of stakeholder involvement practices enhances possibilities for the public to determine the extent to which policy-decisions are based on scientific advice, and to what extent on wider social interests and values. At the same time, it enables risk managers to base and explain their (country-specific) policy decisions in clear reference to both scientific bases and wider societal wishes and needs.

But are wider participatory processes only relevant in cases that the proposed set of participating actors (decision-makers, scientists, private actors and civil society organisations) foresee or predict scientific uncertainty and social ambiguity? I think that wider participatory processes should become part of all food risk assessments and decision-making, for two reasons. First, social risk experiences change through time as they become mediated through socio-contextual factors (e.g. cultural values, social relations) that have an intrinsically dynamic nature. Combined with the common practice of accumulating and changing (scientific and non-scientific) risk knowledge, such contextual mediation may have unforeseen social dynamics that trigger social ambiguity. Predetermining the need for wider participatory processes risks missing relevant social dynamics that would justify wider participation. Second, and related, by only including the affected and interested parties mentioned above, the framework tends to overly rely on system-level information flows. It overlooks the importance of the differentiated, contextual embeddedness of significant groups of citizen-consumers, as these actors process information and bracket non-knowing, through which they co-determine risk perspectives, co-govern food risks, and co-constitute trust in food.

To overcome these limitations, without having to resort to overly costly and time-consuming inclusive practices, the implementation of two options for incorporating different citizen-consumer perspectives can be considered. First, a limited number of strategically chosen ‘lay’ citizen-consumers (e.g. citizen-consumers carrying different consumer rationalities) may be involved in the ‘inclusive institutions’ of the Internet forum and the interface committee. Second, the ‘inclusive institutions’ could be informed by (quantitative—see also below) research on risk perspectives and trust among groups of consumer who are actually involved in different consumption practices. Such research can—in contradiction to e.g. current Eurobarometer research that essentially investigates attitudes—provide insight in the contextual rationalities and heuristics carried in everyday consumption practices. With these options, country- and practice-specific risk perspectives

can be included in the food policy framework, and thus contribute to forestalling discursive and regulatory capture by the affected and interested parties mentioned above. Such citizen-consumer involvement, moreover, allows for (more) iterative monitoring of whether even wider participatory processes are advisable.

In addition to these recommendations oriented at the food policy framework, this study suggests that different measures beyond policy-institutional sites are advisable, for instance at shopping floors and public arenas. First, we evidenced that ‘risk communication’ contributes to consumer trust when it involves ‘practice-oriented’ information. As trust in food is trust between consumers and (other) governance actors, risk information should not only—or even primarily—entail product-related specifications, but also information on the practices of relevant actors (supply chain actors, governmental agencies) in the other parts of the food system. Governments can play important roles in information provision at the shopping floor, by requiring and validating information supplied to consumers on relevant activities of food supply chain actors (e.g. animal welfare labelling, environmental performance labelling as CO₂ labels, countries or regions of origin denotations). In mass-media, governments may contribute to consumer trust by providing clear, concise information to citizen-consumers (preferably in co-operation with other relevant governance actors as retailers and NGOs) on the existence and functioning of different checks-and-balances incorporated in system-level food governance practices (e.g. on an citizen-consumer oriented Internet site, but also in other mass-media during public debates on food and food risks).

Second, this study showed that different supply chains and product categories connote different relevant possibilities for groups of consumers to co-govern food risks and co-constitute trust in food. Governmental support for non-conventional systems-of-provision (e.g. organic, local and regional supply chains) should, therefore, not only be considered legitimate to protect the individual freedom of (food) choice, but also for constituting consumer trust (see also Beekman 2001). Safeguarding or stimulating the existence of multiple food channels fosters citizen-consumer trust in food, one of the EU policy aims. Hence, efforts to safeguard outdoor animal farming practices by offering vaccination as an alternative to confinement is to be applauded. Governments can further support this diversity of channels through economic measures (e.g. subsidies), public information campaigns, as well as for instance co-organising local food markets.

The above recommendations oriented at shopping floors largely pertain to retailers as well: providing process-related information to consumers (e.g. via symbolic tokens as labels or via interpersonal contact), and information on how retailers are involved in different system-level checks-and-balances (e.g. by disclosing product-traceability to consumers, portraying the effectiveness of checks-and-balances by openly communicating recall-actions, co-operating with independent accrediting agencies of labelled information such as NGOs). Such information provision likely contributes to consumer trust in food. Aside from such governance through information (which, as discussed in this study, can only partly constitute consumer trust), retailers have different opportunities to build trust-relations with consumers through in-store, physical arrangements that allow consumers to bracket what they do not know. Offering different product categories (e.g. including local products besides imported products in supermarkets, ready-to-eat besides uncooked products, organic besides conventional) to allow consumer involvement in food governance is one of such possibilities. Further options include combining face-to-face interaction with interaction via symbolic tokens as food-labels—e.g. by placing knowledgeable personnel at meat-sections in supermarkets. Finally, in the face of food risks as avian influenza, a practical possibility to retain consumer trust is the placement of suitable alternatives (e.g. vegetarian meat-replacements) in close proximity to the ‘at-risk’ products, to facilitate those groups of consumers aiming at (temporarily) shifting their consumption patterns.

6.4.2 Recommendations for further research

This study focussed on food risk governance and citizen-consumer trust in the single case of avian influenza, in different western European countries as well as on EU level. These foci proved instructive in exploring contemporary ways of governing food risks both within and outside of European policy institutions, and in furthering insight into consumer involvement and trust building in food risk governance. Yet, this research design necessarily has limitations, which leave interesting venues for further research.

A first line of further research would be to use the current insights for a more quantitative study on processes of trust building among larger consumer groups and different consumption practices/settings. Our explorative research has focused on in-depth studies of limited numbers of consumers in one particular—though crucial—setting:

shopping floors. Using these results for a wider survey of consumers in different consumption settings could provide us with better ideas about the relative importance of different mechanisms of consumer co-governance and their strategies for building trust. Canteens and restaurants would be two other logical contexts where trust in food is relevant, but virtual practices can be of equal interest (see below).

A second interesting expansion would be to conduct similar research in other combinations of countries and food risks. Can we observe similar processes of new food risk governance in other European countries, for instance the new EU Member States in Eastern Europe or even outside the EU? Is consumer involvement and trust building around avian influenza typical for a range of other food risks with which modern consumers are concerned? Or in contrast: has the case of avian influenza a number of case-specific characteristics which makes it not easy comparable with, say, BSE or Q-fever? Similar research designs on other combinations of countries and food risks should be able to obtain further insights in similarities and differences, and thus answers to questions of generalisation of the insights obtained in this study.

An additional interesting topic to explore is whether and how different citizen-consumer interests and values in one location influence interest and values in other locations. For instance, do citizen-consumer concerns about animal welfare and environmental sustainability incite improvements (or deteriorations) in food production practices in other parts of Europe, or do attempts to meet region-specific social interests and concerns trigger (re-)regionalisation of production-consumption chains? Such dynamics can be mediated by at least two mechanisms: either through the enabling and constraining character of EU-level policies, or through the transnational market dynamics of supply and demand.

Finally, in this study we examined the public character of contestations of risk definitions in the 'traditional' mass-media of national newspapers. An increasingly important mass-medium, to which different social actors—different (self-defined) experts, citizen-consumers, value chain actors—have access as information receivers and providers, is the Internet. How and to what extent does this medium of 'mass self-communication' (Castells 2009) transform the public dynamics of legitimating and contesting risk characterisations and policy-decisions? And to what extent is the Internet replacing (and

can it replace) conventional mass-media and information provisions via shopping floors as a key means for food risk governance and the construction of consumer trust?

Hence, there is a world open for interesting further research; also because food risks will not easily disappear from the public and political agendas in our contemporary ‘food risk society’.

Note

1. AI has, however, (co-)triggered different initiatives to better integrate these sciences because, as framed in the EU animal health strategy 2007-2013, “animals + humans = one health” (European Commission 2007) and according to the OIE, the WHO, the FAO (Food and Agriculture Organisation), the United Nations, and the World Bank, “one world” equals “one health” (OIE et al. 2008).

References

- Adam, B. (1998) *Timescapes of Modernity: The Environment and Invisible Hazards* (London: Routledge)
- Advisory Committee on the Microbiological Safety of Food (ACMSF) (2005) Avian Influenza Risk Assessment—Update November 2005. Discussion Paper ACM/768, <http://www.food.gov.uk/multimedia/pdfs/acm768v2.pdf>
- Albert Heijn (n.d.) Homepage. Available online at: <http://www.ah.nl/> Accessed 30 January 2007
- Alexander, D. (2007) An overview of the epidemiology of avian influenza. *Vaccine* Vol. 25 (30) pp. 5637–5644
- Allan, S. (2002) *Media, Risk and Science* (Buckingham: Open University Press)
- Altheide, D. (1996) *Qualitative Media Analysis: Qualitative Research Methods Vol. 38* (Thousand Oaks, CA: Sage)
- Ansell, C. and D. Vogel (eds.) (2006) *What's the Beef? The Contested Governance of European Food Safety* (Cambridge: MIT Press)
- Anthony, R. (2004) Risk Communication, Value Judgments, and the Public-Policy Maker Relationship in a Climate of Public Sensitivity toward Animals: Revisiting Britain's Foot and Mouth Crisis. *Journal of Agricultural and Environmental Ethics* Vol. 17 (4–5) pp. 363–383
- Atkins, P. and I. Bowler (2001) *Food in Society: Economy, Culture, Geography* (London: Arnold)
- BBC 2007, "Promise to 'stamp out' bird flu", The British Broadcasting Corporation, 5 February, http://news.bbc.co.uk/2/hi/uk_news/6332631.stm
- Beck, U. (1992) *Risk Society: Towards a New Modernity* (London: Sage)
- Beck, U., A. Giddens and S. Lash (1994) *Reflexive Modernization: Politics, Tradition and Aesthetics in the Modern Social Order* (Cambridge: Polity Press)
- Beck, U. (1999) *World Risk Society* (Cambridge: Polity Press)
- Beck, U. (2000) Risk society revisited: theory, politics and research programmes. Pp. 211–229 in B. Adam, U. Beck and J. van Loon eds, *The risk society and beyond: critical issues for social theory* (London: Sage)

