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*Consumer risk reflections on organic and local food in Seattle,
with reference to Newcastle upon Tyne*

Bruce Allen Scholten

**Thesis submitted for the Degree of
*Doctor of Philosophy (PhD)***

March 2007



*

18 APR 2008

**'All for ourselves and nothing for other people seems, in every age of the world,
to have been the vile maxim of the masters of mankind.'**
- Adam Smith (1776) *The Wealth of Nations*

ABSTRACT

Consumer risk reflections on organic and local food in Seattle, with reference to Newcastle upon Tyne

Central questions of human geography can be explored in contemporary turns to organic and local foods (Goodman 2003, 2004; Murdoch & Miele 2001). Why do people adapt differently to similar places, or vice-versa? Patterns are emerging in global trends of organic food consumption, such as the correlation of upper education and income levels with organic demand but these indicators do not explain everything, and too little is known on the micro-scale of everyday practices by different types of consumers in different countries (Raynolds 2004; IFOAM 2004). Buck, Getz & Guthman (1997) identified the Bay Area in northern California as one of the most significant centres of organic production and consumption in the US. My study focuses on Seattle and presents evidence that it is an organic growth pole in the same league as San Francisco, because so many Seattleites are concerned with food-related issues including animal welfare, environmental sustainability, social justice and nutrition. These ecotopic attitudes (Callenbach 1975) manifest themselves in behaviours linked to alternative food networks (AFNs), booming farmers' markets - and Puget Consumers Co-op, the largest in the US with 38,000 members and \$93m sales which promotes organic and local foods, preserves farmland, and joined a boycott of organic-industrial milk brands because customers feared violations of USDA 'access to pasture' grazing rules in what I term the organic pasture wars (Pollan 2001; Cornucopia Institute August 10, 2006; USDA 2002; PCC 2006a&b; Scholten 2007e). Personal and family health is part of Seattle's turn to organics, but grassroots resistance to vertical integration in globalising food systems, evidenced by some Greens' vow to go *beyond organic* in USDA organic rules, may be termed altruistic, i.e. marked by care for others and the environment.

Newcastle upon Tyne in the UK is, like Seattle, a former node for coal, steel and ships, but its champions such as Siemens have not been the economic drivers that Boeing and Microsoft have been on Puget Sound. Tyneside's consumption may have less to do with altruism than food scares such as anthropogenically-exacerbated mad cow disease (BSE/vCJD) which raised reflection among rich and poor, and induced vegetarianism in many young women (Whatmore 2002; Atkins & Bowler 2001). Foot and mouth disease, which spread from Newcastle in 2001, exacerbated doubts on food safety, and drove a turn to natural foods. Thus, while Newcastle is not claimed to be the equivalent of Seattle, both post-fordist cities host *similar actors*, often women, whose geographical imaginations transcend political economy (Marsden, Munton & Ward 1996). Ironically fieldwork was completed shortly before discovery of BSE near Seattle in 2003. The thesis brings risk theory into discussion of food. Its theoretical touchstone is the risk society thesis of Beck (1986) and Beck, Giddens & Lash (1994), attended by insights of Mary Douglas (1996) and Deborah Lupton (1999). Methodology includes interviews, focus groups and questionnaires from 404 UK/US respondents. Snowball sampling (Atkinson & Flint 2001) targeted groups in a range of stereotyped relationships to risks:

- Academics: stereotypically risk-averse, undergraduates to professors, teachers & educators;
- Firefighters: variably risk-embracing, or managing risk for career advancement' (Lupton, 1999: 156);
- Motorcyclists: risk-embracing 'edgeworkers' justifying risk in work or hobbies (Lyng, 1990: 859);
- Others: not fitting above groups, e.g. academic bikers, or motos with higher degrees if also teachers.

Key claims are that Newcastle's organic use (three-times that found in Edinburgh a decade before) is on a continuum toward Seattle which has better prices and availability - evidence that the organic diet can be multi-ethnically democratic and not limited to elites (Tregear *et al.* 1997; Goodman 2004; Hartman 2004; Scholten 2006a & b). After a BSE scare, consumers often flirt with organics from afar before returning to conventional diets. But repeated scares may permanently dislodge the commodity fetish of industrial food, and as consumers' knowledge grows, more of them adopt food from trusted local farmers which better satisfies values such as health, local economic security, and ecological sustainability (Caplan 2000; Winter 2003). Seattle's political power as an organic pole is world class, but Newcastle also shows ethical strengths in AFNs and fair trade. In the new bio-fuel boom Seattle and Newcastle can learn from each other to resolve global issues such as food miles.

