

The SAGE  
Handbook of  
Environment *and* Society

Edited by  
Jules Pretty, Andrew S. Ball,  
Ted Benton, Julia S. Guivant,  
David R. Lee, David Orr,  
Max J. Pfeffer and Hugh Ward

# Contents

Editorial arrangement and Chapter 1 © Jules Pretty, Andrew S. Ball, Ted Benton, Julia S. Guivant, David R. Lee, David Orr, Max J. Pfeffer and Hugh Ward 2007	
Chapter 2 © Ted Benton 2007	Chapter 24 © Thomas Wilbanks and Patricia Romero-Lankao 2007
Chapter 3 © Damian White and Gideon Kossoff 2007	Chapter 25 by Howard Frumkin is in the public domain
Chapter 4 © Mary Mellor 2007	Chapter 26 © Ian Colbeck 2007
Chapters 5 and 6 © Ted Benton 2007	Chapter 27 © Andrew Ball 2007
Chapter 7 © The MIT Press 2006	Chapter 28 © Stuart Bunting 2007
Chapter 8 © Damian White, Chris Wilbert and Alan Rudy 2007	Chapter 29 © Peter Oosterveer, Julia S. Guivant and Gert Spaargaren 2007
Chapter 9 © Thomas Crocker 2007	Chapter 30 © David Rapport 2007
Chapter 10 © Ian Bateman 2007	Chapter 31 © Laura Little and Chris Cocklin 2007
Chapter 11 © Randall Kramer 2007	Chapter 32 © Jules Pretty 2007
Chapter 12 © David R. Lee 2007	Chapter 33 © Henry Buller and Carol Morris 2007
Chapter 13 © Joe Morris 2007	Chapter 34 © Madhav Gadgil 2007
Chapter 14 © David Orr 2007	Chapter 35 © David Smith, Sarah Pilgrim and Leanne Cullen 2007
Chapter 15 © Richard Bawden 2007	Chapter 36 © Jonathan Hastie 2007
Chapter 16 © Max J. Pfeffer and Linda P. Wagenet 2007	Chapter 37 © Carl Folke, Johan Colding, Per Olsson and Thomas Hahn 2007
Chapter 17 © Val Plumwood 2007	Chapter 38 © Steven R. Brechin, Grant Murray and Charles Benjamin 2007
Chapter 18 © Luisa Maffi 2007	Chapter 39 © Harini Nagendra and Elinor Ostrom 2007
Chapter 19 © Ron Johnston 2007	Chapter 40 © Albert Weale 2007
Chapter 20 © Ronald Herring 2007	Chapter 41 © Ulrich Beck and Cordula Kropp 2007
Chapter 21 © Steven Griggs and David Howarth 2007	
Chapter 22 © Tim O'Riordan 2007	
Chapter 23 © Christina Page and Amory Lovins 2007	

First published 2007

Apart from any fair dealing for the purposes of research or private study, or criticism or review, as permitted under the Copyright, Designs and Patents Act, 1988, this publication may be reproduced, stored or transmitted in any form, or by any means, only with the prior permission in writing of the publishers, or in the case of reprographic reproduction, in accordance with the terms of licences issued by the Copyright Licensing Agency. Enquiries concerning reproduction outside those terms should be sent to the publishers.



SAGE Publications Ltd  
1 Oliver's Yard  
55 City Road  
London EC1Y 1SP

SAGE Publications India Pvt Ltd  
B 1/1 1 Mohan Cooperative Industrial Area  
Mathura Road, Post Bag 7  
New Delhi 110 044

SAGE Publications Inc.  
2455 Teller Road  
Thousand Oaks  
California 91320

SAGE Publications Asia-Pacific Pte Ltd  
33 Pekin Street #02-01  
Far East Square  
Singapore 048763

Library of Congress Control Number 2007922921

British Library Cataloguing in Publication data  
A catalogue record for this book is available from the British Library

ISBN 978-1-4129-1843-5

Typeset by Cepha Imaging Pvt. Ltd., Bangalore, India  
Printed in Great Britain by the Cromwell Press Ltd, Trowbridge, Wiltshire  
Printed on paper from sustainable resources

## List of Contributors

- 1 Introduction to Environment and Society  
*Jules Pretty, Andrew S. Ball, Ted Benton, Julia S. Guivant, David R. Lee, David Orr, Max J. Pfeffer and Hugh Ward*

## SECTION I ENVIRONMENTAL THOUGHT: PAST AND PRESENT

- 2 Humans and Nature: From Locke and Rousseau to Darwin and Wallace  
*Ted Benton*
- 3 Anarchism, Libertarianism and Environmentalism: Anti-Authoritarian Thought and the Search for Self-Organizing Societies  
*Damian F. White and Gideon Kossoff*
- 4 Ecofeminism: Linking Gender and Ecology  
*Mary Mellor*
- 5 Deep Ecology  
*Ted Benton*
- 6 Greening the Left? From Marx to World-System Theory  
*Ted Benton*
- 7 Human Relationships, Nature, and the Built Environment: Problems that Any General Ethics Must Be Able to Address  
*Warwick Fox*
- 8 Anti-Environmentalism: Prometheans, Contrarians and Beyond  
*Damian F. White, Alan P. Rudy and Chris Wilbert*

## SECTION II VALUING THE ENVIRONMENT

- 9 Fundamental Economic Questions for Choosing Environmental Management Instruments  
*Thomas D. Crocker*
- 10 Valuing Preferences Regarding Environmental Change  
*Ian J. Bateman*
- 11 Economic Valuation of Ecosystem Services  
*Randall A. Kramer*

ix

1

33

35

50

66

78

91

107

124

149

149

159

172

vi	CONTENTS	
12	Assessing Environment-Development Tradeoffs: A Developing Country Perspective <i>David R. Lee</i>	181
13	Water Policy, Economics and the EU Water Framework Directive <i>Joe Morris</i>	191
<b>SECTION III KNOWLEDGES AND KNOWING</b>		207
14	Ecological Design and Education <i>David W. Orr</i>	209
15	Knowing Systems and the Environment <i>Richard Bowden</i>	224
16	Volunteer Environmental Monitoring, Knowledge Creation and Citizen-Scientist Interaction <i>Max J. Pfeffer and Linda P. Wagenet</i>	235
17	Environmental Ethics <i>Val Plumwood</i>	250
18	Biocultural Diversity and Sustainability <i>Luisa Majji</i>	267
<b>SECTION IV POLITICAL ECONOMY OF ENVIRONMENTAL CHANGE</b>		279
19	Representative Democracy and Environmental Problem Solution <i>Ron Johnston</i>	281
20	Political Ecology from Landscapes to Genomes: Science and Interests <i>Ronald J. Herring</i>	299
21	Protest Movements, Environmental Activism and Environmentalism in the United Kingdom <i>Steven Griggs and David R. Howarth</i>	314
22	Faces of the Sustainability Transition <i>Tim O'Riordan</i>	325
23	The Greening of Business: Opportunity or Contradiction? <i>Christina Page and Amory Lovins</i>	336
<b>SECTION V ENVIRONMENTAL TECHNOLOGIES</b>		351
24	The Human Dimensions of Global Environmental Change <i>Thomas J. Wilbanks and Patricia Romero-Lankao</i>	353
25	Healthy Environments <i>Howard Frumkin</i>	362
26	Air Pollution: History of Actions and Effectiveness of Change <i>Ian Colbeck</i>	374
27	Terrestrial Environments, Soils and Bioremediation <i>Andrew S. Ball</i>	385

	CONTENTS	vii
28	Regenerating Aquaculture – Enhancing Aquatic Resources Management, Livelihoods and Conservation <i>Stuart W. Bunting</i>	395
29	Shopping for Green Food in Globalizing Supermarkets: Sustainability at the Consumption Junction <i>Peter Oosterveer, Julia S. Guivant and Gert Spaargaren</i>	411
<b>SECTION VI REDESIGNING NATURES</b>		429
30	Healthy Ecosystems: An Evolving Paradigm <i>David J. Rapport</i>	431
31	Environment and Human Security <i>Laura Little and Chris Cocklin</i>	442
32	Sustainable Agriculture and Food Systems <i>Jules Pretty</i>	457
33	Animals and Society <i>Henry Buller and Carol Morris</i>	471
34	Social Change and Conservation <i>Madhav Gadgil</i>	485
35	Coral Reefs and People <i>David Smith, Sarah Pilgrim and Leanne Cullen</i>	500
<b>SECTION VII INSTITUTIONS AND POLICIES FOR INFLUENCING THE ENVIRONMENT</b>		517
36	The Role of Science and Scientists in Environmental Policy <i>Jonathan Hastie</i>	519
37	Interdependent Social-Ecological Systems and Adaptive Governance for Ecosystem Services <i>Carl Folke, Johan Colding, Per Olsson and Thomas Hahn</i>	536
38	Contested Ground in Nature Protection: Current Challenges and Opportunities in Community-Based Natural Resources and Protected Areas Management <i>Steven R. Brechin, Grant Murray and Charles Benjamin</i>	553
39	Institutions, Collective Action and Effective Forest Management: Learning from Studies in Nepal <i>Harini Nagendra and Elinor Ostrom</i>	578
40	The Precautionary Principle in Environmental Policies <i>Albert Weale</i>	590
41	Environmental Risks and Public Perceptions <i>Ulrich Beck and Cordula Kropp</i>	601
	Index	613