- Beck, U. (2009) *World at Risk* (Cambridge: Polity Press)
- Beekman, V. (2001) *A Green Third Way? Philosophical Reflections on Government Intervention in Non-Sustainable Lifestyles* (Wageningen: PhD thesis Wageningen University)
- Beekman, V. (2006) Feeling food: the rationality of perception. *Journal of Agricultural and Environmental Ethics* 19 (3) pp. 301–312
- Berg, L. (2004) Trust in food in the age of mad cow disease: a comparative study of consumers' evaluation of food safety in Belgium, Britain and Norway. *Appetite*, Vol. 42 (1) pp. 21–32
- Bijman, J., B. Pronk and R. de Graaff (2003) *Wie voedt Nederland? Consumenten en Aanbieders van voedingsmiddelen 2003*. (Who's feeding The Netherlands? Consumers and food suppliers 2003) (The Hague: LEI)
- Bildtgård, T. (2008) Trust in food in modern and late-modern societies. *Social Science Information* Vol. 47 (1) pp. 99–128
- Borraz, O., J. Besançon and C. Clergeau (2006) Is It Just about Trust? The Partial Reform of French Food Safety Regulation. Pp. in C. Ansell and D. Vogel eds, *What's the Beef: The Contested Governance of European Food Safety* (Cambridge: MIT Press)
- British Veterinary Association (BVA) (2007) The British Veterinary Association: Statement on the Use of Vaccination as a Control Option for Avian Influenza. Policy Statement 5 February 2007, http://www.bva.co.uk/AI_vaccination_statement.pdf
- Buller, H. and C. Morris (2003) Farm Animal Welfare: a New Repertoire of Nature-Society Relations or Modernism Re-embedded? *Sociologia Ruralis* Vol. 43 (3) pp. 216–237
- Busch, L. (2000) The moral economy of grades and standards. *Journal of Rural Studies* Vol. 16 (3) pp. 273–283
- Cabinet Office (2009). Avian Influenza (Bird flu), http://www.cabinetoffice.gov.uk/ukresilience/latest/avian_flu.aspx Accessed on 25 June 2009
- Capua, I., A. Schmitz, V. Jestin, G. Koch and S. Marangon (2009) Vaccination as a tool to combat introductions of notifiable avian influenza viruses in Europe, 2000 to 2006. *Rev. sci. tech. Off. int. Epiz.* Vol. 28 (1) pp. 245–259

- Castells, M. (1996). *The Rise of the Network Society. Volume I of The Information Age: Economy, Society and Culture* (Malden, MA: Blackwell)
- Castells, M. (2004) *The Power of Identity. Volume II of The Information Age: Economy, Society and Culture* 2nd edition. (Malden, MA: Blackwell)
- Castells, M. (2009) *Communication Power* (Oxford: Oxford University Press)
- CFSPH (Center for Food Security and Public Health), Institute for Internal Cooperation in Animal Biologics, and World Organisation for Animal Health (2009) High Pathogenicity Avian Influenza – Fowl Plague, Grippe Aviaire. Last Updated: January 2010, http://www.cfsph.iastate.edu/Factsheets/pdfs/highly_pathogenic_avian_influenza.pdf
- CIV (French Meat Information Centre) (2006) *Information influenza aviaire ou grippe aviaire* (Information on avian influenza or avian flu) Paris, Centre d'Information des Viandes, 1 March, http://www.civ-viande.org/file/documents/grippe_aviaire_010306bis.pdf
- Cohen, M. (2009) Environmental Policies in Their Cultural and Historical Contexts. Pp. 423–431 in J. Boersema and L. Reijnders eds, *Principles of Environmental Sciences* (Dordrecht: Springer)
- Competition Commission (2000) *Supermarkets: A report on the supply of groceries from multiple stores in the United Kingdom* (London: Competition Commission)
- Cooter, R., and R. Fulton (2001) Food matters: Food Safety Research in the UK Public Sector, 1917-1990. *Food Industry Journal* Vol. 4 (3) pp. 251–261
- Cope, S., L. Frewer, O. Renn and M. Dreyer (2009) Potential methods and approaches to assess social impacts associated with food safety issues. *Food Control, in press, corrected proof* (doi:10.1016/j.foodcont.2009.05.008)
- Council of the European Union (1992) Council Directive 92/40/EEC of 19 May 1992 introducing Community measures for the control of avian influenza. *Official Journal of the European Union* L167 pp. 1–16
- Council of the European Union (2006) Council directive 2005/94/EC of 20 December 2005 on Community measures for the control of avian influenza and repealing Directive 92/40/EEC. *Official Journal of the European Union* L010 pp. 16–65
- Dagevos, H. (2005) Consumers as four-faced creatures: looking at food consumption from the perspective of contemporary consumers. *Appetite* 45 (1) pp. 32–39

- Dagevos, H., S. van der Kroon and E. Van Wijk-Jansen (2006) *Consumentenbeleid dat op de toekomst is voorbereid: bespiegelingen met betrokkenen*. (Consumer policy prepared for the future: reflections of experts) (The Hague: LEI)
- Dean, M. (1999) *Governmentality: Power and Rule in Modern Society* (London: Sage)
- Den Boer, M., L. Canté, A. Dekker, B. Duyvesteyn, H. Geveke, R. Jansen, M. Kort and R. van der Mark (2004) *Eindrapport De crisis tussen mens en dier: Evaluatie bestrijding AI-crisis* [Final report The crisis between human and animal: evaluation of the AI-crisis control] (Utrecht: Berenschot)
- De Krom, M. (2009) Understanding Consumer Rationalities: Consumer Involvement in European Food Safety Governance of Avian Influenza. *Sociologia Ruralis* Vol. 49 (1) pp. 1–19
- De Krom, M. and P. Oosterveer (2010) Contesting Risk and Responsibility: European Debates on Food and Agricultural Governance of Avian Influenza. *Nature and Culture* Vol. 5 (2) pp. 175–195
- De Krom, M. and A. Mol (forthcoming) Food Risks and Consumer Trust: Avian Influenza and the Knowing and Non-Knowing on UK Shopping Floors. *Appetite*
- Department for Environment, Food and Rural Affairs (Defra) (2004) *Animal Health and Welfare Strategy for Great Britain* (London: Defra)
- Department for Environment, Food and Rural Affairs (Defra) (2006) *H5N1 in a Whooper Swan (Cygnus cygnus) in Scotland: Preliminary Risk Assessment for Great Britain*. (London: International Animal Health Division)
- Department for Environment, Food and Rural Affairs (Defra) (2007) *H5N1 highly pathogenic avian influenza outbreak: Holton, Suffolk February 2007 - lessons to be learned report*. (London: Defra)
- Department for Environment, Food and Rural Affairs (Defra) (n.d.) *Avian influenza (bird flu): Impact on the countryside* London, Department for Environment, Food and Rural Affairs, <http://www.defra.gov.uk/foodfarm/farmanimal/diseases/atoz/ai/rural/index.htm>
- Dratwa, J. (2002) Taking risks with the precautionary principle: food (and the environment) for thought at the European Commission. *Journal of Environmental Policy and Planning* Vol. 4 (3) pp. 197–213
- Dreyer, M., O. Renn, S. Cope and L. Frewer (2009). Including social impact assessment in

food safety governance. *Food Control*, in press, corrected proof (doi:10.1016/j.foodcont.2009.05.007)

- Dreyer, M. and O. Renn (eds.) (2009) *Food Safety Governance: Integrating Science, Precaution and Public Involvement – Risk, Governance and Society Volume 15* (Berlin Heidelberg: Springer)
- DG SANCO (n.d.) Food safety – from farm to fork. Homepage available online at http://ec.europa.eu/food/index_en.htm Accessed 27 February 2007
- Donaldson, A. (2008) Biosecurity after the Event: Risk Politics and Animal Disease. *Environment and Planning A* Vol. 40 (7) pp.1552–1567
- Dutch Food and Consumer Product Safety Authority (VWA) (2005) Vogelgriep niet overdraagbaar door het eten van kip (Avian influenza is not transmissible by eating chicken) Press release 21 October 2005 (The Hague: VWA)
- Dutch Ministry of Agriculture, Nature and Food Quality (LNV) (2003) Kabinetsstandpunt inzake toekomst intensieve veehouderij in Nederland (Cabinet-position concerning the future of intensive livestock farming in the Netherlands) Letter to the parliament 19 December 2003 (The Hague: LNV)
- Dutch Ministry of Agriculture, Nature and Food Quality (LNV) (2005a) Maatregelen i.v.m. risico insleep Aviaire Influenza (Measures because of the risk of Avian Influenza introduction) Letter to the parliament 31 August 2005 (The Hague: LNV)
- Dutch Ministry of Agriculture, Nature and Food Quality (LNV) (2005b) Einde afschermplicht voor pluimvee per 1 januari 2006 (End of the requirement to keep poultry under cover as of 1 January 2006) Press release 30 December 2005 (The Hague: LNV)
- Dutch Ministry of Agriculture, Nature and Food Quality (LNV) (2006a) Invoering afschermplicht i.v.m. Vogelgriep (Introduction of the requirement to keep poultry under cover because of bird flu) Letter to the parliament 16 February 2006 (The Hague: LNV)
- Dutch Ministry of Agriculture, Nature and Food Quality (LNV) (2006b) Avian Influenza. Letter to the parliament 23 February 2006 (The Hague: LNV)
- Dutch Ministry of Agriculture, Nature and Food Quality (LNV) (2006c) Developments Regarding Avian Influenza. Letter to the parliament 27 April 2006 (The Hague: LNV)