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Bruce A. Scholten 2007

GLOSSARY of ACRONYMS, ABBREVIATIONS & KEY TERMS

- AAG Association of American Geographers
- AFE alternative farm enterprise
- AFN alternative food network
- AAFN alternative agro-food networks
- ANT actor network theory
- Anthropogenic risk: from human-made causes involving great uncertainty, e.g. GM foods
- B or b billion
- BRD Bundesrepublik Deutschland or Federal Republic of Germany
- BSE Bovine Spongiform Encephalopathy, *aka* mad cow disease, the bovine TSE.
- BGH Bovine Growth Hormone stimulates milk production; GM version is rBGH or rBST
- BST Bovine Somatotropin, a natural hormone which stimulates milk production in bovines; the acronym for the GM, or recombinant, hormone is rBGH or rBST
- Ca. circa; approximately. Alternately: *c.*
- CUP Cambridge University Press
- CASFS (at UCSC) Centre for Agroecology and Sustainable Food System, UC Santa Cruz.
- CROPP Cooperative Regions of Organic Producer Pools, *aka* Organic Valley
- CSA Community Supported Agriculture
- DBV Deutsche Bauernverband, *aka* German Farmers Union
- DEFRA Department for the Environment, Food and Rural Affairs (UK)
- EPA Environmental Protection Agency (US)
- EU European Union
- FAO The Food and Agriculture Organisation FAO
- FDA Food and Drug Administration (US)
- FiBL Forschungs Institut für Organische Landwirtschaft (BRD/FRG); see SOEL
- FM farmers' market
- GATT General Agreement on Tariffs and Trade preceded the WTO
- GM, GMO genetic-modification, genetically-modified organism
- Hazard: dangers such as earthquakes or radiation not linked to human causes
- IFOAM International Federation of Organic Agriculture Movements
- IMF International Monetary Fund
- IPM integrated pest management
- MAFF Ministry of Agriculture, Fisheries and Food
- MBM meat-and-bone-meal
- NE Northeast, as in North East England

NFU National Farmers Union, acronym for the UK and US organisations

NGO Non-Government Organisation, *aka* non-profit organisation, or charity

NOP Northumbria Organic Producers, established 2000

NOP National Organic Program established by USDA in 2002

NOSB National Organic Standards Board, advisory body autonomous from USDA NOP

NSA nitrate sensitive areas (in the UK)

NY, NYC New York or New York City

OCA Organic Consumers Association; see IFOAM

OGA other gainful activities

OTA Organic Trade Organisation; see IFOAM

OUP Oxford University Press

PCC Puget Consumers Cooperative *aka* PCC Natural Markets supermarkets around Seattle

PDO protected designation of origin (in the EU)

PGI protected geographical indication (in the EU)

PNW Pacific Northwest of the US, i.e. Washington, Oregon, Idaho & British Columbia

Pers. Com. personal communication; noted in text not bibliography

QUANGO Quasi Non-Government Organisation

Risk e.g. cancer and car crashes calculable in large populations, but see anthropogenic risk

RGS-IBG Royal Geography Society–Institute of British Geographers

rBGH recombinant Bovine Growth Hormone, a GM dairy hormone

rBST recombinant Bovine Somatotropin (or -trophin) a GM dairy hormone

SFC short food chain

SPM Sanitary and Phytosanitary Measures

TSE transmissible spongiform encephalopathy, a form of prion diseases, e.g. BSE/vCJD

TSG traditional speciality guaranteed (in the EU)

UCSC University of California at Santa Cruz; see CASFS

Uncertainty: risks difficult to calculate due to lack of information

USDA United States Department of Agriculture

URAA Uruguay Round Agricultural Agreement; brought farming into the GATT in 1994

UW University of Washington based in Seattle

vCJD variant Creutzfeldt-Jakob Disease, the human form of mad cow disease (BSE).

WB World Bank

WTO World Trade Organisation, superseded the GATT in 1995

WW I; WW II World War One and World War Two

TABLE of CONTENTS

Abstract	iii
Acknowledgements	iv
Glossary	vi
Table of Contents	viii
List of Maps	x
List of Tables	xi
List of Figures	xi
<i>All photo credits to Scholten (aka BAS) unless other copyright noted.</i>	

CHAPTER 1 INTRODUCTION TO SEATTLE, WASHINGTON **1**

and Newcastle upon Tyne – at the sustainability crossroads

Introduction & research questions.	2
View from above.	6
Washington on the puzzle map.	8
Environmental crossroads.	14
Newcastle upon Tyne.	18
Sustainability crossroads.	21
NEWS: the Sustainability Compass.	23
Food wars in Newcastle and Seattle.	26