- New Scientist* (1998) Danger, shrimps at work. *New Scientist* 157(2122): 11.
- New Scientist* (1999) Forget the shellfish. *New Scientist* 163(2197): 5.
- Oberdorff, T. and Porcher, J.P. (1994) An index of biotic integrity to assess biological impacts of salmonid farm effluents on receiving waters. *Aquaculture* 119: 219–235.
- ODI (1999) *Aquaculture*. Key sheets for Sustainable Livelihoods. Overseas Development Institute, London.
- Phillips, M.J., Kwei Lin, C. and Beveridge, M.C.M. (1993) Shrimp culture and the environment: lessons from the world's most rapidly expanding warmwater aquaculture sector. In: Pullin, R.S.V., Rosenthal, H. and Maclean, J.L. (eds) *Environment and Aquaculture in Developing Countries*. ICLARM Conf. Proc. 31, pp. 171–197.
- Pollnac, R.B. and Sihombing S. (1996) Cages, controversies and conflict: carp culture in Lake Toba, Indonesia. In: Bailey, C., S. Jentoft and P. Sinclair (eds), *Aquaculture Development: Social Dimensions of an Emerging Industry*. Westview Press, Boulder, CO, pp. 249–261.
- Pretty, J.N. (1995) Participatory learning for sustainable agriculture. *World Development* 23: 1247–1263.
- Primavera, J.H. (1997) Socio-economic impacts of shrimp culture. *Aquaculture Research* 28: 815–827.
- Punch, S., Bunting, S.W. and Kundu, N. (2002). Poor livelihoods in peri-urban Kolkata: focus groups and household interviews. U/T Government's Department for International Development Project R 7872, Working Paper 5, University of Stirling, UK.
- Ridler, N.B. (1997) Rural development in the context of conflictual resource usage. *Journal of Rural Studies* 13, 65–73.
- Robertson, A.I. and Phillips, M.J. (1995) Mangroves as filters of shrimp pond effluent: predictions and biogeochemical research needs. *Hydrobiologia* 295: 311–321.
- Selong, J.H., Helfrich, L.A. (1998) Impacts of trout culture effluent on water quality and biotic communities in Virginia headwater streams. *Progressive Fish-Culturist* 60: 247–262.
- Siriwardena, S. (2005) Shrimp farming at the cross roads. id21 Research Highlight. id21 website. <http://www.id21.org> (accessed 19 June 2005).
- Soil Association (2005) Fish farming and organic standards. Soil Association, Bristol, UK.
- STREAM (2006a) Local Resource Users' Groups? What are they? STREAM website: [http://www.streaminitiative.org/Library/pdf/bpg/BPGSRS\\_EN.pdf](http://www.streaminitiative.org/Library/pdf/bpg/BPGSRS_EN.pdf) (accessed 4 May 2006).
- STREAM (2006b) Better-Practice Guidelines – What are Better-Practice Guidelines? STREAM website: <http://www.streaminitiative.org/Library/pdf/bpg/WhatareBPGs.pdf> (accessed 11 July 2006).
- Swedish Society for Nature Conservation (2006) Eco-labelling of shrimp farming in Ecuador. Swedish Society for Nature Conservation website. <http://www.snf.se/pdf/rap-inter-shrimp-ecuador.pdf> (accessed 10 July 2006).
- The Economist* (2003) The promise of a blue revolution. *The Economist* 368(8336): 19–21.
- Thompson, A.G. (1990) The danger of exotic species. *World Aquaculture* 21: 25–32.
- Tran, T.B., Le, C.D. and Brennan, D. (1999) Environmental costs of shrimp culture in the rice-growing regions of the Mekong Delta. *Aquaculture Economics & Management* 3: 31–42.
- Trade Justice Movement (2006) About the Trade Justice Movement. Trade Justice Movement website: <http://www.tradejusticemovement.org.uk/about.shtml> (accessed 8 July 2006).
- Turner, K. (1991) Economics and wetland management. *Ambio* 20, 59–63.
- UNEP (2005) Annotated guiding principles for post-tsunami rehabilitation and reconstruction. Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, United Nations Environment Programme.
- Welcomme, R.L. (1988) International Introductions of Inland Aquatic Species. FAO Fisheries Technical Paper 294, FAO, Rome, 318 pp.
- Weston, D.P. (1996) Environmental considerations in the use of antibacterial drugs in aquaculture. In: Baird, D.J., Beveridge, M.C.M., Kelly, L.A. and Muir, J.F. (eds), *Aquaculture and Water Resource Management*. Blackwell Science, Oxford, pp. 140–165.
- Yap, W.G. (1999) Rural aquaculture in the Philippines. RAP Publication. FAO, Bangkok.

# Shopping for Green Food in Globalizing Supermarkets: Sustainability at the Consumption Junction

Peter Oosterveer, Julia S. Guivant and Gert Spaargaren

## INTRODUCTION

As the market for sustainable (or 'green') food expanded worldwide in the 1990s, supermarkets took up dominant roles as channels for its commercialization. Alternative natural food and grocery stores and farmers' markets were forced to assume a secondary role. Countries where most organic products are sold via supermarket chains tend to be the countries where the organic market shares are the highest as well (Willer and Yussefi, 2004). And although the organic food movement in Europe dates back more than fifty years, it is only since the 1990s that organic foods are achieving mainstream status largely through these supermarket sales (Van der Grijp and den Hond, 1999).

Supermarket retailers thus have become key players and their strategies and goals can be said to be of crucial and even further-increasing importance with respect to the future provisioning of green food products worldwide. But, although supermarkets are playing a growing role in our daily lives as consumers, academic research on its social, economic and political implications are still incipient. Environmental and rural sociology, as Marsden *et al.* (2000) observed, have left important issues such as analyzing new trends in food provisioning, including the relationship

between changing consumer demands for ethically and environmentally acceptable products, the responses from companies through new products and new information and marketing approaches, to environmental economists and marketing specialists.

This chapter aims at filling this omission and contributing to the analysis of the roles played by supermarkets from the perspective of sustainability transitions in the food sector. We use the plural to refer to transitions as we consider these not being one essential trajectory, because the possibilities for new developments are open and involve a complex set of issues, especially when levels beyond the individual nation-state or region within the global network society are included. We start by introducing a theoretical and disciplinary outlook for understanding the emerging societal trends in the transitions towards sustainability in food provision and in particular the roles of consumers and retailers therein. We will characterize the sustainable food consumer and add four story lines to show some of the complexities involved in this. A review of concrete provider and consumer strategies is presented that will allow us to start developing an analysis of social practices at the shopping floor of retail outlets. We conclude by presenting a first outline of a research agenda

on supermarkets as consumption junctions that are of crucial importance for the future greening of food consumption in global modernity.

### CONCEPTUAL TOOLS FOR UNDERSTANDING CONSUMER BEHAVIOR

What exactly signifies the growing role of retailers in the provision of sustainable food? In answering this question we look at the theory of ecological modernization. This theory has been developed in the 1980s to make sense of the processes of environmental change emerging in modern industrial (mostly OECD) societies from the 1970s onwards. Among the core tenets of this theory is the claim that there are – within industrial production and consumption systems – emerging sets of criteria to be used by actors within these systems to assess and judge the environmental performance of products, technologies and processes. The ecological performance becomes part of the game, next to and parallel to economic performance indicators. By taking on board criteria for ecologically rational production and consumption, actors become involved in the further modernization of the organization of production and consumption from an environmental point of view. Because of their central position, economic or market actors such as producers, retailers and consumers are assigned important roles in this modernization process. From the mid-1980s onward, governments and environmental NGOs are pressurizing, facilitating and regulating these key economic actors on the basis of horizontal governance networks, applying policies and (economic, voluntary) instruments which are attuned to their needs and possibilities (Mol and Sonnenfeld, 2000).

While ecological modernization theory has been developed originally to analyze changes in production processes and providers' strategies at the up-stream ends of production-consumption chains, from the mid 1990s onwards the theory has also been applied to consumer behavior at the bottom end of production-consumption chains (Spaargaren, 2003). In its application to the sphere of consumption, the theory had to be complemented and adapted in some specific ways, since the rationalities governing everyday life and consumption are different from the rationalities dominant in the production sphere. The criteria for ecologically rational consumption behavior are to be embedded in the life-world rationalities which shape daily routines. This asks for a 'translation' of many of the technical goals and regulatory schemes used in the expert systems involved in environmental policy making. In order for people

to 'recognize and understand' the kind of behavior involved in sustainability transitions, a series of 'environmental heuristics' needs to be developed at the level of ordinary, everyday life consumption routines like shopping for food, traveling from home to work, going for a weekend holiday, etc. (Spaargaren and Martens, 2005). Such environmental heuristics facilitate two processes at the same time. They provide a definition or indication of sustainability goals to be realized in these specific consumption domains and they present an action frame or action perspective which people themselves can apply in the specific context concerned, contributing to sustainability transitions.

In the case of retail shopping for sustainable food, these heuristics can take different forms, ranging from devices for sustainable packaging of products to reading authorized and controlled labeling schemes attached to sustainable products, or the use of special discount and saving systems bringing together groups of more sustainable products and services. What kind of heuristics (to be understood as short-hand versions of the 'story lines' as they figure in discourse theory) will become the dominant ones in specific situations and societies depends very much on the actors involved in their construction and cannot be analyzed without taking into account the power relations between the central actors in the provision system on the one hand and groups of citizen-consumers with specific lifestyles and CCC demands on the other.<sup>1</sup>

The retail outlet is an appropriate setting to study the (re)construction and change of the sets of heuristics used for the sustainability transitions in the food sector. The retail outlet is the proper unit of analysis since it functions as the 'locale for interaction' between providers and consumers. The retail outlet, in the words of Schwartz-Cowan (1987), is an example of the consumption junction as the meeting point of system- and life-world rationalities. The consumption junction as 'locale' is not just functioning as a physical setting for interaction but is also constitutive for this interaction in the first place (Goffman, 1963; Giddens, 1984). By approaching shopping practices as they occur in the retail outlet as consumption junction, it becomes possible to combine actor-oriented and social-structural analyses in studying the greening of food production and consumption.

During the 1970s and 1980s, many attempts have been made in social theory to confront the separation between micro and macro studies (cf. Bourdieu, 1977; Giddens, 1979). This so-called structurationist approach argued that the relationship between social action and social structure should be studied at the level of social practices. Using a series of new and redefined concepts

researchers could study long-term changes in institutions without losing sight of the human-made character of social structures, and investigate interests, motives and lifestyles of individual human beings not in 'isolation' but in their situated 'contextness' of social structures. The notion of 'duality of structure,' as introduced by Giddens, has gained wide acceptance in sociology and other social sciences as a key concept and a vehicle for bridging the gap between micro and macro studies. Although welcomed by many as an elegant conceptual framework, structuration theories are nevertheless criticized for the lack of empirical research showing the fruitfulness of their conceptual apparatus. If applied in research, so it is suggested implicitly or explicitly by many critics, this framework will turn out to be overly actor-centered and voluntaristic and therefore unable to deal adequately with the long-term structural changes taking place in globalizing modernity (Archer, 1982; Stones, 2005).

In the field of consumption research, the division between micro and macro studies has taken its own, specific form in the distribution of tasks between micro-economic and social-psychological models on the one hand and structural approaches in transition studies and sociological studies on 'systems of provision' on the other. Consumer research networks in the UK (Southerton *et al.*, 2003) and in the Nordic countries (Boström *et al.*, 2005) have done path-breaking work to bridge this gap, giving some examples of the heuristical quality of structuration theory for empirical research. Those networks study mundane technologies and behaviors from a contextual perspective, looking at the different ways in which the minutiae of everyday life (using the fridge or the stove, cooking and lighting practices) connect to long-term (technological) changes in the systems of provision. Substantial contributions to consumption research have also been made by putting forward the notion of 'political consumerism' to analyze the new (sub- and trans-national) political frameworks for 'individual' commitment to sustainable consumption patterns in globalizing modernity (Micheletti, 2003).