- Dutch Ministry of Agriculture, Nature and Food Quality (LNV) (2006d) *LNV-beleid in 2007: de plannen van de minister van Landbouw, Natuur en Voedselkwaliteit in kort bestek*. (LNV policy in 2007: the plans of the Minister of Agriculture, Nature and Food Quality in brief) (The Hague: LNV)
- Dutch Ministry of Agriculture, Nature and Food Quality (LNV) (2006e) Vandaag einde afschermplicht voor pluimvee (Today ends the requirement to keep poultry under cover) Press release 21 November 2006 (The Hague: LNV)
- Dutch Ministry of Agriculture, Nature and Food Quality (LNV) (2007a) Maatregelen vogelgriep Hongarije (Bird flu measures Hungary) Press release 24 January 2007 (The Hague: LNV)
- Dutch Ministry of Agriculture, Nature and Food Quality (LNV) (2007b) Afschermen pluimvee vanaf 3 februari verplicht vanwege uitbraak in Engeland (Keeping poultry under cover mandatory from 3 February onwards because of outbreak in England) Press release 3 February 2007 (The Hague: LNV)
- Dutch Ministry of Agriculture, Nature and Food Quality (LNV) (2009) All pregnant animals on infected farms to be culled. Press release 16 December 2009 (The Hague: LNV)
- Dutch Ministry of Agriculture, Nature and Food Quality (LNV) (2010) Voor de zomer besluit over maatregelenpakket Q-koorts (Decision on measures against Q-fever before summer) Press release 22 March 2010 (The Hague: LNV)
- Elm Farm Research Centre (2006) *Vaccination nation? Civilised strategies for protecting outdoor poultry from Avian Flu H5N1* (Hamstead Marshall: Elm Farm Research Centre)
- Empres (2006) Evolution of highly pathogenic avian influenza type H5N1 in Europe: review of disease ecology, trends and prospects of spread in autumn–winter 2006. *Empres Watch* October 2006
- Empres (2009) H5N1 HPAI Global Overview November 2009. *H5N1 HPAI Global Overview* Issue no. 17 <ftp://ftp.fao.org/docrep/fao/012/ak720e/ak720e00.pdf>
- Eurobarometer (2005) *Public Opinion in the European Union. Standard Eurobarometer 63* (Brussels: Eurobarometer)
- Eurobarometer (2006a) *Risk Issues. Special Eurobarometer 238* (Brussels: Eurobarometer)
- Eurobarometer (2006b) *Avian influenza. Special Eurobarometer 257* (Brussels: Eurobarometer)

Eurobarometer)

Eurobarometer (2007) *Scientific Research in the Media. Special Eurobarometer 282*
(Brussels: Eurobarometer)

Eurobarometer (2008) *Europeans, Agriculture and the Common Agricultural Policy. Special Eurobarometer 294* (Brussels: Eurobarometer)

European Commission (EC) (2000) *White paper on food safety* COM (1999) 719, January 12 (Brussels: EC)

European Commission (EC) (2005a) Avian Influenza: Commission Asks Member States to Step Up Surveillance. Press release 25 August 2005 (Brussels: EC)

European Commission (EC) (2005b) MEMO/05/295 – Avian Influenza and EU pandemic flu preparedness plan. Information note to the Commission by Mr Kyprianou 1 September 2005 (Brussels: EC)

European Commission (EC) (2005c) Avian Influenza: Commission Proposal for Reinforced Measures Agreed with the Member States. Press release 14 October 2005 (Brussels: EC)

European Commission (EC) (2006a) Avian Influenza: Vaccination of Certain Poultry in France and Netherlands Approved. Press release 22 February 2006 (Brussels: EC)

European Commission (EC) (2006b) Commission Decision of 24 February 2006 on introducing preventive vaccination against highly pathogenic avian influenza H5N1 and related provisions for movements in the Netherlands (notified under document number C(2006) 630) (Only the Dutch text is authentic) (2006/147/EC). *Official Journal of the European Union* L55 pp. 47–50

European Commission (EC) (2006c) Commission Decision of 24 February 2006 on introducing preventive vaccination against highly pathogenic avian influenza H5N1 and related provisions for movements in France (notified under document number C(2006) 632) (Only the French text is authentic) (2006/148/EC). *Official Journal of the European Union* L55 pp. 51–57

European Commission (EC) (2006d) Avian Influenza: Vaccination of certain poultry in France and Netherlands approved. Press release 22 February 2006 (Brussels: EC)

European Commission (EC) (2007) *A new Animal Health Strategy for the European Union (2007-2013) where “Prevention is better than cure”* (Luxembourg: Office for Official Publications of the European Communities)

- European Consumers' Organisation (BEUC) (2005) *Programme of community action in the field of health and consumer protection 2007–2013*. BEUC position paper, BEUC/X/040/2005 (Brussels: BEUC)
- European Food Safety Authority (EFSA) (2005) EFSA Provides Update on Avian Influenza and Food Safety. Press release 26 October 2005 (Parma: EFSA)
- European Parliament and Council (2002) Regulation (EC) No 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety. *Official Journal of the European Communities* L 31 pp. 1–24
- Ewald, F. (2002) The return of Descartes' malicious demon: an outline of a philosophy of Precation. Pp. 273–301 in T. Baker and J. Simon eds, *Embracing Risk: The Changing Culture of Insurance and Responsibility* (Chicago: University of Chicago Press)
- Fishbein, M. and I. Ajzen (1975) *Belief, attitude, intention and behavior: an introduction to theory and research* (Reading, MA: Addison-Wesley)
- Fischler, C. (1988) Food, Self and Identity. *Social Science Information* Vol. 27 (2) pp. 275–292
- Flynn, A., T. Marsden and E. Smith (2003) Food Regulation and Retailing in a New Institutional Context. *Political Quarterly* Vol. 74 (1) pp. 38–46
- Food Standards Agency (FSA) (2007a) Advisory Committee on the Microbiological Safety of Food (ACMSF): avian flu opinion. 14 February 2007, <http://www.food.gov.uk/multimedia/webpage/birdflu/acmsfbirdflu>
- Food Standards Agency (FSA) (2007b) Bird flu poses no food safety risks. Press release 22 November 2007 (London: FSA)
- Gauthier-Clerc, M., C. Lebarbenchon and F. Thomas (2007) Recent expansion of highly pathogenic avian influenza H5N1: a critical review. *Ibis* Vol. 149 (2) pp. 202–214
- Giddens, A. (1990) *The consequences of modernity* (Stanford: Stanford University Press)
- Giddens, A. (1991) *Modernity and self-identity: self and society in the late modern age* (Cambridge: Polity Press)
- Giddens, A. (1999) Risk and responsibility. *The Modern Law Review* Vol. 62 (1) pp. 1–10
- Goffman, E. (1975) *Frame Analysis: An Essay on the Organisation of Experience*

(Harmondsworth: Penguin)

- GRAIN (2006) *Fowl play: The poultry industry's central role in the bird flu crisis* GRAIN Briefing, February 2006, http://www.grain.org/briefings_files/birdflu2006-en.pdf
- Greger, M. (2007) The Human/Animal Interface: Emergence and Resurgence of Zoonotic Infectious Diseases. *Critical Reviews in Microbiology* Vol. 33 (4) pp. 243–299
- Gross, M. (2007) The Unknown in Process. Dynamic Connections of Ignorance, Non-Knowledge and Related Concepts. *Current Sociology* Vol. 55 (5) pp. 742–759
- Gstraunthaler, T. and R. Day (2008) Avian influenza in the UK: knowledge, risk perception and risk reduction strategies. *British Food Journal* Vol. 110 (3) pp. 260–270
- Hajer, M. ([1995] 1997) *The Politics of Environmental Discourse: Ecological Modernization and the Policy Process* (Oxford: Oxford University Press)
- Hajer, M., J. van Tatenhove and C. Laurent (2004). *Nieuwe vormen van governance* (No. RIVM-report 500013004/2004) (Bilthoven: RIVM)
- Hajer, M. and W. Versteeg (2005) A Decade of Discourse Analysis of Environmental Politics: Achievements, Challenges, Perspectives. *Journal of Environmental Policy & Planning* Vol. 7 (3) pp. 175–184.
- Halkier, B. (2001a) Consuming Ambivalences: Consumer handling of environmentally related risks in food. *Journal of Consumer Culture* Vol. 1 (2) pp. 205–224
- Halkier, B. (2001b) Risk and food: environmental concerns and consumer practices. *International Journal of Food Science and Technology* 36 (8) pp. 801–812
- Hansen, J., L. Holm, L. Frewer, P. Robinson and P. Sandøe (2003) Beyond the knowledge deficit: recent research into lay and expert attitudes to food risks. *Appetite* 41 (2) pp. 111–121
- Hansman, H. and J.C. Dagevos (1999): ‘Catching’ consumers: applying a consumer images approach. Paper presented at the IAMA Agribusiness Forum conference Florence 13 June
- Jackson, T. (ed.) (2006) *The Earthscan Reader in Sustainable Consumption* (London: Earthscan)
- Jasanoff, S. (1997) Civilization and Madness: the Great BSE Scare of 1996. *Public Understanding of Science* Vol. 6 (3) pp. 221–232
- Jasanoff, S. (1999) The Songlines of Risk. *Environmental Values* Vol. 8 (2) pp. 135–152
- Jasanoff, S. (2005) In the democracies of DNA: ontological uncertainty and political order