CHAPTER 2 LITERATURE & THEORY REVIEW **30**

From Eat more! rationality to Eat less! reflection

Reliability of books and websites.	32
Post-productivist transition.	34
Embeddedness, ethnicity & literacy in Seattle.	43
Trust & risk in Ludwigshafen & Seattle.	53
Risk defined personally.	53
Agricultural geography to geography of food.	57
Failures of pol-econ.	63
Location Theory to Harvey & Beyond.	67
Hazard, Risk & Uncertainty: practical definitions.	68
Conservation vs. Sustainability.	69
Tim Lang's food wars & health.	75
Post-productivism the era of reflexive consumption?	76
Earth Day 1970 to present.	80
Multifunctionality regulated by the EU & beyond?	83
Conclusions.	88

CHAPTER 3 ALTERNATIVE FOOD NETWORKS NEAR SEATTLE 97***– and Newcastle upon Tyne***

Alternative food networks: definitions & discussion.	98
Conventional agriculture.	104
Food wars in Newcastle and Seattle.	107
Labour: flexible specialisation in Newcastle and Seattle.	114
Parma epiphany.	116
Case studies of AFNs in Seattle and Newcastle.	117
US Small-Organic (<\$50k gross income annually).	121
US Family-Organic (<\$250k).	124
US Industrial-Organic (>\$250,000).	129
UK Small-Organic (<\$50k gross income annually).	134
UK Family-Organic (<\$250k).	137
UK Industrial-Organic (>£125,000/\$250,000).	140
Conclusions.	145

CHAPTER 4 DIRTY COWS 147***BSE/vCJD as a lens on risk & uncertainty***

Mary Douglas, risk, dirt and BSE.	149
Hugh Pennington & uncertainty.	153
Consumers, BSE and responses to risk.	159
Conventional views of BSE.	165
Lupton applied to mad cow BBQs.	167
Conclusions.	168

CHAPTER 5 METHODOLOGY IN THIS STUDY 170***of consumer reflection on organic food and risk***

Background	172
Topic & case study selection.	175
Site selection.	176
Quantitative methods.	179
Research questions.	180
Cognitive dissonance in attitudes & behaviour.	182
Gatekeepers & recruitment.	182
Questionnaire pilots & response.	185
Avoiding test bias.	186
Risks in the food system?	186
Closed or open questions?	186
Media questions.	187
Redundant & distracter questions.	187
Coding GM, Bt, Org, Loc & Risk.	188
Qualitative, ethnographic & photographic methods.	194
Target groups, sampling frame & snowballing.	196
Sub-groups: Academics, Firefighters, Motorcyclists, and Others.	198
Photography.	199
Conclusions.	198

CHAPTER 6 CONSUMER SURVEY QUANTITATIVE DATA **204*****risk perceptions of BSE, organic and local food***

Data and analysis.	205
Q1: Do you eat organic food?	205
Q2: Do you prefer organic or local food?	208
Q3: Did you and/or your family/household dine on organics yesterday?	217
Q4: Did you serve organics to guests at your last home meal?	221
Q5: Is BSE/vCJD in your top food risks?	225
Conclusions.	227

CHAPTER 7 CONSUMER QUALITATIVE DATA ANALYSIS **230*****acad, fire, moto & other risk perceptions of BSE & organic and local food***

Focus groups.	234
Academics' profile & qualitative data.	234
Firefighters' profile & qualitative data.	244
Motorcyclists' profile & qualitative data.	249
Automobility to motomobility.	251
Others qualitative data and analysis.	261
Conclusions on all qualitative data.	265

CHAPTER 8 CONCLUSIONS **267*****on AFNs and risk***

Seattle and Newcastle in the study.	269
Routes to findings.	271
Pasture and food vs. fuel in future work.	275

BIBLIOGRAPHY **276****LIST OF MAPS**

Map 3.1. 2004 P-Patches in Seattle.	109
Map 3.2. Allotment gardens in Newcastle.	110
Map 5.1. Newcastle on the North Sea.	203
Map 5.2. Seattle on Puget Sound.	203

LIST OF TABLES

Table 1.1. Most literate cities in US.	10
Table 2.1. Binaries of structure & agency.	71
Table 3.1. Pretty <i>et al.</i> (2005) Sustainability gains from organics.	100
Table 3.2. Alternative farm & firm scale Seattle 2002-6.	119
Table 3.3. Alternative farm & firm scale Newcastle 2002-6.	120
Table 3.4. Ken & Jenny's conversion.	126
Table 4.1. BSE safeguards in US & Canada.	156
Table 4.2. Chronology of BSE in the UK, US, etc.	158
Table 5.1. Original Research Timetable (part-time).	201
Table 6.1a. Eat organic food, unisex.	206
Table 6.1b. Eat organic food, gendered.	206
Table 6.2a. Organic, local, or equal/no preference, unisex, est'd.	209
Table 6.2b. Organic, local or equal/no pref, gendered, est'd, stated.	210
Table 6.3a. Family/house ate organics yesterday, unisex.	217
Table 6.3b. Family/household ate organics yesterday, gendered.	217
Table 6.4a. Guests served organics at last home meal, unisex.	221
Table 6.4b. Guests served organics at last home meal, gendered.	221
Table 6.5a. BSE/vCJD in top food risks, unisex.	225
Table 6.5b. BSE/vCJD in top food risks, gendered.	225
Table 7.1. Bourdieu's furniture spectrum by applied to food.	237