### THE SUSTAINABLE FOOD CONSUMER

There is a trend both in academic and market research to classify people consuming sustainable (and particularly organic) food as one uniform segment of the population. Essentially these views are based on the belief that when people behave similarly this should be explained through a correspondence in their attitude, or that consuming particular products requires the presence of similar socio-economic or cultural traits. Richter (2002)

pointed at the continuous gap between consumers' responses in research and their real life practices. Thus, data projected from those studies can indicate higher demand rates than the ones that would be obtained considering actual consumption practices. Searching for more complex characterizations about who are the organic food consumers, several marketing studies, undertaken by international consultancy companies, do not exhibit this problem. These recent studies are progressively replacing the 'rational information processor consumer model' by new non-positivist perspectives, where the symbolism involved in the act of consuming is taken into account and analyzed through ethnographic and qualitative research (Murcott, 1999).

Spaargaren (2003) agrees with critics on the need to improve the analytical perspective currently prevailing in consumption research. The current social-psychological models use individual attitudes to predict concrete and future behavior employing, for example, several fixed indicators to identify environmental awareness. As an alternative for the individualist approaches, the social practices' model is offered. In this sociological model social structures are not considered as external variables, but are taken as crucial for the analysis of consumption behavior. Instead of taking the individual and his/her attitudes as central to understand a certain aspect of his/her consumption practices, the social practices' model highlights the actual consumption practices, located in the space and time shared by the individual and other social actors. And, instead of focusing on isolated aspects of behavior, the model aims at establishing the way in which a group of social actors relate to the many everyday practices in order to reduce environmental impacts. Whether or not citizen-consumers actually engage with sustainability transitions in the food sector depends on many different factors, some of which are easier to detect and analyze than others.

Individual consumer choices should thus be approached as part of a wider context (Belk, 1995) and changes in consumer behavior should therefore not only be related to psychological (attitudinal) mechanisms, but also to wider changes in society. Macnaghten (2003) identified three dimensions in societal transition processes towards sustainable consumption. The first process relates to transformations in the production sphere and the retailing sector. The second one concerns macro-social developments, such as demographic changes, and the third refers to changes in the form and content of social practices. These processes, according to Macnaghten, must be understood in a framework that interprets consumption as practical, stratified and relational.

Thus, consumption of sustainable food products in supermarkets should not be detached from transformations in these three different dimensions. Our interest is to understand the supermarket orientation to the sustainable food products on offer and the strategies proposed for the retail sector, as part of a complex and dynamic process. This process captures and stimulates transformations in the consumers' food choices, which does not necessarily imply coherent social practices, making it possible to oppose the *sustainable* and the *non-sustainable* food consumer. Lifestyles and social practices are like twin social concepts: 'Each individual's lifestyle is built using a series of blocks corresponding to a set of social practices that individuals evoke in their routine' (Spaargaren, 2003, p. 689). This definition agrees with the one presented by Giddens (1991), to whom lifestyle is a set of social practices assumed by an individual, together with the narrative regarding self-identity which follows it.

Do food consumption practices constitute a particular category in the wider field of consumption behavior? According to Halkier (2001), yes, since food is literally incorporated into the body, or purposefully kept out of it. It is a daily experience that cannot simply be compared with consumption of other goods and is a necessary ingredient of all peoples' everyday life. One characteristic of these consumer practices is that they are negotiated socially, so they are intersubjective, compound and contingent and not close to a rationalist model. As Warde (1997) defines, food practices belong to the unspectacular side of consumption. If we follow this idea, those practices are not easily identified with a search for status or with the communication of meanings to those in a position to witness the products consumed. Food consumption might have to do with decisions that can be related with this 'exhibition,' but remains a private practice for the most part. Individuals do not have to evaluate continuously every minute consumption decision but they are nevertheless increasingly made aware that they are making a 'choice.' This involves a mix of decisions and routines. A tension and ambiguity between them is what Halkier observes for highly industrialized countries, when she states that:

consumers become concerned by a television show that exposes the poor quality of meat products but this experience is filtered out within a couple of days. They then return to the habit of buying a particular sausage (that contains little meat) because it is one their children like. Consumers would like to have better quality foods but feel at the same time that public information about food risks disturbs their experience of cooking and eating (2001, p. 208).

Halkier takes the relationship between food consumption and ambiguity one step further. She defines it in recuperating Bauman's (1993) concept of ambiguity, which refers to the indeterminate and open processes in social life, especially in modern societies, where it is impossible for individuals to achieve secure and unambiguous order with respect to knowledge about society and themselves.

Ambiguity, or the balance of trust and risk in food systems, evolves over time and can acquire many different shapes depending on many different factors. One obvious conclusion can, however, already be formulated: trust-generating mechanisms used in traditional local settings will not work effectively in the global circuits of food provisioning. Talking to the farmer at the local food market and visiting the farms where our daily food stuffs are produced, can no longer remain the most dominant and relevant trust-generating mechanism in reflexive modernity. People have to rely on abstract systems, scientific expertise and various information systems, to make long-distance assessments on the quality of the products and the reliability of the information flows which come along with them. With the growing significance of global food chains for our everyday food practices, the need for trust-building mechanisms based on abstract systems and expert knowledge forcibly increases. Relevant expert systems include medical professions, health services, state organisms, social care, etc. But trust is not necessarily blind. From the analyses of Beck *et al.* (1994) and Giddens (1990) on risk, it can be derived that, in conditions of reflexive modernity, trust in (abstract) expert systems:

- is fragile (since people are aware that systems considered safe today can be hit by some food crisis tomorrow) and needs constant monitoring/work, commitment;
- is related to the (shop and production) systems and their organizational principles as well as to the people/experts who make these systems work;
- is reproduced/disturbed /re-established especially by processes occurring at the so-called 'access points,' where lay-people meet the experts (or their representatives) of the systems in a regular and more or less organized way.

The awareness of the need to make daily choices in food consumption and of the presence of uncertainties and ambiguities in trusting food products constitute what can be seen as important drivers behind the considerable growth in sustainable food consumption we witness nowadays on a worldwide scale.

## DEFINING SUSTAINABLE FOOD

It is important to avoid the use of exclusive definitions of sustainability, for example, when concentrating primarily or exclusively on science-based (life-cycle) assessments of the environmental impact of provisioning particular food products. Some observers claim that a sustainable lifestyle or food consumption pattern can be rather clearly defined in technical terms, but such an essentialist approach is not very helpful. The different story lines with respect to sustainable food production and consumption emerging over the past two or three decades are to a certain extent based on science but always mixed up with broader societal issues. Applying a sociological definition of sustainable food is therefore required, making the definition dependent from the evolving ways in which consumer concerns about food are interpreted in specific societies.

Before elaborating such a definition it deserves paying attention to a perspective on sustainable food provisioning applied within environmental and rural sociology that has attracted broad support, that is, alternative agro-food networks. The growth of green food has interested the social sciences but most studies concentrated on the analysis of the proliferation of alternative agro-food networks (AAFNs) operating at the margins of mainstream industrial food circuits. This bias may be understandable as AAFNs<sup>2</sup> provide many opportunities for the renewed interest in local, determinedly microanalytical and ethnographic elements in the study of sustainable food production and consumption practices. These studies are essentially based on a dichotomy between the food production of the 'industrial world,' with its heavily standardized quality conventions and logic of mass commodity production, on the one hand, and the 'domestic world' on the other, where quality conventions embedded in trust, tradition and place support more differentiated, localized and 'ecological' products and forms of economic organization. The concept of 'quality' evokes the cultural aspects of this model but remains mainly production centered. The analysis of AAFNs makes it possible to express strong normative commitments to the social movements contesting mainstream, corporate industrial agro-food systems and the related hegemonic agricultural techno-scientific complex. In this arena, AAFNs figure as material and symbolic expressions of alternative eco-social imaginaries, and the literature emphasizes its capacity to wrest control from corporate agribusiness and create a domestic, sustainable, and egalitarian food system. It can be regarded as a form of resistance to the disruptive effects of global competition in the food market.

These loaded normative assumptions cause problems in the analysis of large-scale and industrialized organic production. Several observers consider the entrance of agribusiness into the organic market a misconception of what organic principles should be, and therefore, as this trend is not desirable, it should not be studied (Michelson, 2002). Others focus on the role of the 'conventionalization' of the organic industry as a crucial process in the transformation of the organic sector and are prepared to consider redefinitions of public policies in relation to family farming (Guthman, 2002, 2004; Reynolds, 2004). Goodman (2003) states that new localized economic arrangements are often uncritically seen as precursors of an associative economy by virtue of their embeddedness in interpersonal ties of reciprocity and trust. In this way, local personal relations can, and also tend to be, idealized in the evaluation of rural development strategies based on territorial value added.<sup>3</sup> The AAFNs' perspective is not only used to characterize local markets, but also points at cultural aspects of global and mainstream markets. Culture values are attributed to the local consumer, while the consumer in conventional mainstream markets is depicted as just following a narrow economic rationality.

Opening up such normative definitions require the recognition that different story lines with respect to sustainable food production and consumption are emerging in different countries and among different groups of consumers. Applying a sociological, historical perspective means conceiving green consumerism as a multidimensional category, covering a number of different 'consumer concerns' about food, all of them including sustainable foods but with different significance. We can identify four dimensions that are not mutually exclusive:

(1) *Naturalness*. Key characteristics are unadulterated food and the use of natural processes during the production process. Examples are organic food consumption which belongs historically among the most clearly defined categories of sustainable food concerns. Also in this category can be included whole foods, considering the ones that support a healthy lifestyle, offer high nutritional value, promote long-term good health, and are free of artificial ingredients and preservation. The practices involved in producing natural foods can cover a wide range of farming methods, including certified organic production. The orientation to 'natural' foods currently can be related to the search for nutrition, enhancing health and a broad identification of food quality, and it is present globally.

(2) *Food-safety* concerns originated in many food crises and scares like those on BSE ('mad cow' disease) and genetically modified organisms (GMOs),

mainly in Europe (where the retail sector had a very determinant role), on avian flu, or on pesticide contamination. Without having read Ulrich Beck (1992) on the emergence of the risk society, consumers nowadays are aware of contemporary food risks as a new form of risk. This means that these food risks are difficult to assess from a lay perspective and impossible to safeguard completely from a (national, science-based) expert point of view. Today, flows of food are organized and regulated at global levels whereby no one can escape the products (and the risks) of food produced and consumed in the space of flows.

(3) *Animal welfare* constitutes a controversial but rather well-circumscribed dimension of consumer concerns, although very unevenly developed throughout the world, it seems. In response to widespread public concerns about the specific ways of bio-industrialized production of chicken and eggs after World War II, mainstream markets for fresh eggs in Western Europe have taken animal welfare issues into account. Furthermore, the radical tactics of animal welfare activists in Europe (e.g. in the UK) have contributed to the high visibility of these concerns, although giving them in some countries a controversial character as well. In most Asian countries animal welfare issues, however, are considered at best as a secondary priority, only to emerge when issues of survival and poverty are satisfactorily dealt with.