- in three states. *New Genetics and Society* Vol. 24 (2) pp. 139–155
- Kalberg, S. (1980) Max Weber's types of rationality: cornerstones for the analysis of rationalization processes in history. *American Journal of Sociology* Vol. 85 (5) pp. 1145–1179
- Kjærnes, U. (2006) Trust and distrust: cognitive decisions or social relations? *Journal of Risk Research* Vol. 9 (8) pp. 911–932
- Kjærnes, U., M. Harvey and A. Warde (2007) *Trust in Food: A Comparative and Institutional Analysis* (Hampshire: Palgrave Macmillan)
- Knowles, T., R. Moody and M. McEachern (2007) European Food Scares and their Impact on EU Food Policy. *British Food Journal* Vol. 109 (1) pp. 43–67
- Lang, T. and M. Heasman (2004) *Food Wars: The Global Battle for Mouths, Minds and Markets* (London: Earthscan)
- Lang, T. (2006) Food, the law and public health: Three models of the relationship. *Public Health* Vol. 120 pp. 30–41
- Lang, T., D. Barling and M. Caraher (2009) *Food policy: integrating health, environment and society* (Oxford: Oxford University Press)
- Ledrans, M., I. Quatresous, P. Renault and V. Pierre (2007) Outbreak of chikungunya in the French Territories, 2006: lessons learned. *Eurosurveillance* Vol. 12 (36) p. 3262
- Lee Ligon, B. (2005) Avian Influenza Virus H5N1: A Review of Its History and Information Regarding Its Potential to Cause the Next Pandemic. *Seminars in Pediatric Infectious Diseases* Vol. 16 (4) pp. 326–335
- Lien, M. and B. Nerlich (eds.) (2004) *The Politics of Food* (Oxford: Berg)
- Lupiani, B. and S. Reddy (2009) The history of avian influenza. *Comparative Immunology, Microbiology and Infectious Diseases* Vol. 32 (4) pp. 311–323
- Magdelaine, P. M. Spiess and E. Valceschini (2008) Poultry meat consumption trends in Europe. *World's Poultry Science Journal* Vol. 64 (1) pp. 53–63
- Mason, J. (2002) *Qualitative researching* 2nd edition (London: Sage)
- Mazzocchi, M., A. Lobb, W. Traill, and A. Cavicchi (2008) Food Scares and Trust: A European Study. *Journal of Agricultural Economics* Vol. 59 (1) pp. 2–24
- Micheletti, M. (2003) *Political Virtue and Shopping: Individuals, Consumerism, and Collective Action* (New York: Palgrave)

- Millstone, E. and T. Lang (2003) *The Atlas of Food: Who eats What, Where and Why* (London: Earthscan)
- Ministry of Agriculture, Fisheries and Food (MAFF) (1998). *Food Standards Agency: A force for change. White Paper* (London: MAFF)
- Misztal, B. (2001) Normality and Trust in Goffman's Theory of Interaction Order. *Sociological Theory* Vol. 19 (3) pp. 312–324
- Mol, A. (2006) Environmental Governance in the Information Age: The Emergence of Informational Governance. *Environment and Planning C: Government and Policy* Vol. 24 (4) pp. 497–514
- Mol, A. and H. Bulkeley (2002) Food Risks and the Environment: Changing Perspectives in a Changing Social Order. *Journal of Environmental Policy & Planning* Vol. 4 (3) pp. 185–195
- Möllering, G. (2001) The Nature of Trust: From Georg Simmel to a Theory of Expectation, Interpretation and Suspension. *Sociology* Vol. 35 (2) pp. 403–420
- National Farmers' Union (NFU) and British Poultry Council (BPC) (2006) British Chicken – What Price?, May 2006, <http://www.thepoultrysite.com/articles/587/report-british-chicken-what-price>
- NBvH (Dutch Association of Smallholders) (2006) Is there a future for hobby holding in Europe?, Conference 1 July, Ede, <http://hobbydierhouder.nl/content/view/388/100/>
- Nerlich, B. (2004) Risk, blame and culture: Foot and Mouth Disease and the Debate about Cheap Food. Pp. 39–57 in M. Lien and B. Nerlich eds, *The politics of food* (Oxford: Berg)
- Nerlich, B. and C. Halliday (2007) Avian Flu: The Creation of Expectations in the Interplay between Science and the Media. *Sociology of Health & Illness* Vol. 29 (1) pp. 46–65
- Nestle, M. (2002) *Food Politics. How the Food Industry Influences Nutrition and Health* (Berkeley: University of California Press)
- NOS (Netherlands Broadcasting Foundation) (2010) Beperkingen aan grootte megastallen Noord-Brabant (Restrictions to size mega-farms Noord Brabant), <http://nos.nl/artikel/144900-beperkingen-aan-grootte-megastallen-noordbrabant.html> Accessed 24 March 2010
- Office de l'élevage (2006) *La consommation des produits carnés. Septembre* (The

- consumption of meat products. September), <http://www.office-elevage.fr/consommation/conso-06/text05.pdf>
- Oosterveer, P. (2002) Reinventing risk politics: reflexive modernity and the European BSE crisis. *Journal of Environmental Policy & Planning* Vol. 4 (3) pp. 215–229
- Oosterveer, P. (2007) *Global Governance of Food Production and Consumption: Issues and Challenges* (Cheltenham: Edward Elgar)
- Oosterveer, P., J. Guivant and G. Spaargaren (2007) Shopping for green food in globalizing supermarkets: sustainability at the consumption junction. Pp. 411–428 in J. Pretty, A. Ball, T. Benton, J. Guivant, D. Lee, D. Orr, M. Pfeffer and H. Ward eds, *Handbook of Environment and Society* (London: Sage)
- Osterhaus, A. (2006) *Zijn we voorbereid op de vogelgriep? De meest gestelde vragen over vogelgriep* (Utrecht: Kosmos-Z&K)
- Paul, K. (2009) *Food safety : a matter of taste? Food safety policy in England, Germany, the Netherlands, and at the level of the European Union* (Amsterdam: PhD thesis University of Amsterdam)
- Pellizzoni, L. (2004) Responsibility and environmental governance. *Environmental Politics* 13 (3) pp. 541–565
- Pellizzoni, L. (2005) Trust, responsibility and environmental policy. *European Societies* 7 (4) pp. 567–594
- Peters, H., H. Heinrichs, A. Jung, M. Kallfass and I. Petersen (2008) Medialization of Science as a Prerequisite of its Legitimization and Political Relevance. Pp. 71–92 in D. Cheng, M. Claessens, T. Gascoigne, J. Metcalfe, B. Schiele and S. Shi eds, *Communicating Science in Social Contexts: New Models, New Practices* (Dordrecht: Springer)
- Pollan, M. (2008). *In defence of food: The myth of nutrition and the pleasures of eating*. (London: Allen Lane/Penguin)
- Poppe, C. and U. Kjærnes (2003) *Trust in Food in Europe: A Comparative Analysis* (Oslo: National Institute for Consumer Research)
- PvdD (Dutch Party for the Animals) (n.d.) Marianne Thieme overhandigt petitie Q-koorts aan ministers Verburg en Klink (Marianne Thieme presents petition Q-fever to Ministers Verburg and Klink) Press release 13 January 2010 (The Hague: PvdD)
- Reckwitz, A. (2002) Toward a theory of social practices: a development in culturalist

- theorizing. *European Journal of Social Theory* Vol. 5 (2) pp. 243–263
- Renn, O. (2009) Precaution and the governance of risk. Pp. 226–258 in W. Adger and A. Jordan eds, *Governing Sustainability* (Cambridge: Cambridge University Press)
- Renn, O. and P.-J. Schweizer (2009) Inclusive Risk Governance, Concepts and Application to Environmental Policy Making. *Environmental Policy and Governance* Vol. 19 (3) pp. 174–185
- Rushton, J. and M. Upton (2006) Investment in preventing and preparing for biological emergencies and disasters: social and economic costs of disasters versus costs of surveillance and response preparedness. *Rev. sci. tech. Off. int. Epiz.* Vol. 25 (1) pp. 375–388
- Scientific Panel on Biological Hazards (2006) Food as a possible source of infection with highly pathogenic avian influenza viruses for humans and other mammals. *The EFSA Journal* Vol. 74 pp. 1–29.
- Scientific Task force on Avian Influenza and Wild birds (2008) “Scientific Summary of Highly Pathogenic Avian Influenza H5N1, 27 March 2008”, <http://www.aiweb.info/document.aspx?DocID=358>
- Scottish Government (2006) Bird Flu Update 13/04/2006. News release 13 April 2006 (Edinburgh: Scottish Government)
- Sénat (2006) Une approche critique de la mise en oeuvre des moyens de lutte contre la “grippe aviaire” (A critical approach to the utilisation of means to control “avian influenza”), Rapport d’information n° 451 (2005-2006) de Mme Nicole BRICQ, fait au nom de la commission des finances, déposé le 4 juillet 2006, <http://www.senat.fr/rap/r05-451/r05-451.html>
- Simmel, G. (2004) The Philosophy of Money. Pp. 51–512 in D. Frisby ed, *The Philosophy of Money. Third enlarged edition* (London: Routledge)
- Slovic, P. (1992) Perception of Risk: Reflections on the Psychometric Paradigm. Pp. 117–152 in S. Krimsky and D. Golding eds, *Social theories of risk* (New York: Praeger)
- Slovic, P. (1998) Perceived Risk, Trust and Democracy. Pp. 181–192 in R. Löfstedt and L. Frewer eds, *The Earthscan Reader in Risk & Modern Society* (London: Earthscan)
- Slovic, P. (2000). *The Perception of Risk* (London: Earthscan)
- Slovic, P., B. Fischhof and S. Lichtenstein (2000) Facts and fears: understanding perceived risk. Pp. 137–153 in P. Slovic *The perception of risk* (London: Earthscan)