LIST OF FIGURES: Illustrations, maps & photos

All photo credits to Scholten (aka BAS) unless other copyright noted.

Figure 1.1. Seattle Pike Place Public Farmers' Market.	1
Figure 1.2. NE England organic beef at Hexham.	1
Figure 1.3. Old icons on Washington's map	8
Figure 1.4. La Conner on Puget Sound.	12
Figure 1.5. Ferry crossing Puget Sound with Mt. Baker behind.	13
Figure 1.6. Mt. Rainier from Gig Harbor.	13
Figure 1.7. PCC Farmland Trust before the flood.	14
Figure 1.8. PCC farm after the flood.	14
Figure 1.9. Woody Guthrie's Grand Coulee Dam.	15
Figure 1.10. Interstate-5 traffic in Seattle.	17
Figure 1.11. Down in Dreamsville – US homeless.	17
Figure 1.12. Tyneside from Castle Keep.	19
Figure 1.13. Tyne & Wear Metrotrain.	20
Figure 1.14. Sustainability Compass.	23
Figure 1.15. New icons on Washington's map.	27
Figure 2.1. Local conversion to global chains; Hispanic labour helps.	30
Figure 2.2. Northumbrian Organic Producers (NOP 2000) launch.	30
Figure 2.3a. Ethnic Make-up 2000.	49
Figure 2.3b. Ethnic Make-up 2000 Statistics.	49
Figure 2.4. Asian Indian Population growing fast.	51
Figure 2.5. Asians in Washington Pie Chart.	52
Figure 2.6 Organic Farm Gender Scale 2002-4.	66

Figure 2.8. Brandt on tech transfer transfer.	87
Figure 2.9. Climate activists in Hamburg 1988.	87
Figure 2.10. Biodynamic farmer fingers soil.	94
Figure 3.1. Organic pioneer Betty studied biology.	97
Figure 3.2. Organic pioneers contest globalisation out of boxes.	97
Figure 3.3. Pike Place Farmers' Market, Seattle.	109
Figure 3.4. USDA Farm Typology.	118
Figure 3.5. Dandelion stand in West Seattle market.	122
Figure 3.6. Hi-Skies plant starts at Snohomish market.	123
Figure 3.7. Organic pioneers in Whatcom County.	124
Figure 3.8. Dutch-American cheese-makers in Lynden.	125
Figure 3.9. Ken & Jenny's farm.	128
Figure 3.10. Sam and Wife Cheese shop.	128
Figure 3.11. Tracy Miedema at Cascadian.	130
Figure 3.12. Gene Kahn, founder Cascadian.	130
Figure 3.13. Cascadian Farm, Small Planet & Muir Glen offices.	130
Figure 3.14. Goldie Caughlan of PCC.	132
Figure 3.15. Greenlake PCC.	132
Figure 3.16. Dean-Horizon's global happy cow logo.	132
Figure 3.17. MOM's Meats barn dance in Teesdale.	135
Figure 3.18. Durham activists toast Slow Food.	137
Figure 3.19. Fred on Cuthbert's box scheme.	139
Figure 3.20. Out of this World supermarket.	140
Figure 3.21. Jon Walker of OotW.	140
Figure 3.22. Slow Food Durham & Waitrose manager.	141
Figure 3.23. Whole Foods US & UK.	142
Figure 3.24. WF showcases food.	142
Figure 3.25. Cheerios by General Mills.	143
Figure 3.26. Rachel's Organic Yogurt logo on Horizon milk.	144
Figure 3.27. Rachel's Organic Yogurt expanding in 2002.	145
Figure 3.28. Organic industry structure: top 25 (Howard 2007).	146
Figure 4.1. A spectre haunts America: obesity.	147
Figure 4.2. UK beef cattle on grass were virtually BSE-free.	147
Figure 4.3. BSE-clean dairy cows.	150
Figure 4.4. Response to expert and media reports of BSE risks.	152
Figure 4.5. BSE cases 100 adult cattle/sq. km. on the UK map.	154
Figure 4.6. BSE on the PNW map in 2003.	155
Figure 4.7. BSE on the North American map 2003-2005.	156
Figure 4.8. UK/US fear of BSE/vCJD.	163
Figure 4.9. Nature & food paradigms group/grid (after Douglas).	169
Figure 5.1. Chris Curtis of Seattle NFMA.	170
Figure 5.2. Academic focus group near Newcastle.	170
Figure 5.3a&b. North East UK 2002-3 Food & Risk Survey.	190
Figure 5.4a&b. Seattle Food & Risk Survey 2003.	192
Figure 6.1a. Eat organic food, unisex.	206
Figure 6.1b. Eat organic food, gendered.	207
Figure 6.2a. Organic, local, or equal preference, unisex, estimated.	211
Figure 6.2b. Organic, local, or equal preference, unisex, stated.	212
Figure 6.2c. Organic, local, or equal preference, gendered, estimated	214
Figure 6.2d. Organic, local, or equal preference, gendered, stated.	215