(4) *Environmental* (or *eco-system related*) concerns related to modern industrial food production and consumption, mainly activated and campaigned for by environmental organizations and social movements all over the world. They argue that food production and consumption should be sustainable in the Brundtland report meaning of the word: producers (farmers) should manage ecosystems in such a way that future generations are not deprived of a well-functioning sustenance base to human life and consumers should include these concerns in their consumption practices, including fair trade. In many cases these *eco-system concerns* are interlinked with one or more of the other dimensions, most notably in the case of pesticide use with human health.

Most people share some of the above-mentioned dimensions of food concerns at some moments in their lives. Which of the concerns worry people most varies between different groups of consumers and different countries, while the overall level of consumer concerns differs as well between different parts of the world. Instead of trying to determine and explain the many different possible contents and specific profiles of consumer concerns in different parts of the world as a particular phenomenon in itself,<sup>4</sup> it seems more promising to take a dynamic, process-oriented and contextual perspective to green

consumerism in the global network society. From this perspective, the emphasis is on the interaction between emerging green consumer concerns on the one hand and developing retailer strategies for green food provision on the other. This interaction process is reciprocal but not well balanced in terms of power relations. Retailers are more powerful in many respects than consumers when it comes to shaping green food consumption. On the other hand, consumer power has increased considerably not only as a result of a series of food crises but also because of the emergence of private-interest-based regulation of food quality and food safety (Ponte and Gibbon, 2005). If indeed it is 'up to the consumers to decide,' retailers and food producers implicitly acknowledge that consumer interests have to be taken seriously. Consumer demands for green products are taken into account also because they are articulated and supported by a growing number of organizations and movements which claim to act on behalf of the consumers and for that reason demand access to networks making decisions on the future provision of green food.

#### CLOSE ENCOUNTERS AT THE SHOPPING FLOOR

Whether or not consumers actually engage with sustainability transitions in the food sector depends on many different factors, some of which are easier to detect and analyze than others. One interesting opportunity to study this phenomenon is the retail outlet where we can approach consumers and their shopping practices while establishing a balance between macro and micro approaches.

First, there is the visual level concerning the more sustainable products and services on offer, that is, the ways in which these products are presented to the consumer as well as the information systems attached to them. Visual indicators are important for analyzing emerging consumers buying sustainable foods, but in order to really gain an in-depth understanding of the consumption practices implied in shopping for sustainable food in retail outlets, these physical devices are only a first step. For information, images, messages, products and services to be really accepted, bought or 'appropriated' by citizen-consumers, they have to be embedded in a vital and active system of trust relations which involves both providers and citizen-consumers. When applied to our object of analysis, the retail outlets, these assumptions help to 'read from the shelves' what kind of social relations and strategies are reflected and mirrored in the specific physical setting of the retail outlet. This notion of trust and power relations 'being mirrored' or 'reflected' in physical

characteristics of the setting should not be interpreted in any mechanistic or static way. To be able to read and decipher these inscribed trust relations one needs a social theory on the ways in which relations behind the product and information flows are organized in the context of reflexive modernity. In the language of structuration theory, these trust and power relations are said to be *instantiated* at the very moment when people enact – with the help of the physical characteristics or technologies included in the shop setting – the social practice of shopping.

When a set of valid indicators for shop-level assessments is available, they can be used not just for assessing environmental policies but also for the evaluation and construction of market-based forms of citizenship involvement in the greening of food chains. Product images and information exchange about production circumstances of certain foods provided by NGOs, public media or Internet and e-mail communication, in combination with supermarkets in-shop policies on information and communication, may influence consumer shopping practices. Micheletti (2003) refers to particular forms of engagements in terms of 'political consumerism,' and she shows that reliable sets of environmental performance indicators on a retail level can be used for many different forms of environmental action and pressure. Power relations equally get specific characteristics in the retail outlet. Supplementing the more conventional notions of economic power of food producers and consumers, political power at the

shop floor and information control acquire increasing importance. Viewed from this perspective, shopping practices are directly linked to supermarket decisions on how they organize the provisioning of food in their shops.<sup>5</sup> The main cornerstones of our framework for the analysis of consumer practices when buying sustainable food in retail outlets are summarized in Figure 29.1.

When operationalizing this conceptual model into strategic variables, we distinguish between three basic sets. At the right-hand side of the conceptual model, we discern a set of variables and indicators referring to the environmental strategies of the main actors in the provision system. The second set of theoretical variables and items refers to the processes at the shop-floor level. Here, we make a further distinction between variables describing the physical characteristics of the green product and information flows on the one hand, and variables and items referring to the relationships of power and trust as they are reproduced in the shop-floor setting on the other. Finally, we use a set of variables describing the lifestyles and consumption patterns of the groups of consumers shopping for green food. We try to describe their environmental performance beyond the specific food-shopping practice and we look for ways to relate the revealed preferences for green food to basic characteristics of their lifestyles and overall consumption levels, and to the involvement of global civil society actors such as consumer NGOs.

Both the physical characteristics of the retail outlet and the social relations governing the

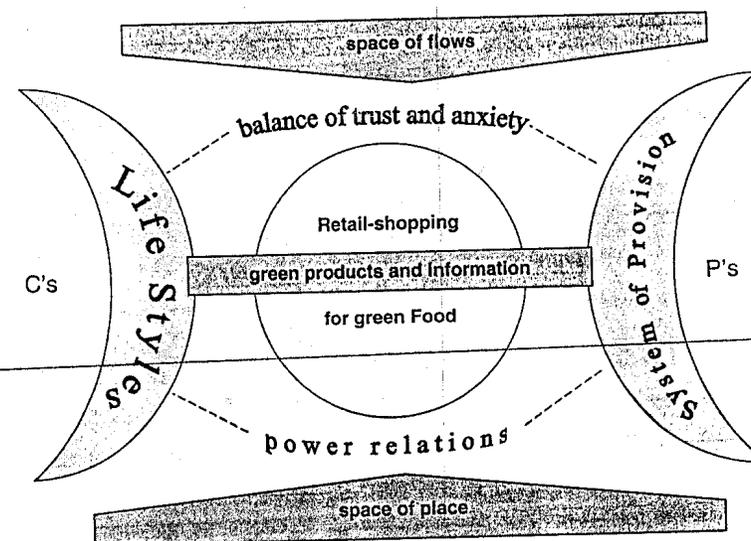


Figure 29.1 Retail shopping for green food: a conceptual model

shopping practices are the result of a specific articulation of local and global forces or dynamics. The distinction introduced by Castells (1996) between the space of place and the space of flows can help to make sense analytically of these dynamics, without incurring a simplistic dualism. So, these concepts are helpful provided that one does not relapse into an interpretation of this scheme which situates the sustainability transitions exclusively or primarily in the 'local dynamics' of the space of place, while regarding the globalizing forces and dynamics of the space of flows as a threat and negative factor for sustainability transitions (Oosterveer, 2005a). It is, for example, an exciting dimension of sustainability transitions in the food sector when one witnesses the globalization and standardization of the modes of production and consumption of organic foods formerly restricted to niche markets. These unorthodoxies can only be understood and properly analyzed when possibilities for environmental change at the level of the space of flows are taken into account as well and analyzed with respect to the many diverging ways of being connected to local factors and dynamics in the space of place.

To be in the condition to face the challenge of globalization for the social sciences and, in our case to be able to capture the complexities in the new role of retail chains, we need a new mapping of space and time, that will not exclude national specificities, but will avoid any type of dualism between the national and the global level, between the 'inside' and the 'outside' (Beck and Willms, 2004).<sup>6</sup> Assuming a cosmopolitan view, the transitions to more sustainable food-consumption practices are related to the regional origin of the products and their concomitant food-miles, the (EU, WTO, national governments) standardized norms for packaging, safety and environmental quality, the environmental strategies of the retail chains and the orientation of the shopping public. While shopping for sustainable food, people can engage with production processes and colleague-consumer groups and environmental NGOs worldwide, thereby performing different forms of what Beck refers to as banal cosmopolitanism (Beck and Willms, 2004).

### PROVISION OF SUSTAINABLE FOOD IN THE RETAIL OUTLET: SUPERMARKET STRATEGIES

The dominant position of the retail sector in the processes of change in food provision can basically be explained by two reasons. First, retailers can substantiate their claim to be 'closest' to food consumers in many important respects by pointing

to the fact that they meet on a regular, almost daily basis with major segments of mainstream food consumers (Seth and Randall, 2001). Second, the organization of food production and consumption has become a global affair, and consequently supermarket chains operating worldwide have a privileged position. These reasons are further elucidated below.

Retailers 'know best' the concerns of their clients since meeting them in the retail outlet leads to first-hand information about what consumers want and what their concerns are. These regularized and frequent interactions at the shop floor also provide retailers with the possibilities to experiment with new (green/healthy) food products and practices. As a consequence, retailers claim to have the power to make or break the market for sustainable products and services in the food sector. They 'create' and 'control' not just green consumers but also – 'on behalf of the consumer' – the suppliers of green products (Bevan, 2005, p. 7). The increasingly significant presence of supermarkets in the green-food sector is part of transformations induced by the supermarkets themselves in the food consumption sphere, by providing new options and taking initiatives regarding product innovations and food quality. During the 1990s a fundamental shift has taken place in retailing in Western countries from selling highly standardized and packaged brand-name food products to loyal customers, towards increasingly fragmented micro-marketing strategies increasingly selling perishable foods such as fruits, vegetables, dairy and meat (Guptill and Wilkins, 2002). This transition forces retailers to expect more and more from their suppliers in terms of the policing of food delivery as well as the type and specifications of the food produced. This stands to give retailers a market advantage with customers and it demonstrates to governments that they are taking existing food regulations seriously (Flynn *et al.*, 2003). Retailers constructed so-called private-interest or market-based regimes for quality control, offering the consumer individual choice also with respect to food quality 'beyond basic standards.' Although many governments still play an important role in the regulation of food markets, retailers are 'at the apex of this quality construction; being able to absorb and transmit regulatory changes, customer reactions and supply chain quality assurance parameters' (Marsden *et al.*, 2000, p. 8).