- Smallman-Raynor, M. and A. Cliff (2008) The Geographical Spread of Avian Influenza A (H5N1): Panzootic Transmission (December 2003-May 2006), Pandemic Potential, and Implications. *Annals of the Association of American Geographers* Vol. 98 (3) pp. 553–582
- Smith, E., T. Marsden, A. Flynn and A. Percival (2004) Regulating food risks: rebuilding confidence in Europe's food? *Environment and Planning C: Government and Policy* Vol. 22 (4) pp. 543–567
- Spaargaren, G. (2003) Sustainable consumption: a theoretical and environmental policy perspective. *Society and Natural Resources* Vol. 16 (8) pp. 687–701
- Stake, Robert E. (1998) Case Studies. Pp. 86–109 in N. Denzin and Y. Lincoln eds, *Strategies of Qualitative Inquiry* (Thousand Oaks: Sage)
- Sztompka, P. (1999) *Trust: A Sociological Theory* (Cambridge: Cambridge University Press)
- Taubenbergerand, J. and D. Morens (2009) Pandemic influenza – including a risk assessment of H5N1. *Rev Sci Tech*. Vol. 28 (1) pp. 187–202
- Van Kleef, E., L. Frewer, G. Chryssochoidis, J. Houghton, S. Korzen-Bohr, T. Krystallis, J. Lassen, U. Pfennig and G. Rowe (2006) Perceptions of food risk management among key stakeholders: results from a cross-European study. *Appetite* 47 (1) pp. 46–63
- Van Kleef, E., Ø. Ueland, G. Theodoridis, G. Rowe, U. Pfenning, J. Houghton, H. van Dijk, G. Chryssochoidis and L. Frewer (2009) Food risk management quality: Consumer evaluations of past and emerging food safety incidents. *Health, Risk & Society* Vol. 11 (2) pp. 137–163
- Van Loon, J. (2000) Virtual risks in an age of cybernetic reproduction. Pp. 165–182 in Adam, B., U. Beck and J. van Loon, *The risk society and beyond: critical issues for social theory* (London: Sage)
- Vogel, D. (2003) The Hare and the Tortoise Revisited: The New Politics of Consumer and Environmental Regulation in Europe. *British Journal of Political Science* Vol. 33 (4) pp. 557–580
- Wales, C., M. Harvey and A. Warde (2006) Recuperating from BSE: the shifting UK institutional basis for trust in food. *Appetite* 47 (2) pp. 187–195

- Ward, N., A. Donaldson and P. Lowe. (2004) Policy Framing and Learning the Lessons from the UK's Foot and Mouth Disease Crisis. *Environment and Planning C: Government and Policy* Vol. 22 (2) pp. 291–306
- Warde, A. (1997) *Consumption, food and taste: culinary antinomies and the commodity culture* (London: Sage)
- Weatherell, C., A. Tregear and J. Allinson (2003) In search of the concerned consumer: UK public perceptions of food, farming and buying local. *Journal of Rural Studies* Vol. 19 (2) pp. 233–244
- Weber, M. (1958) Science as a Vocation. *Daedalus* Vol. 87 (1) pp. 111–134
- Weber, M. (1962) *The protestant ethic and the spirit of capitalism* (London: George Allen & Unwin)
- Which? (2007) Shoppers reassured over poultry products: Move follows bird flu outbreak in Suffolk – 05 February 2007, Which?, <http://www.which.co.uk/news/2007/02/shoppers-reassured-over-poultry-products-108354>
- Woods, A. (2004) Why slaughter? The cultural dimensions of Britain's foot and mouth disease control policy, 1892–2001. *Journal of Agricultural and Environmental Ethics* Vol. 17 (4-5) pp. 341–362
- World Health Organisation (WHO) (2006a) Avian influenza – situation in Turkey. Update 7. 30 January 2006
- World Health Organisation (WHO) (2006b) Avian influenza – Fact sheet, February 2006, http://www.who.int/mediacentre/factsheets/avian_influenza/en/
- World Health Organisation (WHO) (2010) Cumulative Number of Confirmed Human Cases of Avian Influenza A/(H5N1) Reported to WHO – 17 February 2010, http://www.who.int/csr/disease/avian_influenza/country/cases_table_2010_02_17/en/index.html
- World Organisation for Animal Health (OIE) (n.d.) Avian influenza – facts and figures: H5N1 timeline Available online at: http://www.oie.int/eng/info_ev/en_AI_factoids_H5N1_Timeline.htm Accessed 4 March 2010
- World Organisation for Animal Health (OIE), FAO, WHO, UN System Influenza Coordination, UNICEF, The World Bank (2008) *Contributing to One World, One Health: A Strategic Framework for Reducing Risks of Infectious Diseases at the Animal–Human–Ecosystems Interface*, <http://www.oie.int/downld/AVIAN%20>

INFLUENZA/OWOH/OWOH_14Oct08.pdf

- World Organisation for Animal Health (OIE) (2009) *Terrestrial Animal Health Code 2009* (Paris: OIE)
- Wynne, B. (1996) May the sheep safely graze? A reflexive review of the expert–lay knowledge divide. Pp. 44–83 in S. Lash, B. Szerszynski and B. Wynne eds, *Risks, environment and modernity: towards a new ecology* (London: Sage)
- Wynne, B. (2001) Managing scientific uncertainty in public policy. Paper presented at the conference ‘Biotechnology and Global Governance: Crisis and Opportunity’, April 26–28, Cambridge MA
- Wynne, B. and K. Dressel (2001) Cultures of Uncertainty – Transboundary Risks and BSE in Europe. Pp. 121 – 154 in G. Sjöstedt, J. Linnerooth-Bayer and R. Löfstedt eds, *Transboundary Risk Management* (London: Earthscan)
- Yee, K., T. Carpenter and C. Cardona (2009) Epidemiology of H5N1 avian influenza. *Comparative Immunology, Microbiology and Infectious Diseases* Vol. 32 (4) pp. 325–340
- Yin, R. (1994) *Case Study Research: Design and Methods – Applied Social Research Methods Series Volume 5* 2nd edition (Thousand Oaks: Sage)
- Yin, R. (1998) The Abridged Version of Case Study Research: Design and Method. Pp. 229–259 in L. Bickman and D. Rog eds, *Handbook of Applied Social Research Methods* (Thousand Oaks: Sage)
- Zinn, J. (2008) Introduction: The Contribution of the Sociology to the Discourse on Risk and Uncertainty. Pp. 1–17 in J. Zinn ed, *Social Theories of Risk and Uncertainty: An Introduction* (Malden, MA: Blackwell)

Appendix 1: Interview guide consumer research

1. Why did you buy this specific poultry product?
 - a. What were reasons to buy this product/what issues did you take into account when buying this product?
 - i. Which of these reasons were most important for you (priorities)?
 - b. Why did you buy this product in here?
 - c. Why did you buy this product at this moment?

2. Do you buy similar poultry products more often (meat products with similar characteristics that you deem important)?
 - a. If not, why did you buy the product just now?
 - i. (continue with question 3)
 - b. If yes, which reasons to buy this product do you then deem important?
 - i. If similar to 1, go on with question 2c.
 - ii. If not similar to 1, which other reasons do you find important in those instances?
 - c. How many times a week/month do you buy such a product?
 - i. Where do you buy such a product in such cases?
 1. Why there?
 2. If in different places:
 - a. Why do you buy such products in different places?
 - b. Which of these places do you prefer?

3. Hypothetically speaking, if you would have the possibility to change anything of the poultry meat or the production and supply process of this meat as it is presently available in the stores, would you choose to do so?
 - a. Why?
 - b. What do you deem to be the most important issue to change?

4. *Who*, in your opinion, should fulfil *which* tasks to ensure that those issues you deem to be important regarding poultry meat are taken into account?
 - a. Why?
 - b. Do you think that these tasks have been adequately fulfilled in this case?
 - c. Why (not)?

Questions to go more in depth concerning Q4, if necessary:

5. Which task or tasks should the *shop* where you buy your products fulfil to ensure that those issues you deem to be important regarding poultry meat are taken into account?
 - a. Why do you think so?
 - i. To what extent does this differ from your view on these issues when it concerns food products in general?
 - ii. Why?

6. Same question concerning the *farmer* that reared the animal from which the meat originates?
7. Same question concerning the *slaughterhouse & other actors in the food supply chain: distributor / feed companies*?
8. Same question concerning the *government*?
9. Same question concerning *NGOs*?
10. Same question concerning *science / scientists*?
11. Same question concerning the *media*?
12. Same question concerning *consumers / your task*?

13. To what extent has the existence of HPAI avian influenza influenced your consumption of poultry meat?
 - i. What influence did this have on your consumption pattern of poultry meat?
 - ii. Why did this have influence on you consumption pattern of poultry meat?
- b. Same question for food products in general in relation to other animal diseases (BSE; FMD; classical swine fever).
 - i. If there is a difference in the influence: why is this the case?