Figure 6.3a. Family/household ate organics yesterday, unisex.	217
Figure 6.3b. Family/household ate organics yesterday, gendered.	218
Figure 6.4a. Guests served organics at last home meal, unisex.	221
Figure 6.4b. Guests served organics at last home meal, gendered.	222
Figure 6.5a. BSE/vCJD in top food risks, unisex.	225
Figure 6.5b. BSE/vCJD in top food risks, gendered.	226
Figure 7.1. Seattle Pike Place farmers' market.	230
Figure 7.2. Organic, local and place-linked cheese at Durham market.	230
Figure 7.3. Focus Group questions.	232
Figure 7.4. UK academic barbecue.	234
Figure 7.5. Academics toast as Seattle rain begins.	234
Figure 7.6. Organics in the Ivory Tower?	242
Figure 7.7. Newcastle fire emergency.	244
Figure 7.8. Seattle smoke-eaters like gardens.	244
Figure 7.9a&b&c. Scuba-like gear helps firefighters manage risk.	245
Figure 7.10. Fires near Seattle grab a brownie.	247
Figure 7.11. US cruisers are like Cadillacs.	249
Figure 7.12. UK semi-pro roadracers.	249
Figure 7.13. Cows & Kawasakis in NE Thailand.	250
Figure 7.14. Motobility in Bangkok.	250
Figure 7.15. Horse show in NE England.	252
Figure 7.16. Moto fans at Donington Park.	252
Figure 7.17. Royal equestrian.	253
Figures 7.18a, b, c. <i>Pssst!</i> These motorcycles are dangerous!	257
Figure 7.19. Newcastle woman respondent likes her Harley.	258
Figure 7.20. Function follows form: <i>American Chopper</i> .	258
Figure 7.21. Seattle International Raceway.	260
Figure 7.22. Box scheme, County Durham.	261
Figure 7.23. Seward Park Seattle PCC.	261
Figure 7.24. Newcastle University Nafferton Farm open day.	262
Figure 7.25. Parents and kids tour Newcastle.	262
Figure 7.26. Slow Food Durham launched 2006.	262
Figure 7.27. Seattle Pike Place Farmers' Market.	263
Figure 7.28. Women, Infants & Children (WIC) coupons = cash.	263
Figure 7.29. Seattle farmers' markets lend red wagons for kids.	263
Figure 7.30. Worlds of Milk Production: Pasture or CAFOs?	266
Figure 8.1. Buzzwords at Seattle area farmers' markets.	267
Figure 8.2. Slow Food convivium in Durham in fall 2006.	267
Figure 8.3. In the 1980s this Magnolia Seattle supermarket...	268
Figure 8.4. Fresh fruit & veg.	268
Figure 8.5. Friendly fishmonger.	268
Figure 8.6. Seattle World's Fair.	269
Figure 8.7. Newcastle's Castle Keep.	269
Figure 8.8. Starbucks at Pike Place Farmers' Market (Starbucks 1971).	270
Figure 8.9. Gospel singers at Starbucks in 2002.	270
Figure 8.10. Newcastle restaurateur Bill Oldfield.	273
Figure 8.11. Seattle chef Tom Douglas.	273



Figure 1.1. Seattle Pike Place Public Farmers' Market, established 1907. The state plays a role in facilitating alternative food networks (AFNs).



Figure 1.2. NE England organic beef at Hexham. Farmers' markets rebounded in the 1990s.