The second reason for the growing retailer dominance is that the organization of food production and consumption has increasingly become a global affair. To keep up with the high dynamics of food consumption and production in globalizing markets – with the (quality) regulation of food in the 'space of flows' (Oosterveer, 2005) – the

resources of local, independent shop owners or small (organic) farmers' cooperatives are far from sufficient. Through concentration and internationalization over the past decades retailers have gained competitive advantage, resulting for example in many countries in Europe in five major retail chains accounting for considerable shares in the overall food sales. In 1990 no retailers were included in the Fortune 500 list of the largest global companies, but in 2002 more than 50 were. By that time, Wal-Mart had become the largest of all companies, considering the size of sales (Reynolds and Cuthbertson, 2004, pp. 1–22). This process was related to the closure of small shops and independent retailers (Dobson *et al.*, 2003). In 2005, the top 10 global food retailers accounted for combined sales of \$840 billion – 24% of the estimated \$3.5 trillion global market (up from 18% in 2001). See Table 29.1.

One example of these large retail firms is the French hypermarket chain Carrefour, selling food through its super- and hyper-markets in France, but also in many other countries around the world (see Box 1).

Consequently, food quality and safety issues stretch far beyond the local or national level. While for a long time quality control rested primarily in the hands of public regulators, we witnessed a major change in the 1990s when retailers assumed a more active role in the development of food safety standards and procedures, like HACCP (Hazard Analysis and Critical Control Point).

In order to attract consumer attention, supermarkets refer to different storylines from within

### Box 1 Carrefour: global mega-grocer

Carrefour operates over 11,000 stores (430,000 employees) in more than 30 countries in Europe, Latin America and Asia. France accounts for about half of the company's sales. At the beginning of 2005, Carrefour planned to open 70 hypermarkets, including 15 in China, 7 in Brazil, 6 in Colombia, 5 in Indonesia, 4 in Thailand and 3 in Poland.

Source: ETC Group (2005, p. 8)

the general frame of sustainable food consumption. Also, combinations of different storylines are developed, like the combination of the 'naturalness' and the 'safe food' storylines. The growing importance of this specific combination can be illustrated by considering some of the transformations that are taking place in the area of food marketing. In the 1980s, a new perspective on consumer research split the academic marketing field into two coexisting perspectives. The conventional perspective assumes a positivist approach, employing quantitative research and focusing on the purchasing process. The newly emerging non-conventional perspective adopts a non-positivist methodology, employing also ethnographic and qualitative methods in dialog with sociology and anthropology, assuming a cultural perspective where consumers are not considered as rational (economic) actors. This approach emphasizes the cultural significance process as it is intertwined with consuming practices at different levels and within specific social contexts. The constellations of meaning and practices characterizing subcultures of consumption and styles of food consumption are not based on socio-economic circumstances exclusively or primarily, since even members of one subculture can belong to several socio-economic groups (Thompson and Troester, 2002).

An empirical example of these non-positivist trends in marketing research is provided by the work of the Hartman Group in the USA (Hartman Group, 2000; <http://www.hartman-group.com>, 2003). In studies of this Group on organic food consumption, it was found that – with an annual growth of 15 to 20 per cent – organic food products are becoming part of mainstream food consumption practices in the USA, while no longer being restricted to just 'market niches.' In this new generation of marketing research, the stages of organic food consumption are explored in a qualitative way, working from the periphery to the center of the market, attempting to establish a comprehensive characterization of organic consumer lifestyles, consumer behaviors, distribution channels and information sources. These reports contextualize the organic food consumer as being

Table 29.1 Top 10 global food retailers

Company	2004 revenues (US\$ millions)	Percentage global market share (grocery retail)
1. Wal-Mart* (USA)	287,989	8
2. Carrefour (France)	99,119	3
3. Metro AG (Germany)	76,942	2
4. Ahold (Netherlands)	70,439	2
5. Tesco (UK)	65,175	2
6. Kroger (USA)	56,434	2
7. Costco (USA)	52,935	2
8. ITM-Enterprises (France)	51,800	1
9. Albertson (USA)	39,897	1
10. Edeka Centrale (Germany)	39,100	1

\* Wal-Mart does not report grocery sales separate from total revenues. Market research firm, Retail Forward, estimates that Wal-Mart sold \$109 billion in groceries in 2004.

Source: ETC Group (2005 p. 6)

part of cultural changes where they are becoming more concerned with quality of life and health, and thereby transforming consumption practices (Barry, 2004). This phenomenon has also been the focus of a study about 'The Wellness Lifestyle Shopper: Mapping the Journeys of Wellness Consumers' (<http://www.hartman-group.com>, 2000). This study states that consumers, as well as their paths to achieve wellness, are complex social entities because they have to consider an enormous diversity in products appealing to health entering the market. Data showed that the American population spends around \$66 billion per year on healthy products, a significantly growing market (<http://www.hartman-group.com>, April 2003). People's concerns with health and the nutritional quality of food were mentioned by 66 per cent of the organic consumers interviewed in this research. Concerns about pesticide risks was the reason given by 38 per cent, food safety by 30 per cent, while only 26 per cent mentioned environmental reasons, contradicting the belief that organic food consumers are essentially environmentally conscious citizens. Instead of understanding consumers as being informed solely by economic and scientific arguments, these consultancy reports recognize that changes in the cultural sphere impact the way in which people consume products and services and deal with related experiences and information.

The National Grocers Association (NGA) of the USA has recently established the organic market to be the fastest growing sector of food products in the supermarkets. Also, the NGA relates this development to the growing importance consumers attach

to well-being and health.<sup>7</sup> At a conference on organic food consumption in the USA in 2003 the NGA concluded:

As the fastest growing category in the food industry today, and public concern about health and wellness expected to continue, no retailer can safely ignore this increasingly important facet of the industry. The \$5 billion organic market is growing at a rate of five times larger than the growth rate of the overall food industry and doubling in size every 3½ years since 1990. By 2003, the market for organic products is estimated to be over \$13 billion.<sup>8</sup>

On the basis of a research among 146 representatives of supermarket chains, the NGA underlined the importance of organic or natural foods for supermarkets and offered a number of recommendations for interested supermarkets (see Box 2). Paying close attention to these recommendations, Wal-Mart plans to roll out at the end of 2006 a complete selection of organic foods – food certified by the USDA in its nearly 4000 stores in the USA. Just as significant, the company says it will price all this organic food at an eye-poppingly tiny premium over its already cheap conventional food: the organic Cocoa Puffs and Oreos will cost only 10 per cent more than the conventional kind (*New York Times*, 4, June 2006). The entrance of Wal-Mart into this sector will challenge the argument that organic food is elitist.

By way of comparison, let us now consider the situation in a less industrialized country like Brazil. The rising trend in the consumption of

healthy food has been detected in a number of market studies. One segment of this category can be called 'diet/light' and has witnessed annual growth rates of 30 per cent over the last few years, according to ABIAD (Brazilian Dietetic and Special Purpose Foods Association). According to the Brazilian Food Industry Association sales of light and diet products alone already corresponded to about US\$ 1.7 billion of the total of US\$ 47 billion in food sales in 2002. This entails a growth rate of 952.5 per cent over a period of 11 years. Since 1990, the average number of new products released jumped from 40 to 80 per year. These data for Brazil follow the wider global trend of searching for a better quality of life, directly associated with better nutrition, in combination with food that is tasty and pleasurable (Fruitafatós, June 2002). We can see this global trend mirrored and supported by retail practices for the provision of green foods in Brazil (see Box 3).

The Brazilian Supermarket Association confirmed the presence of a trend comparable with the one in the supermarkets in Europe and USA, where interest in the broad category of healthy food (including organic products) is growing fast: 'The (food) sector knows that consumers want good health and longevity. Supermarkets can meet this demand by including certified natural products, organic and functional food, as well as "diet" and "light" products and, what is very important,

by giving consumers information on what they are buying. Ultimately your store can "sell" health!'<sup>11</sup>

Provider strategies in sustainable food are related to systems of provision (i.e. the relations with farmers), marketing strategies (involving one or more of the identified dimensions of sustainable food) and with the positioning of these products within the shop. Surprising is the observed variety in supermarket strategies in this regard. For example, French retail groups that publish a sustainable development report (Carrefour and Auchan) consider quality chain ('filière'), organic and fair trade products as indicators for their company's performance regarding social and environmental responsibilities in the area of food products. Leclerc and Intermarché remain fragmented and display much less information but they consider organic, fair trade (Leclerc) and integrated farming (Intermarché) as sustainable food products. This variability in company strategies deserves further elaboration.

After presenting these different results of empirical research on provider strategies in the field of sustainable food provision, it becomes clear that this interesting perspective demands further elaboration. Based on our conceptual framework and the review of empirical trends in retail policies worldwide, we think the following variables to be of crucial importance for (research into) future supermarket strategies:

### Box 2 Recommendations for supermarkets initiating the sales of organic and natural foods

It may seem simple, but it is not as easy as simply adding a few new product lines to the store shelves or setting up a separate natural foods' section inside the store. To draw this business and meet the needs of these customers, retailers need to become as knowledgeable about natural and organic foods and products as the people they hope to sell to. This segment of consumers knows more, and asks more, and the retailer who will enjoy the long-term benefits of these natural sales will be the one who can answer their questions. Your naturals' section will be most successful, and most profitable, if you follow a few basic guidelines to cater to the natural products customer.

First, when conceptualizing your naturals' section, work with a knowledgeable natural products' distributor who can assist you with product selection, competitive pricing, promotional strategies and merchandizing. Working in partnership with a distributor, who understands this industry will help you build a solid foundation for your own natural products' section. Second, realize the importance of product information and education for this new customer group. Natural products' magazines, shelf talkers, product demos and other consumer information are vitally important to the success of your section. Third, assign a natural products' section manager who is knowledgeable about the products, knows how they differ from commercial brands, can answer customers' questions, and is committed to your customers' natural products' education. Most of all, associates and customers must be encouraged to take time to savor what those in the natural products' industry have grown to love: the flavor, the quality, and the absolute uniqueness of natural foods. Knowledge of and enthusiasm for these products, perhaps more than anything else, will be the deciding factors in the success of your store's natural products' section.