14. To what extent did the existence of avian influenza influence your view on responsibilities of various actors, as discussed before?
 - a. If so, what has changed?
 - b. Why?
 - c. Is that change temporarily or permanently?

15. To what extent do the following issues influence your consumption of poultry meat?
 - a. If poultry is kept in- or outdoors?
 - i. Why?
 - b. If poultry would be vaccinated against avian influenza or not?
 - i. Why?

Background variables:

1. Gender
2. Age
3. Type of poultry meat product
4. Point-of-sale

Appendix 2: List of interviewees

Vincent Rijsman (Manager Business Development, Food Safety & Animal Disease Control; Wageningen University, Animal Sciences Group, Infectious Diseases)
5 July 2006

Sjoerd van de Wouw (Wakker Dier [Dutch animal welfare NGO])
10 July 2006

Bert van den Berg (Dierenbescherming [Dutch Society for the Protection of Animals])
23 August 2006

Bert Urlings (Professor in Supply Chain Management in Animal Production Wageningen University; Director Quality & Environment VION Food Group; Diplomate European College Veterinary Public Health)
27 September 2006

Marc Jansen (CBL, Centraal Bureau Levensmiddelenhandel [Dutch Central Bureau for Provision Trade, the Netherlands])
3 October 2006

Klaas Johan Osinga (LTO Nederland (Land- en Tuinbouw Organisatie Nederland) [Dutch Federation of Agriculture and Horticulture])
6 October 2006

Mart de Jong (Professor Quantitative Veterinary Epidemiology, Wageningen University)
11 October 2006

Clemens Oude Groeniger (Biologica [Dutch umbrella organisation for organic farming and food])
13 October 2006

Sanna Mesman (VWA, Voedsel en Waren Autoriteit [Dutch Food and Consumer Product Safety Authority])
3 November 2006

Martijn Weijtens (LNV, Ministerie van Landbouw, Natuur en Voedselkwaliteit [Dutch Ministry of Agriculture, Nature and Food Quality])
24 November 2006

Huibert Maurice (LNV, Ministerie van Landbouw, Natuur en Voedselkwaliteit [Dutch Ministry of Agriculture, Nature and Food Quality])
28 November 2006

Ed van Klink (LNV, Ministerie van Landbouw, Natuur en Voedselkwaliteit [Dutch Ministry of Agriculture, Nature and Food Quality])

4 December 2006

Maria Ball (NFU, UK National Farmers' Union)

27 June 2007

Simon Hall (Defra, UK Department for Environment, Food and Rural Affairs)

28 June 2007

Ian Hill (Defra, UK Department for Environment, Food and Rural Affairs)

28 June 2007

Julian West (Defra, UK Department for Environment, Food and Rural Affairs)

28 June 2007

Amy Holmes (Defra, UK Department for Environment, Food and Rural Affairs)

28 June 2007

Ann Davison (Defra, UK Department for Environment, Food and Rural Affairs)

28 June 2007

Judith Hilton & Alick Simmons (FSA, UK Food Standards Agency)

2 July 2007

Kate Todd (FSA, UK Food Standards Agency)

2 July 2007

Sue Davis (Which? [UK Consumer's Association])

2 July 2007

Richella Logan (CLA, UK Country Land & Business Association)

3 July 2007

Richard Sanders (Elm Farm Research Centre – The Organic Research Centre)

3 July 2007

Andrew Opie (BRC, British Retail Consortium)

4 July 2007

Peter Bradnock (BPC, British Poultry Council)

4 July 2007

John Avizienius (RSPCA, Royal Society for the Prevention of Cruelty to Animals)

6 July 2007

Anna Bassett (Soil Association)
10 July 2007

Louis Orensa & Hubert Brugere (CIV, Centre d'Information des Viandes [French Meat Information Centre])
24 November 2008

Claude Gilbert (Research director at CNRS, Centre National de la Recherche Scientifique [National Center of Scientific Research])
25 November 2008

Marie Cuenot (Synalaf, Syndicat National des Labels Avicoles de France [National Union of French Poultry Producers])
27 November 2008

Maria Pittman & Alberto Laddomada (DG-SANCO, Health and Consumer Protection Directorate General, European Commission)
3 December 2008

Magali Bocquet (FCD, Fédération des entreprises du Commerce et de la Distribution [French Federation of Commerce and Distribution Companies])
15 December 2008

Hélène Sadonès & Yves Douzal (Ministère d'Agriculture et de la Pêche [French Ministry of Agriculture and Fisheries])
16 December 2008

Alain Melot (FIA, Fédération des Industries Avicoles [French Federation of Poultry Industries])
19 December 2008

Philippe le Loup (ITAVI, Institut Technique de l'AViculture [French poultry farming technical institute])
19 December 2008

Véronique Jestin (AFSSA, Agence française de sécurité sanitaire des aliments [French Food Safety Agency])
22 December 2008

Christianne Brusckhe (Dutch Ministry of Agriculture, Nature and Food Quality; OIE, World Organisation for Animal Health)
6 January 2009

Cees Veerman, (former Dutch minister of Agriculture (2002-2007))
13 January 2009

Ab Osterhaus (Professor, Head Department of Virology, Erasmus MC [University Medical Center Rotterdam])
19 January 2009

Jordi Serratos (European Food Safety Authority [EFSA])
20 January 2009

Summary

During the 1990s, many European countries faced one or more food crises, such as bovine spongiform encephalopathy (BSE), *E. coli*, dioxin residues, and foot-and-mouth disease. These crises were marked by a growing public recognition of food-related risks and the changing nature of these risks, and tended to undermine citizen-consumer trust in the practices and institutions that managed food safety. To restore and retain trust in food throughout Europe, the European food policy framework was substantially renewed at the turn of the century. Conventional food governance was the domain of scientific experts, state agents and actors higher in the food supply chain, who decided on policy measures based on scientific data, and subsequently conveyed them to the general public. In the renewed framework for governing food, other social actors, including (individual and organised) citizen-consumers, were to be more actively involved through innovative roles.

While this innovative position for citizen-consumers represents a definite discursive shift, it remains rather elusive how citizen-consumers should be included in food risk governance practices, and what effects such inclusion has on consumer trust. This study aims to further the understanding of whether and how citizen-consumer involvement in European food risk governance (re)establishes trust in the handling of food risks. It investigates consumer involvement within the conventional policy institutions (at the EU and Member State levels), as well as outside of these institutions (at shopping floors and in mass-media). The study focuses empirically on a major risk to Europe that emerged after the renewed policy framework had largely been implemented: highly pathogenic avian influenza H5N1.

In August 2005, this avian influenza virus strain entered European public arenas as the next food and agricultural risk. As the virus was detected close to Europe, questions arose whether measures were required to protect human health and secure European food supply. Chapter 2 analyses the public debates on the characteristics of the risk and on the interventions needed. The mass media in two EU Member States, the UK and the Netherlands, were studied for this purpose. With the help of qualitative analysis the debates were analysed as they unfolded in selected national newspapers. Arguing that risks are socially mediated realities, this chapter discusses how struggles on risk definitions relate to

different policy decisions. Moreover, it analyses how these political dynamics are informed by the involvement of state, market, science, and civil society actors, and discerns their implications for the functioning of the EU food governance framework.

Chapter 3 explores consumer perspectives on food safety governance by expounding the results of an explorative study among Dutch consumers. Moving away from the ‘knowledge deficit’ model, which entails that consumers should be better educated to avoid ‘irrational’ responses, we investigate what consumers consider at the place and time they actually have to deal with food risks. To give ample room for the construction of contextual knowledge, consumers of poultry meat were questioned at various retailers by applying a qualitative interviewing method. From this research, it is concluded that multiple consumer rationalities about food safety governance exist. As a consequence of the existence of these multiple consumer rationalities, a differentiated governance approach to restore or retain consumer confidence is more likely to be pertinent than a ‘one-size-fits-all’ approach.

Chapter 4 starts from the observation that, irrespective of the major food crises that occurred during the 2000s, consumer trust in food seems to remain high in Western Europe. Information provision to consumers on food risks is a central strategy of the EU, its Member States and private food providers to build food trust among consumers. But can the interpretation of such information by consumers explain these high levels of trust? Following recent outbreaks of avian influenza in the UK, this paper investigates the constitution of food trust among UK poultry consumers by focusing on the place where relevant consumer decisions are made: the shopping floor. In-store qualitative interviews with consumers of a variety of poultry products at different shops are used to reveal the role of information in constructing trust. It is concluded that besides on knowledge inducted from information provided, trust depends as much on consumer strategies to handle non-knowing of food risks. Three main forms of trust relations are distinguished, which together result in high levels of consumer trust at a system level.

Chapter 5 studies the institutional incorporation of social interests and values in EU and Member State food risk governance. The study is based on qualitative analyses of key official publications and press releases from Member State and EU level bodies, as well as from scientists, NGOs and food supply chain actors. These analyses are combined with 40 in-depth interviews with relevant food system actors. The chapter reviews how and

which social interests and values are incorporated in food risk governance in the Netherlands, France and the UK, and at the EU level. It concludes that predominantly through state-level political (and to a lesser extent: scientific) domains social interests and values were articulated on the EU agenda, while at the EU level food risk governance remained principally justified on the basis of scientific evidence. The chapter finishes with discerning the effects of this inclusion of social interest and values on public trust and the functioning of the internal market.