CHAPTER 1: INTRODUCTION TO SEATTLE, WASHINGTON – *and Newcastle upon Tyne – at the sustainability crossroads*



Introduction & research questions

What are the most sustainable ways to satisfy all the expectations we have of food chains? This question encapsulates the reflections that prompted this research thesis. The answer is not simple, because desires vary so much among and within consumers. Some of the more prosaic historic, political and economic background of this study is explained here, with reasons for my turn from research in food production to consumption, in a series of livestock epizootics. The first section of this introductory chapter culminates by listing general questions devised by me in the context of an academic turn to consumption research, and finally lists the set of five most salient and quantifiable questions from my UK/US Food & Risk Survey, along with the two guiding themes for my qualitative work. The chapter then describes the fieldsites and their positions in the post-productivist agricultural transition (Lowe *et al.* 1993), in which the phrase *food wars* (Lang & Heasman 2004) hardly exaggerates potential risks for animals, family farms, sustainability of rural and urban places, environmental sustainability, and perhaps climate.

Triggers to this transition include advances in transport and communications that propel globalisation, and the ‘growth of supranational scales of governance such as the European Union, NAFTA, and the WTO’ (Morgan, Marsden & Murdoch 2006: 195). As drivers of horizontal and vertical integration of food systems, such loci of power are important to actors in food systems because they are basic to the structural problems they face. One example is the fall in the past century of real farmgate prices, a trend linked to a loss of regional political-economic logic in farming so dramatic that Peter J. Atkins (1988: 282, 281-3) called for ‘the end of agricultural geography and the dawn of a “geography of food”’.

WW I and WW II increased UK and US rural incomes before peace time brought recessions (Short, Watkins & Martin 2007). After WW II, the US and Europe tried to protect their own farmers, often inducing dependency in developing countries via food aid or outright dumping

(Scholten 1997; Stiglitz 2002). Laissez-faire economists such as Jagdish Bhagwati (*Economist* June 20, 2002; see also Hoekman & Kostecki 1995) joined criticism of rich country protectionism, which crescendoed in the 1994/5 Uruguay Round Agricultural Agreement (URAA) when world farm subsidies, tariffs and trade were finally brought under the old GATT and new WTO. Sadly, the results were so lacklustre in bringing relief to poor country farm exporters that the Doha Round remained stalled in 2007. But another aspect of the URAA became controversial: Trade Related Intellectual Property rights. Even the the *Economist*, a free trade bastion, printed editorials admitting that the Third World was out-negotiated on TRIPs in farming and pharmaceuticals, and 'the agreement put producers' interests over users' according to economist Joseph Stiglitz (2002: 245). Soon it was apparent that many First World farmers and consumers also perceived real livelihood, social, nutritional and environmental problems from the supranational protections extended to the private developers and purveyors of genetically-modified (GM) crops and livestock hormones. When Monsanto's dairy hormone rBGH/rBST was approved for public use in the US in 1994, it seemed the GM juggernaut could not be stopped. For awhile I considered investigating UK farmers' attitudes to growing GM crops but much academic work was already being done on this, and eventually the UK government softened its pro-GM stance.

A promising research path was suggested by place-linked foods and less-intensive farming in Europe (Ilbery & Kneafsey 1999). There existed a globally-based geographical imaginary of those determined to circumvent agribusiness risks and uncertainties by adoption of organic methods, in a turn to nature and organics (Murdoch & Miele 1999). Agribusiness was implicated in the overuse of antibiotics in confined animal feeding operations (CAFOs), leading to ineffectiveness of human drugs, the spread of infections such as MRSA in hospitals, and damage to water supplies and aquatic life. Morgan *et al.* (2006) write that the UK's large, intensive farm structures reflect those of the US and both countries experienced a similar litany of food scares. But the UK became notorious as the site where mad cow disease crossed to humans, hence BSE/vCJD (Pennington 2000, 2006).

Contributors to the agricultural press including myself (Scholten 1989c) hypothesised that organic farm and dairy networks such as those in Germany could return some struggling family-scale farms to profitability. In the US, New Deal farm programmes such as *parity* had given way to the Reagan-Bush administration's preference for free markets, leading to rejection of pleas for a US version of EU milk quotas called *production management* by groups including the Washington State Dairy Federation (Morgan *et al.* 2006; Scholten

1989c&d, 1990d, 1997b; pers. com. with WSDF president). Farm bankruptcies in the 1980s, spawned by falling farmgate prices, raised consumer alarm through Farm-Aid benefits led by Texan Willie Nelson, Canadian Neil Young, sometime Seattleite David Matthews and others. Farmers organised organic cooperatives such as CROPP (est. 1988), and worked with legislatures and consumer groups to organise urban farmers' markets (Merrill 2005). But if farmers were bold enough to produce and market organic and local foods, serious questions remained about consumer demand. Would consumers adopt non-conventional foods in the US, where people seem more concerned with obesity, compared to the UK where animal welfare had higher priority (Scholten 1990c, 1995)? Organic farmers, environmentalists and movements such as Slow Food claimed family-scale production precluded many food-borne diseases such as BSE, so it seemed worthwhile to investigate UK/US farm-to-table food chains in new alternative food networks. It was a propitious time to begin study of organics, shortly before the USDA initiated its National Organic Programme (2002). Alas, the NOP's honeymoon was brief. Greens warned that agribusiness dominated the organic niche, adding unsustainabilities into industrial-organic food in a process called organic conventionalisation (Guthman 2004). Researching the gap between attitudes and behaviour, Padel & Foster (2005: 624) urged work on the 'potentially conflicting values of local and organic food.' Food miles became the buzz-phrase of *locovores*, and *local* was the new organic.