Source: Jonathan M. Seltzer. Natural Foods: A Natural Profit Opportunity (*National Grocer Magazine*)<sup>9</sup>

### Box 3 Green food provisioning in Brazilian supermarkets

In order to supply their retail outlets with sufficient quantities of green food in response to the increasing demand, supermarkets have to organize systematically their provisioning, pushing the growth of organic food production. In 2001, the total sales of formally certified organic food products in Brazil reached US\$200 million in 2003 and is estimated to be around US\$ 250 to 300 millions for 2004 (Globo Rural, November 2002; Ormond *et al.*, 2002). To supply this demand, the country had more than 800,000 hectares certified as organic in 2003, which grew from 275,576 hectares in 2001. In addition, there is also a large quantity of 'informally certified' or non-certified organic production, especially in the southern states of Rio Grande, Paraná and São Paulo. The estimated number of organic producers is around 14,000 and among them small-sized family farms are responsible for up to 80 per cent of the production (Folha de São Paulo, 10/11/2002). Greater São Paulo represents half of the national consumption of organics and is also the main pole of production. The annual growth of organic production is calculated as being between 30 and 50 per cent. An important part is production for export (soybeans, coffee, juices, sugar, nuts, oils, banana, guaraná, etc.), which is around 70 per cent of the total certified volume (there are 12 national and about 9 international certifying agencies active in the country), generating in 2001 US\$ 130 million (Exame, 28/05/2002). But the sector is also growing in the domestic market which belongs, together with Argentina, the most developed in Latin America. Around 45 per cent of the organic food sales in the domestic market are done through supermarkets, 26 per cent through fairs and 16 per cent in specialized stores.<sup>10</sup> Most of the products are fresh vegetables and fruits, but a growing number of companies and small family units is processing tea, coffee, mate tea, jams, oils, breakfast cereals, and dairy products. Fresh vegetables are presented in different forms thereby allowing the producer to increase the value. Provisioning supermarkets with organic food from farmers or farmers' associations takes different forms but two stand out as most important. The first strategy is to enter into direct contracts with organic farmers (e.g. applied by regional supermarkets in the city of Florianópolis, Santa Catarina State) and the second one is to rely on intermediaries (more adopted by national and international chains, e.g. in the cities of Rio de Janeiro and São Paulo). The first strategy allows a more diversified offer of products, higher quality, more space of exhibition and less difference in price between conventional and organic products than the second one does.

- product information strategies (what information is available in the shop, on the shelves and on the product; which sustainable food storyline, or combination thereof, is referred to);
- price settings in relation to other food products;
- physical location within the shop (separate section, separate shelves, separate section within a shelf, mingled among other products);
- linkages with suppliers ((in)formal contracts, certification/labeling, retailer supervision of production process, farmers within the shop);
- company communication (adds, other forms of publicity, which sustainable food storyline, or combination thereof, is referred to);
- company strategy: is sustainable food considered an essential part of the corporate image or only one category of products on sale?

With the use of these variables in the context of cross-national, comparative research, it will be possible to identify and analyze the different retailer strategies with regard to sustainable food provision and consumption in globalizing food chains, also for sustainable food.

#### BUYING SUSTAINABLE FOOD: CONSUMER STRATEGIES

Making sense of consumers shopping for sustainable food in supermarkets cannot only be done through reference to economic variables and attitude-behavior relations. Attention to other issues is required for comprehending consumer strategies for buying sustainable food, such as concerns about environment, food safety and health, the importance of different lifestyles and the changes in consumer trust in food. In particular, the issues of lifestyle and trust will be further elaborated.

Life in modern-day societies is characterized by an increasing plurality of different lifestyles and this diversity is also reflected in the varying consumer choices and marketing strategies in the food sector (Slater, 1997). Giddens (1991), Warde (1994) and Beck *et al.* (1994) point at the plurality in lifestyles and consider reflexivity related to consumption practices as a key element for understanding this variety. Consumer reflexivity becomes particularly visible in the significance attached to health and bodily well-being in the face of conflicting expert systems.

Searching for health and buying sustainable food can be part of different lifestyles. Even within the clearly identifiable sector of organic food, a marketing study in Germany by Biohandel, March 2006, found a large diversity in consumer behavior. This study points at the presence of different reasons for different categories (combining socioeconomic backgrounds and cultural attitudes) of

German consumers in buying organic food. They distinguished three (out of the ten in total) consumer categories that are interested in buying organic food, together representing some 35 per cent of the German population:

- *Post-materialists* constitute the traditional basis for organics. They buy organic products because they care for the environment, but also for pleasure, taste, feeling well and health. Organic labeling gives the certainty of buying the 'right' products.
- *Middle-class consumers* have recognized organics as a trend and buy it on rational grounds and partly also on status. Important for them is pesticide- and chemical-free food and although they are less informed about organics they do trust seals and labels. They generally buy organic food in conventional stores.
- *Modern performers* consider organics as being associated with fitness and energy and prefer to buy these products, of which they do not know much, in conventional supermarkets around the corner. Without attaching too much value to these labels and categorizations, this study points very clearly at the diversity in lifestyles of which organic food consumption can be part. A Dutch study on lifestyle profiles for consumers of biological products (Wertheim, 2005) indicated that for the broader category of biological or sustainable food this variety may even be larger. In modern society diversity does not stop at the front door of the consumers' homes as, even within the context of the household food, habits may be different, exposing different lifestyles between people that are in close social relationship. To explain this cultural fragmentation of our dietary preferences Richardson (2004) points at the increased individualization of culinary preferences (especially among pre-teen children) and the growing presence of dietary restrictions (due to food sensitivities, allergies and forms of vegetarianism). Cultural forces beyond the household are increasingly potent in fragmenting any united dietary patterns existing within it.

As in other countries, in Brazil concerns about health and lifestyle play a role in selecting vegetables next to their cosmetic appearance and flavor. Thus, consuming sustainable food can be occasional and only one among several other health-oriented practices. Guillon and Willequet (2003) identified this trend as the 'ego-trip' way of consuming sustainable food. Since the beginning of the 1990s, this trait seems to be present in individuals' decisions towards self-protection (e.g. the safety and sanitary quality of food) and self-promotion (beauty, healthiness and fitness). Many consumers who could not be identified as being environmentally aware or socially responsible were concerned with buying alternatively

produced food. Similarly, data from research undertaken in Europe in 1998 (Antoine, 1998) found that 76 per cent of consumers considered food as the best medicine, though they did not specify any particular food, either organic or conventional. Consumer food choices can hardly be explained by their consciousness of the relation between pesticide use and product appearance. Many consumers were not even very well informed about the qualities of organic food products, but they are still interested, often for health reasons. In the *SuperHiper Magazine* (June, 2002) research, 92.5 per cent of the people interviewed were interested in knowing more about organic food, particularly about the composition and nutritional value and disease prevention potential. Many consumers also wanted to know recipes and ways to consume fruits and vegetables. These results signal the recommendation for producers, suppliers, and supermarkets to make the benefits and advantages of 'green' products more visible and comprehensible and create a better fit between their information strategies and consumer practices and concerns.

Obviously, not all choices are available for all consumers. Nevertheless, it is essential to be aware that buying sustainable food is not limited to the richer echelons of Western societies. In many other countries consumer concerns about food are growing as well, although not necessarily applying the same dimensions of sustainability (or storylines) as in the EU or the USA. Aprilia (2005), for example, showed in her research on Thailand that in this country 'green' food provisioning was initially intended for export but later a domestic demand emerged as well. Currently, organic food has become a niche market already available in supermarkets targeted at high-class consumers but the creation of new markets for the majority of middle-class Thai has not yet taken place. Most Thai consumers select their food primarily on the basis of its freshness and taste, whereas the organic food consumers state that they consume organic food mainly for health and safety reasons.<sup>12</sup> Local Thai certification schemes thus pay as much attention to organic production practices as to hygiene: hygienic certification is food produced with hygienic processes that may include chemical substances provided at an acceptable level that is harmless to human health. Hygienic food provides better opportunities for the average Thai to consume less-polluting, less-contaminated food produced at more affordable prices than organic food.

In general, trust is an essential element of consumer strategies with regard to sustainable food. The presence of risks associated with food (pesticide residues, bird flu, BSE, etc.) that may endanger human health in combination with the necessary

dependence on experts to provide information about their occurrence and danger, necessitates some form of trust relation to be developed and sustained.

Trust in the food system as abstract system refers both to the products and technologies applied and the people at work in (global) food chains. Consumers need to trust the health and safety of the food they consume, the information provided about the production process involved, and the people producing and retailing the food. As a personal relationship with the producer of food is not possible in supermarkets, consumer trust in sustainable food bought at retail outlets has some specific characteristics. The relationship between consumers and members of staff is necessarily superficial, so consumers' trust in sustainable food products is generally based on the (environmental) image of the company (and its obligation to uphold its image) and on the active (visible through labels) presence of independent controlling agencies supervising certifications and other indicators of good environmental performance. This trust is nevertheless precarious so in case of acute problems consumers are inclined to (temporarily) look for additional external and independent sources of information to orient themselves in order to make the right choices, for example, the choices for sustainable food.

This short discussion of consumer concerns, trust and lifestyles is based on the preliminary results of an emerging strand of empirical research worldwide in the field of consumer strategies in buying sustainable food. They point at the importance of further elaboration of transnational, comparative research in this domain. For this future research, we have again tried to identify a number of variables and factors we think to be important:

- Dimensions of consumer concerns as contained in specific lifestyles. Different (combinations of) story lines can be connected with different lifestyles' characteristics also outside the consumption domain of food.
- Product information strategies. What information is asked for by consumers and which formats of information provision (in the shop, on the shelves, on the products) fit best to the lifestyles of consumer groups.
- Social relations of anxiety and trust: the preferences of consumers for specific company information strategies targeted at establishing and maintaining a meaningful trust relation.
- (Premium) prices for green products: 'willingness to pay,' although not isolated from concrete shopping and eating practices, nor from cultural/lifestyle characteristics and always in relation to other food products.

- Preferences of consumers for specific formats for the physical location and presentation of green products within the shop (separate section, separate shelves, separate section within a shelf, mingled among other products)
- Preferences of consumers for specific ways of constructing 'hierarchies for green qualities.'

These variables can help to move beyond the isolated, individualist approaches to consumer behavior which tend to dominate research for a long time. By using these kinds of variables, consumer strategies with regard to buying sustainable food are researched in direct relation to and linked with provider strategies.

### THE SHOPPING FLOOR AS LOCALE FOR SUSTAINABLE FOOD TRANSACTIONS

The shopping floor constitutes the locale where supermarket chains and consumers interact in the selling and buying of sustainable food, or where provider and consumer strategies actually meet. Although the social practices in the retail outlet cannot be understood without including the different strategies presented above, so far, very little empirical research has been done applying this perspective.

Nevertheless, some empirical findings are available and one interesting starting point is the physical lay-out of the shop. The way different sustainable food products are positioned in the shop setting proves very important in the success of such products. For an example on the shelf space, see Box 4. Items such as the assortment of sustainable food products (quantitative as well as qualitative), the positioning of the green assortment in overall assortment, the spatial structure of green provision, and the dimension of sustainability referred to are characterizing differences on the shopping floor and thereby facilitating or complicating the enactment of particular provider and consumer strategies.