The sixth and final chapter draws conclusions on the changing positions of, and relations between, scientists, policy makers, market actors and citizen-consumers. First, while natural scientists have lost their position as the *a priori* trustworthy source of risk information, they still maintain a central position in legitimating risk definitions. Yet, in this position scientists have become more transparent than in the past concerning their internal disagreements, and are (more overtly) incorporating wider social, economic and political arguments in their policy advice. Herewith, these scientists become more susceptible to public contestation, and risk assessment opens up for non-scientific actors aiming to publicly legitimate their own perspectives. In essence, this changing public character of risk assessments entails the conflation of two previously segregated risk governance phases: those of risk assessment and communication. With such communication, citizen-consumers are 'invited' or even 'forced' to conduct micro-level assessments and judgements of conflicting risk characterisations.

Second, due to the dissolution of science as the uncontested source of risk characterisation, risk managers can no longer assume that they can legitimate their decisions by referring to scientific risk assessments, and the cost-benefit analyses based on them. Instead, policy makers are urged to base decisions also (more explicitly) on wider social interests and values and legitimate their handling of risks in view of scientific non-knowing. This is especially the case when risk knowledge bases are subject to public contestation, and when wider social perspectives on the appropriateness of different risk governance options diverge. In such situations, different risk perspectives may become dominant in different countries, as risks are mediated through different culturally-embedded and socially contextualised sense-making frames. Due to this differentiation, European Member States (re-)emerge as pivotal governance actors: while EU level food risk governance remains grounded in scientific-rational and technically-based justification

which safeguards a minimum level of European policy harmonisation, more room has to be opened for the Member States to incorporate country-specific social interests and values in their decisions.

Third, the possibilities for Member States to differentiate from a harmonised European food risk governance arrangement entailed increased room for private actors to become—legitimately—involved. By refusing to retail products whose characteristics were co-determined by Member State-specific measures, supermarkets became strongly involved in food risk governance—and were decisive in the success of such measures. Supermarkets legitimated their involvement with the argument of retaining their consumers' trust in food.

Fourth, citizen-consumers take on roles as micro-level assessors of conflicting risk characterisations, which 'materialises' in consumers' co-governance of food risks through their consumption practices. With such consumer co-governance, consumption turns political, marking a partial shift of risk management practices towards places where consumers stand in 'direct' relation to the risk governors in the food supply and management systems: the shopping floors. On shopping floors, consumers differ in their perspectives on risks and on how to govern these. Hence, providing room for Member State-based differentiation in risk management does not necessarily mean one addresses all consumer rationalities, as for groups of consumers such management decisions may lack congruence with their perspectives and concerns.

Moreover, political and policy institutions encounter difficulties to address in their risk management decisions the socio-contextual embeddedness of consumers, consumption practices and trust. Significant groups of consumers do not regard themselves merely as passive recipients of food products, information flows and governance outcomes. They are self-defined co-governors of the safety of food through their acts of buying food and relating to the relevant actor networks. Within these relations and co-constructions consumer trust is being built. As such, European and national policy institutions may contribute to the make-up of the constraining and enabling environment of the shopping floor, but these institutions cannot fully construct and determine consumer trust.

Hence, we observed an increased involvement of (interests and values of) citizen-consumer in institutional risk assessment and management practices—particularly through Member State-level political domains. At the same time, risk assessment and management dynamics shift for an important part to contexts and practices outside of conventional,

political and policy institutions: to the mass-media and shopping floors. Besides policy challenges, these dynamics entail opportunities for improving the European food risk governance process, which are set out in policy recommendations for different groups of governance actors. The study finishes with making some recommendations for further research.

Samenvatting

Tijdens de jaren '90 van de vorige eeuw werden veel Europese landen geconfronteerd met één of meerdere voedselcrises, zoals BSE (bovine spongiform encephalopathy, ook bekend als 'gekkekoeienziekte'), *E. coli*, dioxineverontreiniging en mond-en-klauwzeer. Deze crises werden gekenmerkt door een toenemende publieke her- en erkenning van voedselgerelateerde risico's alsmede van het veranderende karakter van deze risico's, en tenderden ernaar het vertrouwen van burger-consumenten in de praktijken en instituties die voedselveiligheid moesten waarborgen, te ondermijnen. Om dit vertrouwen in voedsel in Europa te herstellen, werd rond de eeuwwisseling het Europese beleidsraamwerk omtrent voedsel substantieel vernieuwd. Conventionele voedselregulering was het domein van wetenschappelijke experts, staatsactoren, en actoren die zich hoger in de voedselproductieketen bevinden. Deze beslisten op basis van wetenschappelijke gegevens over te nemen maatregelen en communiceerden deze vervolgens naar de samenleving. Het vernieuwde kader poogt andere sociale actoren—inclusief (individuele en georganiseerde) burger-consumenten—actiever te betrekken via innovatieve rollen.

Deze innovatieve positie voor burger-consumenten representeert een duidelijke discursieve verandering. Het blijft echter onduidelijk hoe burger-consumenten moeten worden betrokken in governance-praktijken en welke effecten betrokkenheid van burger-consumenten heeft op consumentenvertrouwen. Deze studie heeft als doel om bij te dragen aan inzicht in waarom en hoe betrokkenheid van burger-consumenten in governance van voedselrisico's in Europa het vertrouwen herstelt en onderhoudt in de omgang met voedselrisico's. Het onderzoekt consumentenbetrokkenheid binnen de conventionele beleidsinstituties (op EU- en Lidstaatniveau), alsmede buiten deze instituties (in winkels en massamedia). Empirisch focust de studie op een majeur risico voor Europa dat ontstond nadat het vernieuwde beleidsraamwerk grotendeels geïmplementeerd was: hoogpathogene aviaire influenza H5N1.

In augustus 2005 verscheen dit vogelgriepvirus in Europese publieke arena's als het volgende voedsel- en landbouwriscio. Omdat het virus nabij Europa ontdekt was, kwamen vragen op omtrent welke maatregelen genomen moesten worden om de menselijke gezondheid en de voedselproductie in Europa te beschermen. Hoofdstuk 2 analyseert de

publieke debatten over de karakteristieken van het risico en over noodzakelijke interventies. De massamedia in twee EU Lidstaten, het Verenigd Koninkrijk en Nederland, werden voor dit doel bestudeerd. Met behulp van kwalitatieve analyse werden de debatten zoals deze zich in geselecteerde nationale kranten ontwikkelden, onderzocht. Beargumenterend dat risico's sociaal gemedieerde realiteiten zijn, bediscussieert dit hoofdstuk hoe strijd over risicodefinities gerelateerd is aan verschillende beleidsbeslissingen. Tevens analyseert het hoe deze politieke dynamieken mede bepaald worden door betrokkenheid van staats-, markt-, wetenschappelijke, en *civil society* actoren, en bespreekt het de implicaties voor het functioneren van het EU voedselbeleidskader.

Hoofdstuk 3 exploreert consumentenperspectieven op het voedselveiligheidsbeleid via een uiteenzetting van resultaten van een verkennende studie onder Nederlandse consumenten. Het 'knowledge-deficit' model verlatend (dit model brengt met zich mee dat consumenten betere educatie zouden moeten krijgen om 'irrationele' reacties te voorkomen), onderzoeken we waarmee consumenten rekening houden op de plaats en tijd dat ze daadwerkelijk om moeten gaan met voedselrisico's. Om voldoende ruimte te geven voor de constructie van contextuele kennis, werden consumenten van pluimveevlees met behulp van een kwalitatieve interviewmethode ondervraagd bij verschillende verkooppunten. Uit dit onderzoek wordt geconcludeerd dat verschillende consumentenrationaliteiten ten opzichte van governance omtrent voedselveiligheid bestaan. Ten gevolge van het bestaan van deze meerdere consumentenrationaliteiten is een gedifferentieerde governance-benadering om consumentenvertrouwen te herstellen en vast te houden meer waarschijnlijk ter zake dienend dan een generieke, 'een-maat-past-iedereen' benadering.

Hoofdstuk 4 begint met de observatie dat, ondanks de substantiële voedselcrises die voorkwamen in de jaren 2000, het vertrouwen van West-Europese consumenten in voedsel groot leek te blijven. Informatieverstrekking is een centrale strategie van de EU, haar Lidstaten en private voedselproducenten om consumentenvertrouwen in voedsel op te bouwen. Maar kan de interpretatie van dergelijke informatie door consumenten deze hoge niveaus van vertrouwen verklaren? In het kielzog van recente uitbraken van vogelgriep in het Verenigd Koninkrijk onderzoekt dit hoofdstuk de aard van vertrouwen in voedsel van Britse consumenten van pluimvee door te focussen op de plaats waar consumenten relevante beslissingen nemen: de winkelvloer. In winkels werden kwalitatieve interviews

afgenomen met consumenten die een variëteit aan pluimveeproducten kochten bij verschillende verkooppunten, om zo de rol van informatie in de constructie van vertrouwen bloot te leggen. Het hoofdstuk concludeert dat naast van kennis die afgeleid is van aangeboden informatie, vertrouwen minstens net zo veel afhangt van strategieën van consumenten om met het ‘niet-weten’ rondom voedselrisico’s om te gaan. Drie vormen van vertrouwensrelaties worden onderscheiden, die tezamen resulteren in hoge niveaus van consumentenvertrouwen op systeemniveau.