However nature intervened when I was making plans to study trends in farm production. Five years after the UK government admitted the BSE/vCJD link, foot-and-mouth disease (FMD) put a pall on the UK countryside in early 2001. As a son of farmers, the prospect of interviewing farmers traumatised by government slaughter of their herds was anathema, so I left that task to others. Meanwhile, the ERSC (2001) Cultures of Consumption research agenda highlighted consumption, and work by other academics was likely to add knowledge synergistic with my findings. Significantly, a focus of my study was alternative food networks (AFNs), whose great departure from productivism is to shorten food chains, and connect rural farmers and urban consumers in frequent face-to-face encounters. While developing a methodology for such a study, post-productivist literature suggested these questions (see also Chapters 5 and 6):

- How much do age, class, ethnicity, gender, income or life course affect consumption?
- To what extent do media, friends, and government experts inform consumption?
- Why do consumers in Seattle seem more adventurous than those in Newcastle?
- How universal are consumption attitudes/behaviours, or cognitive dissonance?
- How much, if at all, is food risk-awareness linked to class, profession or pastime?

Considering time and resources, I determined that I could find answers to some of the above questions, and assess how receptive markets were to organic and local foods, by constructing a quantifiable survey for a range of consumers, asking questions such as:

- Do you eat organic food?
- Do you prefer organic or local food?
- Did you or your family/household eat organics yesterday?
- Did you serve organics to guests at your last home meal?
- Is BSE/vCJD in your top food risks?

In ethnography and qualitative work, individuals and groups would address these themes:

- Are we citizens or consumers? Have farmers' markets and organics improved life?
- Are we optimistic about the environment on local to global scales in 10-20-30 years?

This thesis did not set out to answer questions on social justice, some of which are being addressed by researchers such as Guthman (forthcoming). But, as we will see, the research outcomes taught me much about social movements, bringing Newcastle and Seattle into sharper relief than before, despite decades of acquaintance with both. There was relief in concluding that, at least for a generation, many organic farmers can earn sustainable livelihoods. Organicists have even won significant battles against corporate agribusiness in what I call the USDA organic pasture wars, and they have successfully demanded that supermarkets offer rBGH/rBST-free milk (Scholten 2006a&b and forthcoming). The research unearthed a few organic farmers whose main interest is supplying the rich. This attitude is understandable, but undemocratic, feeding dread that organics are only for elites as feared by David Goodman (2004). My big surprise was finding evidence that in working class Newcastle, as well as in richer Seattle, organics have democratic appeal, which can enable healthier consumption as availability and price improve.

Seattle was the metropolitan nexus of AFNs in Puget Sound, Washington State and the Pacific Northwest (PNW) from Portland, Oregon to Vancouver, Canada. Puget Consumers Cooperative (PCC) in Seattle was intrinsic to the growth of major organics brands such as Cascadian Farm, and actors in the region led development of USDA NOP standards. This seemingly ecotopic milieu begged study – while Newcastle, experiencing its own AFN boom, served as a comparator (Please see Newcastle and Seattle area maps in Chapter 5.) Now let us explore the fieldsites.

View from above

It is tempting to apply Julius Caesar's description of Gaul to our principal study area: *Cascadia in tres partes diversa est*. Washington State is divided into three parts: water, mountains and desert. The Cascade Mountains separate the rainy western strip from the arid east. To the west of Seattle, the salty Pacific Ocean laps around Washington's Olympic Peninsula, flowing through the Straits of Juan de Fuca which separate the peninsula from Canada's Vancouver Island. To the east desert – less than a century ago it was inscribed on school textbook maps as part of The Great American Desert – is rent by the Columbia River coursing out of Canada's province of British Columbia, demarcating much of eastern Washington from the State of Idaho to the east, and forming the border with Oregon to the south, before pouring into the Pacific Ocean at Astoria. Basic to this dynamic of sea and desert is the Cascade Range extending from the 49th parallel on the border with Canada toward Oregon and California (see Wahl 2001: 2).