A new strategy introduced by hypermarket chains in France since the mid-1990s included the selling of regional and organic food products, combined with the development of quality systems ensuring product traceability and the rearrangement of the stores in 'consumption universes' (i.e. the thematic regrouping of products not according to the product's nature but to the consumers' use) (Laurenceau, 2005). Shop managers consider regional or quality labeled food products (e.g. Label Rouge, AOC) as equivalent to other products and thus do not need separate treatment, except for organic products (mostly because they are a more recent phenomenon in these shops and formally demand strictly separated 'filieres').

#### Box 4 The importance of supermarket shelf space for sustainable food consumption

Experimental research provided evidence for the observation that not only the price of a product or its characteristics determines consumer interest but also that the context in the supermarket plays an important role as well.

While testing consumer reactions to the presentation of sustainable food in supermarkets, researchers ascertained that consumers are sensible to the way a product is offered. When a product is presented in a supermarket in such a way that it gives the impression of being popular and of good quality, consumers are more interested in buying this product. For example, when sustainable foods are offered more space in the supermarket shelves they seem to be popular and therefore consumers will buy more.

Source: Dagevos *et al.* (2005)

When several labels are available for one category of products, these can correspond to different levels of quality and therefore with different prices. Retailers use food labels as general signs of quality according to their perceptions of consumers' needs and preferences (e.g. consumers may choose different labels for different kinds of meat). In most cases, labels represent a higher quality and are thus displayed on higher shelves, thus more expensive, but this is not the case in certain stores, where either the display is vertical or where the higher quality has become common and widely purchased. In France, the notion of 'quality' seems to create coherence between the retailers' and consumers' concerns for sustainable food. In the store this 'quality' is materialized into the mix of 'terroir' (regional product) and sustainability labels. Consumers are familiar with some labels, such as organic agriculture but not with others and, evidently, they ask for more information figuring on the product itself as well as in the store and in the catalog.

Supermarkets may use different strategies in their shops when commercializing organic food products (Richter *et al.*, 2001). How prominent and strong is the attempt from the firm to persuade or facilitate the consumer in his or her green choices, preferences and routines? How consumer oriented is the strategy when compared to internal (profits/market) interests of the providers? How cosmopolitan is the sustainable food product in terms of being originated and regulated and standardized from a local or an international/global perspective? Some essential differences characterizing these strategies are the number and diversity of products in the retail outlet, the motivation and

qualification of the workers at the selling point, and the presentation and positioning of the products in the store. During interviews in several European supermarkets, Richter *et al.* (2001) observed that the person in charge of the organic food sector usually emphasized that organics were part of a broader environmental and social responsibility strategy from the retailing chain. However, when looking deeper into the data, they found out that these commitments can lead to different practices and are diffuse in their scope.

In the Brazilian case, Guivant *et al.* (2003) concluded that, although the main international and national retail chains, like Carrefour, Pão de Açúcar and Wal-Mart, have invested significantly in the organic food supply, they basically assumed only minimum and basic strategies. The growing presence of organic products can not necessarily be considered the result of elaborate concern-wide strategies to replace conventional food. Organic foods are dispersed in the area for products associated with well-being and quality of life. For this reason, organic products are normally placed on shelves where, without appropriate information to consumers, they are mixed with hydroponics (food products, with lower pesticide presence and benefiting from a lower price and a 'clean' image), conventional products packed very similarly to organic ones (with colorful labels identifying producers and strengthening the notion of being commercialized directly from producers, looking like 'natural' products), and conventional vegetables in packages with misleading statements (such as, 'free of conservatives,' 'natural product,' etc.). Only certain regional supermarkets have special, refrigerated stands, with signs, clearly separating organics from hydroponics, conventional, etc. In these supermarkets, the demand for healthy foods is contributing significantly to the growth of organic food consumption and production, contradicting the negative forecasts from a part of the organic agriculture movement about sales through supermarkets. It may be expected that this provision strategy from the retail sector is 'converting' consumers to become more 'green.'

Although again based on scarce and scattered empirical data, these findings nevertheless point at the following variables and indicators that might be useful for studying the shopping floor practices implied in the consumption of sustainable food:

- The availability of products – number and diversity of products and departments in the retail store with a green profile.
- Location and presentation of green products – products' location on the shelf (vertical as well as horizontal).
- Trust enhancing strategies in everyday shopping for sustainable products, both from the side of

providers and from the side of consumers (in situ information strategies; communication devices; potential for mutual feedback and control).

- Motivation, training and qualifications of the workers at the selling point, resulting in passive, defensive or pro-active strategies for confronting the consumer with sustainable products.
- The framing of the price setting: the position of sustainable food in comparison with other food products in terms of relative prices but also in terms of image, etc.
- Shopping connected special actions and devices (eco-saving systems; eco-bonus cards, etc.) for the promotion of sustainable food.

Again the list is indicative instead of exhaustive and is meant to contribute to the development of a future research agenda that takes as its starting point the practice of shopping at the retail outlet as a relevant case of a consumption junction.

### CONCLUSION

Viewed from a global perspective, green food consumerism is on the increase, although its development can be considered uneven in different respects. With the help of a theoretical framework and its operationalization into three specific categories of factors and variables, we are able to identify the heterogeneous paths that lead to increased sustainability. With the help of the research outline as suggested, it is possible to investigate different forms of 'fits' and 'misfits' between retailer strategies on the one hand and consumer strategies on the other. Guided by our typology of four dimensions of sustainability, we were able to reconstruct some different ways of framing sustainable food consumption in different settings in different parts of the world. When Brazilians are 'going organic' to improve their lifestyles and well-being through the consumption of food that suits the image of a sportive, healthy, and modern life, they put pressure on retailers to provide a hierarchy of food (quality) choices structured according to our first dimension in particular. Guivant (2003) talks about an 'ego-trip' – instead of an eco-trip – discourse as being specifically relevant for the Brazilian case. In this ego-trip discourse on the greening of food production and consumption, fit and healthy personal bodies are connected in a direct way to fit and healthier food flows worldwide. When, in the aftermath of bird flu, Malaysian and Thai food consumers are 'going organic' or start buying at least 'pesticide-controlled' food, they start looking for a government and retail-controlled provision of 'safe' food along the lines of our second dimension of consumer concerns as well. Most likely, however, their concerns are not framed in terms of

an ego-trip discourse of the kind found in Brazil. Nevertheless, adherence to safe and health food standards in both parts of the world could very well turn out to be quite comparable with respect to the ways in which consumers respond to strategies by retailers who use the provisioning of green food to create new markets. What puts the Asian consumers and retailers in a different position, compared to their Brazilian or European counterparts, is the lower level of the overall provisioning of green food in their societies. In all regions, however, at least some food is sold and bought under the heading of green or sustainable food.

International trends situate supermarkets as central stakeholders in the expansion of organic food consumption, notwithstanding the conflicts that may exist with farmers about the conditions of supplying sustainable food, as well as with consumers about the framing of sustainability and about the price. According to what has been observed in recent research, worldwide most supermarkets have approached the organic food sector as part of a wider strategy aimed at appealing to those consumers interested in green consumption, including four types of motivations mentioned in this chapter. This inclusion of organic foods into the conventional market and especially on supermarket shelves is not always welcomed as a desirable development by the organic agriculture movement. Their concerns and criticisms are related to the resulting demand for large-scale production, commercialization in supermarkets, consumption restricted to higher income classes due to high prices, etc. An alternative response would be to hold on to small-scale organic food production and consumption distributed through local markets. However, according to the arguments presented in this chapter, a significant growth of the sustainable food market depends on the inclusion of such products in supermarkets. Among the most important challenges in this respect are the negotiations taking place between producers and the retail sector, and the framing of sustainability in and through shopping practices at the consumption junction of supermarkets. As the quality and quantity of sustainable products on offer increase and consumption is stimulated along with changes in lifestyle patterns, the dynamics of sustainable production may be strengthened, breaking away from the negative projections coming from the organic agriculture movement and opening up more alternatives for green-food production and consumption. Accepting the presence of other strategies in the provisioning of sustainable food, next to and as an alternative to the traditional channels of organic food supply, makes it possible to study the strengths and weaknesses of the different options. This chapter has identified

some of the key indicators for organizing such empirical studies, as well as formulated a wider conceptual framework to guide this research.

## NOTES

1 CCC refers to citizen/consumer demands for 'convenience, comfort and cleanliness' (Shove, 2003).

2 We follow here Goodman's (2003, 2004) presentation of the main arguments around AAFNs.

3 A reply to these criticisms was presented by Van der Ploeg and Renting (2004).

4 As it is done in the many research projects on attitudes and value-orientations of groups of consumers. See Torjusen *et al.* (2004).

5 For example, retailers can choose (not) to establish specific contracts with organic farmers in the region, or submit contracts under specific (favorable) conditions. This can be illustrated using the case of, for example, Brazilian supermarkets. While in some main cities, like São Paulo and Rio de Janeiro, contracts are not different for organic farmers associations, in Florianópolis regional retail chains offer specific conditions, including refrigeration for the exposure of fresh products (Guivant, 2003).

6 Through this perspective we agree on the need to avoid methodological nationalism, which blinds conventional sociology to the multidimensional process of change that has irreversibly transformed the very nature of the social world and the place of states within that world' (Beck and Sznaider, 2006, p. 2).

7 <http://www.nationalgrocers.org/MarketCenter.html#ConsumerSolutions>, April 2003.

8 *Ibid.*

9 <http://www.nationalgrocers.org/NGNaturalFoods.html>

10 Willer and Yussefi (2004), p. 134.

11 *SuperHiper Magazine*, June 2002.

12 In particular, bird flu surfacing in Thailand, as in other countries of Southeast Asia in 2002, caused widespread consumer concerns about the presence of food risks. Publicity about the presence of high quantities of pesticides in food in supermarkets and stalls is another cause for concern.

## REFERENCES AND BIBLIOGRAPHY

- Antoine, J.-M. (1998) *Les aliments fonctionnels: La perspective de l'industrie alimentaire*. Forum sur les aliments fonctionnels. Conseil de l'Europe. Strassbourg, Editions du Conseil de l'Europe: 170.
- Aprilia, A. (2005) *Analysis of Sustainable Food in Bangkok, Thailand: Production, Consumption and Communication*. Environmental Policy Group. Wageningen, Wageningen University. MSc thesis.