Hoofdstuk 5 onderzoekt de institutionele incorporatie van sociale belangen en waarden in voedselrisicobeleid op EU- en Lidstaatniveau. De studie is gestoeld op kwalitatieve analyses van officiële sleutelpublicaties en persberichten van instanties op Lidstaat- en EU niveau, alsmede van wetenschappers, niet-gouvernementele organisaties en actoren uit de voedselproductieketen. Deze analyses zijn gecombineerd met 40 diepte-interviews met relevante actoren uit het voedselsysteem. Het hoofdstuk beschouwt hoe, en welke, sociale belangen en waarden geïncorporeerd zijn in het voedselrisicobeleid in Nederland, Frankrijk en het Verenigd Koninkrijk, en op EU-niveau. Het concludeert dat sociale belangen en waarden voornamelijk door politieke (en in mindere mate: wetenschappelijke) domeinen op Lidstaatniveau werden gearticuleerd op de EU-agenda, terwijl op EU-niveau voedselrisicobeleid vooral werd gerechtvaardigd op basis van wetenschappelijke gegevens. Het hoofdstuk eindigt met het duiden van de effecten van deze inclusie van sociale belangen en waarden op publiek vertrouwen en het functioneren van de interne markt.

Het zesde en laatste hoofdstuk trekt conclusies over de veranderende posities van, en relaties tussen, wetenschappers, beleidsmakers, marktactoren en burger-consumenten. Ten eerste, terwijl natuurwetenschappers hun positie als *a priori* vertrouwenswekkende bron van informatie over risico’s verloren hebben, behouden ze een centrale positie in het legitimeren van risicodefinities. Echter, in deze positie zijn wetenschappers transparanter dan in het verleden geworden omtrent hun interne meningsverschillen, en incorporeren ze (openlijker) bredere sociale, economische en politieke argumenten in hun beleidsadviezen. Hiermee worden deze wetenschappers vatbaarder voor publieke betwisting, en ontsluit risico-assessment zich voor niet-wetenschappelijke actoren die proberen om hun eigen perspectieven publiekelijk te legitimeren. In essentie brengt dit veranderende publieke karakter van risico-assessments een samenvoeging van twee voorheen gescheiden

risicobeleidsfasen met zich mee: die van risico-assessment en risicocommunicatie. Met dergelijke communicatie worden burger-consumenten ‘uitgenodigd’ of zelfs ‘gedwongen’ om op microniveau-assessments en oordelen over conflicterende risicokarakterisering te maken.

Ten tweede, omdat wetenschap niet langer de onbetwiste bron van risicokarakterisering is, kunnen risicomangers er niet langer van uitgaan dat ze hun beslissingen kunnen nemen door te refereren aan wetenschappelijke risico-assessments en de kosten-batenanalyses die daarop gebaseerd zijn. In plaats daarvan worden beleidsmakers aangespoord om beslissingen (meer expliciet) te baseren op bredere sociale belangen en waarden en om hun aanpak van risico’s te legitimeren in het zicht van wetenschappelijk ‘niet-weten’. Dit is in het bijzonder het geval wanneer grondslagen van kennis over risico’s publiekelijk worden betwist, en wanneer bredere sociale perspectieven op de toepasselijkheid van verschillende risicobeleidsopties uiteenlopen. In dergelijke situaties kunnen verschillende risicoperspectieven dominant worden in verschillende landen, aangezien risico’s worden gemedieerd door verschillende cultureel ingebedde en sociaal gecontextualiseerde referentiekaders. Door deze differentiatie komen Europese Lidstaten (wederom) naar voren als centrale beleidsactoren: terwijl voedselrisicobeleid op EU-niveau gebaseerd blijft op wetenschappelijk-rationeel en technisch-gebaseerde rechtvaardiging, hetgeen een minimum niveau van Europese beleidsharmonisatie garandeert, moet meer ruimte worden gegeven aan Lidstaten om landspecifieke sociale belangen en waarden te incorporeren in hun beslissingen.

Ten derde, de mogelijkheden voor Lidstaten om af te wijken van een geharmoniseerd Europees voedselrisicobeleidsarrangement bracht een toegenomen ruimte voor private actoren met zich mee om zich—legitiem—te mengen in dit beleid. Door te weigeren om producten te verkopen waarvan de karakteristieken mede waren bepaald door Lidstaatspecifieke maatregelen, raakten supermarkten sterk betrokken in voedselrisicobeleid—en waren ze beslissend in de mate van succes van deze maatregelen. Supermarkten legitimeerden hun betrokkenheid met het argument van het behouden van consumentenvertrouwen in voedsel.

Ten vierde, burger-consumenten nemen rollen op zich op microniveau als beoordelaars van conflicterende risicokarakterisering, hetgeen zich ‘materialiseert’ in *co-governance* van voedselrisico’s via hun consumptiepraktijken. Met deze *co-governance*

door consumenten wordt consumptie politiek, hetgeen een gedeeltelijke verschuiving van risicomanagementpraktijken markeert richting plaatsen waar consumenten in ‘directe’ relatie staan tot de risico-governors in de voedselproductieketen en managementsystemen: de winkelvloer. Op winkelvloeren verschillen consumenten in hun perspectieven op risico’s en op hoe met deze om te gaan. Dientengevolge levert ruimte voor Lidstaatspecifieke differentiatie in risicomanagement niet noodzakelijk een adressering van alle consumentenrationaliteiten op, aangezien voor groepen consumenten zulke managementbeslissingen een gebrek aan congruentie met hun perspectieven en zorgen kunnen hebben.

Bovendien worden politieke en beleidsinstituties geconfronteerd met moeilijkheden om in hun risicomanagementbeslissingen de sociaalcontextuele inbedding van consumenten, consumptie praktijken en vertrouwen te adresseren. Significante groepen consumenten beschouwen zichzelf niet enkel als passieve ontvangers van voedselproducten, informatiestromen en governance-uitkomsten. Ze zijn zelf-gedefinieerde co-governors van voedselveiligheid via hun handelingen van voedsel kopen en zich relateren aan relevante actor-netwerken. Binnen deze relaties en co-constructies wordt consumentenvertrouwen opgebouwd. Europese en nationale beleidsinstituties kunnen daarom bijdragen aan de compositie van de beperkende en mogelijkheden biedende omgeving van de winkelvloer, maar deze instituties kunnen consumentenvertrouwen niet volledig construeren en bepalen.

We observeerden dus een toegenomen betrokkenheid van (belangen en waarden van) burger-consumenten in institutionele risico-assessment en –management praktijken— in het bijzonder via politieke domeinen op Lidstaatniveau. Tegelijkertijd verschuiven risico-assessment en –management dynamieken voor een belangrijk gedeelte naar contexten en praktijken buiten de conventionele, politieke en beleidsinstituties: naar de massamedia en winkelvloeren. Naast uitdagingen voor het beleid, behelzen deze dynamieken ook mogelijkheden voor het verbeteren van Europese voedselrisico-governance processen. Deze mogelijkheden worden uiteengezet in beleidsaanbevelingen voor verschillende groepen van governance-actoren. De studie rondt af met enkele aanbevelingen voor verder onderzoek.

Annex to statement

Name: Michiel P.M.M. de Krom
PhD student, Mansholt Graduate School of Social Sciences (MG3S)
Completed Training and Supervision Plan



Courses and other learning activities	Department/ Institute	Year	ECTS (=28 hrs)
Scientific Writing	CENTA	2006	1,5
Ethics and the Public Role of Social Scientists	Mansholt Graduate School of Social Sciences (MG3S)	2006	1
The Art of Writing	CENTA	2007	1,5
Scientific Publishing	Wageningen Graduate Schools (WGS)	2007	0.3
Getting Articles Published	Environmental Policy Group (ENP)	2007-2008	0.6
Mansholt Introduction course	MG3S	2006	1,5
Social Theory and the Environment	SENSE	2005-2006	6
Policy Evaluation Methodology	MGS & SENSE-WIMEK	2006	4
Food Risk Analysis. An integrated approach combining insights from the natural and social sciences	MGS	2006	3
'Giddens group' (Discussion group)	-	2005-2009	4
Various teaching and supervising activities for the Environmental Policy Group, including student group works supervision, guest lecturing and MSc thesis supervision	ENP	2005-2010	4
Conferences and seminars			
Mansholt Multidisciplinary Seminar	MG3S	2009	1
8 th Annual Conference of the European Sociological Association	Glasgow, Scotland, UK	2007	1
XXII nd Congress of the European Society for Rural Sociology	Wageningen, the Netherlands	2007	1
Sustainable Consumption and Alternative Agri-food Systems Conference, May 27-30 2008	Arlon, Belgium	2008	1
ISA 1st Forum of Sociology	Barcelona, Spain	2008	1
Research seminar Information, choice and responsible consumers: the levers of sustainable development?	Montpellier, France	2008	1
9th European Sociological Association Conference	Lisbon, Portugal	2009	1
		TOTAL (min. 30 ECTS)	34,4

*One ECTS on average is equivalent to 28 hours of course work

About the author

Michaël Petrus Marinus Martinus de Krom (first name: Michiel) was born on 30 May 1980 in Oss, the Netherlands. After finishing secondary education (VWO) at the *Dominicus College* in Nijmegen (the Netherlands), he started studying at the University of Nijmegen in 1998. At this university, he obtained his *propaedeuse* (first year's preliminary examination) in *Cultural Anthropology and Development Studies*, and a master-degree in *Environmental Policy Science*. From 2004-2005, he did a Master degree in Applied Ethics at the University of Leuven (Belgium), which he finished *magna cum laude*. In 2005, he started working as a PhD-researcher at the Environmental Policy Group, Wageningen University, which resulted in this thesis. Since 2010, he works at the Social Sciences Unit of the Institute for Agricultural and Fisheries Research (ILVO), Belgium, on a joint project with Ghent University on the (potential) role of multifunctional agriculture in sustainable rural development.

Cover design: Petra de Krom, Studio Pitz

Printed by: Wöhrmann Print Service, Zutphen, the Netherlands