- Archer, M. (1982) "Morphogenesis versus structuration: on combining structure and action." *British Journal of Sociology* 33 (4): 455-482.
- Barry, M. (2004) "The symbolic power of 'organic'." *Hartbeat Newsletter* April.
- Bauman, Z. (1993) *Modernity and Ambivalence*. Cambridge, Polity Press.
- Beck, U. (1992) *Risk Society: Towards a New Modernity*. London, Sage Publications.
- Beck, U. and N. Sznaider (2006) "Unpacking cosmopolitanism for the social sciences: a research agenda." *British Journal of Sociology* 57 (1): 1-23.
- Beck, U. and J. Willms (2004) *Conversations with Ulrich Beck*. Cambridge, Polity Press.
- Beck, U., A. Giddens and S. Lash (eds) (1994) *Reflexive Modernization. Politics, Tradition and Aesthetics in the Modern Social Order*. Cambridge, Polity Press.
- Belk, R. W. (1995) Studies in the new consumer behaviour. In: D. Miller (ed.) *Acknowledging Consumption. A Review of New Studies*. New York, Routledge, pp. 58-95.
- Bevan, J. (2005) *Trolley Wars. The Battle of the Supermarkets*. London, Profile Books.
- Boström, M., A. Follesdal, M. Klintman, M. Micheletti and M. P. Sorenson (eds) (2005) *Political Consumerism: its Motivations, Power and Conditions in the Nordic Countries and Elsewhere*. 2nd International Seminar on Political Consumerism. Oslo, TemaNord.
- Bourdieu, P. (1977) *Outline of a Theory of Practice*. Cambridge, Cambridge University Press.
- Castells, M. (1996) *The Rise of the Network Society. Volume 1 of The Information Age: Economy, Society and Culture*. Malden (MA) and Oxford, Blackwell Publishers.
- Dagevos, H., E. van Herpen and M. Cornelis (2005) *Consumptiesamenleving en Consumenten in de Supermarkt. Duurzaam voedselconsumptie in de context van markt en maatschappij*. Wageningen, Wageningen Academic Publishers.
- Dobson, P. W., M. Waterson and S. W. Davies (2003) "The patterns and implications of increasing concentration in European food retailing." *Journal of Agricultural Economics* 54 (1): 111-125.
- Dries, L., T. Reardon and J. F. M. Swinnen (2004) "The rapid rise of supermarkets in Central and Eastern Europe: implications for the agrifood sector and rural development." *Development Policy Review* 22 (5): 525-556.
- ETC Group (2005) Oligopoly, Inc. 2005. *Concentration in Corporate Power*. Communiqué, ETC Group: 18.
- Flynn, A., T. Marsden and E. Smith (2003) "Food regulation and retailing in a new institutional context." *The Political Quarterly* 74 (1): 38-46.
- Giddens, A. (1979) *Central Problems in Social Theory. Action, Structure and Contradiction in Social Analysis*. Berkeley, University of California Press.
- Giddens, A. (1984) *The Constitution of Society. Outline of the Theory of Structuration*. Cambridge, Polity Press.
- Giddens, A. (1990) *The Consequences of Modernity*. Stanford, Stanford University Press.
- Giddens, A. (1991) *Modernity and Self-Identity: Self and Society in Late Modern Age*. Cambridge, Polity Press.

- Goffman, E. (1963) *Behaviour in Public Places*. London, Free Press.
- Goodman, D. (2003) "The quality 'turn' and alternative food practices: reflections and agenda." *Journal of Rural Studies* 19 (1): 1-7.
- Goodman, D. (2004) "Rural Europe redux? Reflections on alternative agro-food networks and paradigm change." *Sociologia Ruralis* 44 (1): 3-16.
- Guillon, F. and F. Willequet (2003) *Les aliments santé: marche porteur ou bulle marketing?* Paris, Armand Collin.
- Guivant, J. (2003) "Os supermercados na oferta de alimentos orgânicos: apelando ao estilo de vida ego-trip." *Ambiente e Sociedade* 6 (2): 63-98.
- Guivant, J., M. Fernanda de A. C. Fonseca, F. Sampaio, V. Ramos and M. Scheiwezer (2003) *Os supermercados e o consumo de frutas, legumes e verduras orgânicos certificados. Relatório final de pesquisa, CNPq projeto 520874/01-3*.
- Guptill, A. and J. L. Wilkins (2002) "Buying into the food system: trends in food retailing in the US and implications for local foods." *Agriculture and Human Values* 19: 30-51.
- Guthman, J. (2002) "Commodified meanings, meaningful commodities: re-thinking production-consumption links through the organic system of provision." *Sociologia Ruralis* 42 (4): 295-311.
- Guthman, J. (2004) "The trouble with 'organic life' in California: a rejoinder to the 'conventionalisation' debate." *Sociologia Ruralis* 44 (3): 301-316.
- Halkier, B. (2001) "Consuming ambivalences. Consumer handling of environmentally related risks." *Journal of Consumer Culture* 1 (2): 205-224.
- Hartman group (2000) *Organic Lifestyle Shopper: Mapping the Journeys of Organic Consumers*. Bellevue, The Hartman Group.
- Laurenceau, M. (2005) *Sustainable Food Consumption and Retailer Strategies in France: A Matter of Quality?* Environmental Policy Group. Wageningen, Wageningen University. MSc thesis.
- Macnaghten, P. (2003) "Embodying the environment in everyday life practices." *The Sociological Review* 51 (1): 63-84.
- Marsden, T., A. Flynn and M. Harrison (2000) *Consuming Interests. The Social Provision of Foods*. London, UCL.
- Micheletti, M. (2003) *Political Virtue and Shopping. Individual, Consumerism, and Collective Action*. New York, Palgrave MacMillan.
- Michelsen, J. (2002) "Recent developments and political acceptance of organic farming in Europe." *Sociologia Ruralis* 41 (1): 3-20.
- Mol, A. P. J. and D. A. Sonnenfeld (eds) (2000), *Ecological Modernization Around the World. Perspectives and Critical Debates*. Ilford, UK, Frank Cass.
- Murcott, A. (1999) "Not Science but PR: GM food and the making of a considered sociology." *Sociological Research Online* 4 (3).
- Neven, D. and T. Reardon (2004) "The rise of Korean supermarkets and the evolution of their horticulture procurement systems." *Development Policy Review* 22 (6): 669-699.
- Oosterveer, P. (2005a) *Global Food Governance*. Wageningen, Wageningen University. PhD thesis.

## Redesigning Natures

- Oosterveer, P. (2005b) "Global regulation of food and consumer involvement: labelling of sustainable fisheries using the Marine Stewardship Council (MSC)." *TemaNord* 517: 339-363.
- Ormond, P. J., S. R. Lima de Paula, P. Favaret Filho and L. Thibau M. da Rocha (2002) *Agricultura Orgânica: Quando o passado é futuro*. Rio de Janeiro, BNDS Setorial.
- OTA (2006) *2006 Manufacturer Survey*. Greenfield, OTA (Organic Trade Association).
- Ponte, S. and P. Gibbon (2005) "Quality standards, conventions and the governance of global value chains." *Economy and Society* 34 (1): 1-31.
- Raynolds, L. T. (2004) "The globalization of organic agro-food networks." *World Development* 32 (5): 725-743.
- Reynolds, J. and C. Cuthbertson (ed.) (2004) *Retail Strategy. The View from the Bridge*. Oxford, Elsevier.
- Richardson, J. (2004) "What's for dinner? Understanding meal fragmentation as a cultural phenomenon." *Heartbeat: Taking the Pulse of the Marketplace*. <http://www.hartman-group.com/products/HB/archives2005.html>
- Richter, T. (2002) *Conceptual Basics for National Standardized Data Gathering Concerning Organic Consumption and Influencing Factors*. 14th IFOAM Organic World Congress, Victoria, Canada.
- Richter, T., O. Schmid, U. Meier, D. Halpin, P. van der Berge and P. Damary (2001) *Marketing Approaches for Organic Products in Supermarkets: Case Studies from Western Europe and the United States of America Conducted in 2000*. Basel, Research Institute of Organic Agriculture.
- Schwartz-Cowan, R. (1987) "The consumption junction: a proposal for research strategies in the sociology of technology." In: W. E. Bijker, T. P. Hughes and T. J. Pinch (eds) *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*. New York, The Guilford Press.
- Seltzer, J. M. (2004) "Natural foods: a natural profit opportunity" *National Grocer Magazine*. <http://www.nationalgrocers.org/NGNaturalFoods.html> (accessed Nov. 2004)
- Seth, A., and G. Randall (2001) *The Grocers. The Rise and Rise of Supermarket Chains*. London, Kogan Page.
- Shove, E. (2003) *Comfort, Cleanliness and Convenience. The Social Organization of Normality*. Oxford, Berg.
- Slater, D. (1997) *Consumer, Culture and Modernity*. London, Polity Press.
- Southerton, D., H. Chappels and B. van Vliet, (eds) (2003) *Sustainable Consumption; the Implications of Changing Infrastructures of Provision*. Cheltenham, Edward Elgar Publishing.
- Spaargaren, G. (2003) "Sustainable consumption: a theoretical and environmental policy perspective." *Society and Natural Resources* 16: 687-701.
- Spaargaren, G., and S. Martens (2005) "Globalisation and the role of citizen-consumers in environmental politics." In: F. Wijen, K. Zoeteman and J. Pieters (eds) *A Handbook of Globalisation and Environmental Policy. National Government Interventions in a Global Arena*. Cheltenham, Edward Elgar Publishing, pp. 211-245.
- Stones, R. (2005) *Structuration Theory*. Houndmills, Basingstoke and New York, Palgrave MacMillan.
- Thompson, C. J. and M. Troester (2002) "Consumer value systems in the age of postmodern fragmentation: the case of the natural health microculture." *Journal of Consumer Research* 28 (4): 550-571.
- Torjusen, H., L. Sangstad, K. O'Doherty Jensen and U. Kjaerness (2004) *European Consumers' Conceptions of Organic Food: A Review of Available Research*. SIFO Professional Report. Oslo, SIFO.
- Van der Grijp, N. M. and F. den Hond (1999) *Green Supply Chain Initiatives in the European Food and Retailing Sector*. Amsterdam, IVM (Institute for Environmental Studies).
- Van der Ploeg, J. D. and Henk Renting (2004) "Behind the 'redux': a rejoinder to David Goodman." *Sociologia Ruralis* 44 (2): 234-242.
- Warde, A. (1994) "Consumers, identity and belonging: reflections on some theses of Zygmunt Bauman." In: R. Keat, N. Whiteley and N. Abercrombie (eds) *The Authority of the Consumer*. London, Routledge, pp. 58-74.
- Warde, A. (1997) *Consumption, Food and Taste. Culinary Antinomies and the Commodity Culture*. London, Sage Publishing.
- Wertheim S. (2005) *Bio-Logisch! In the Eye of the beholder*. Research Report LEI/ WUR, Wageningen, WUR.
- Willer, H., and M. Youssefi (eds) (2004) *The World of Organic Agriculture. Statistics and Emerging Trends, 2004*. Bonn, International Federation of Organic Agriculture Movements.
- Zhang, X., X. Fu and J. Yang (2005) *The Vegetable Supply Chain of Supermarkets in Sichuan, China*. Vegsys Project Report 29. Den Haag, LEI.