One can walk the Cascades on the 1500 mile Pacific Crest trail from Canada to Mexico. A friend of mine did, years ago. Another contents himself with weeks of pack horsing with wife and family - but only in the summer, for in winter the Cascades usually fill with snow (in the 1990s Mt. Baker north of Seattle bore a chilly crown of 150 feet (44m) of snowpack). The Cascades return rainfall to the sea, sometimes destroying crops in intermittent floods of minerals over the banks of rivers and creeks (Figures 1.7 and 1.8 below). From their north-south spine flow the Nooksack River in Whatcom County on the Canadian border, the Skagit, Snohomish, Snoqualmie and Stillaguamish rivers farther south. Before the dams of 20th century modernity, these rivers were so rich in salmon that they helped sustain perhaps the world's only permanently-situated culture of hunter-gatherers (Atkins *et al.* 1998). This land of plenty was too good to resist. Explorers from the Russian, British and early US empires sought hegemony in the region. The inland salt sea that came to be dominated by Seattle was named Puget Sound after Peter Puget, an officer with Captain Vancouver whose nautical explorations were later popularised on KOMO-TV children's show *Captain Puget*, along with tales of overland pioneers (Meany 1957; Jones 1959; Barcott 1994). The 1804-1806 Lewis and Clark expedition presaged a trickle of immigrants from New England over what became the Oregon Trail, incipient artery of Manifest Destiny. As trickles do, it became a flood. Where Native Americans saw salmon, Euro-American settlers saw water power. Where indigenous people saw hills east of Lake Washington, the incomers found coal and named their city Newcastle after its namesake in England. Newcastle, Washington was a rail, timber and coal nexus (13 million tonnes coal were shipped as far as San Francisco,

1959-1963; see City of Newcastle, Wash., US 2006), that helped turn Seattle into a major port. Where aborigines saw forests, immigrants saw lumber. Douglas fir grew over 200 feet in the Cascades; cedar topped 500 in the Olympic Peninsula rain forest where one still sees trees 300 feet tall. The woods were turned into barns, houses, post offices, shops and into the panelling of courthouses, government offices, and mansions for prospering settlers – stations of the continental crossing analysed in Frederick Jackson Turner's historic (1893) essay on the significance of the American frontier. It's doubtful whether Chief Sealth, the namesake of Seattle, ever heard of Turner and his five stages of the frontier. But he probably understood them well. Historian Roger Sale (1978: 28-29), declares, 'Sealth did not in the least like having the city of the white people named after him'. It is unlikely Sealth uttered the more maudlin sentiments attributed to him by environmentalists on Earth Days since 1970 (Clark 1985: 58-65; Johansson 2001). The treaties he signed with representatives of the US government, apportioning land and jurisdiction between settlers and sovereign aboriginal nations, signified a relatively peaceful era of coexistence for indigenous peoples and new incomers, perhaps 10 millennia into the holocene (www.suquamish.nsn.us/; Downey 2002). He knew the days of the longhouse – characteristic of Native American cultures from the Haida in British Columbia to the Nootka around Puget Sound – were numbered. Most 'Indians' were soon sequestered on reservations outside the new city of Seattle. Now, most houses would be built with metal not wooden nails.

Is it accurate to see Chief Sealth, head of the Suquamish Tribe, as Seattle's first and foremost environmentalist? Perhaps. Statements reliably attributed to him sense the sounds and smells of industry wafting from the docks, skid roads (Seattle coined the term), and sawmills that filled ships (see Barcott 1994: 70-73). News of the 1849 Gold Rush in California was probably as loud as the oaths uttered on European barricades of 1848 (Hobsbawm 1962). The 1898 Alaskan gold rush dramatised by writer Jack London faded into the fool's gold of a jobless proletariat. Soon, unionist Wobblies would come to establish a brief Soviet in 1919 (Crowley 2001), and represent Starbucks coffee baristas after the millennium (IWW 2006). But that was to come later. When Chief Sealth signed treaties with the incomers, optimists saw Puget Sound as a cornucopia for natives and settlers alike. At that time there was less commercial interest in arid, pre-irrigation eastern Washington, and the mountains of the Olympic Peninsula seemed remote to Seattleites on Puget Sound (LeWarne 1975). But everywhere settlers lauded the bounty of fish in the waters, the fertility of the land, and the power of nature to regenerate itself after flood, fire and human extraction.

Washington on the puzzle map

The hub of marine and business activity became Seattle, despite its rivalry with Tacoma to the south, and the lumber towns of Everett, and Bellingham (named for a crewman on Captain Vancouver's *Discovery*, likely born in the Northumbrian town; see Meany 1957) to the north. Until the Boeing aircraft company began producing high-technology products on Seattle's minor Duwamish River after WW I, a child's jigsaw puzzle map of the state's geography carried icons of the state's most valued products.

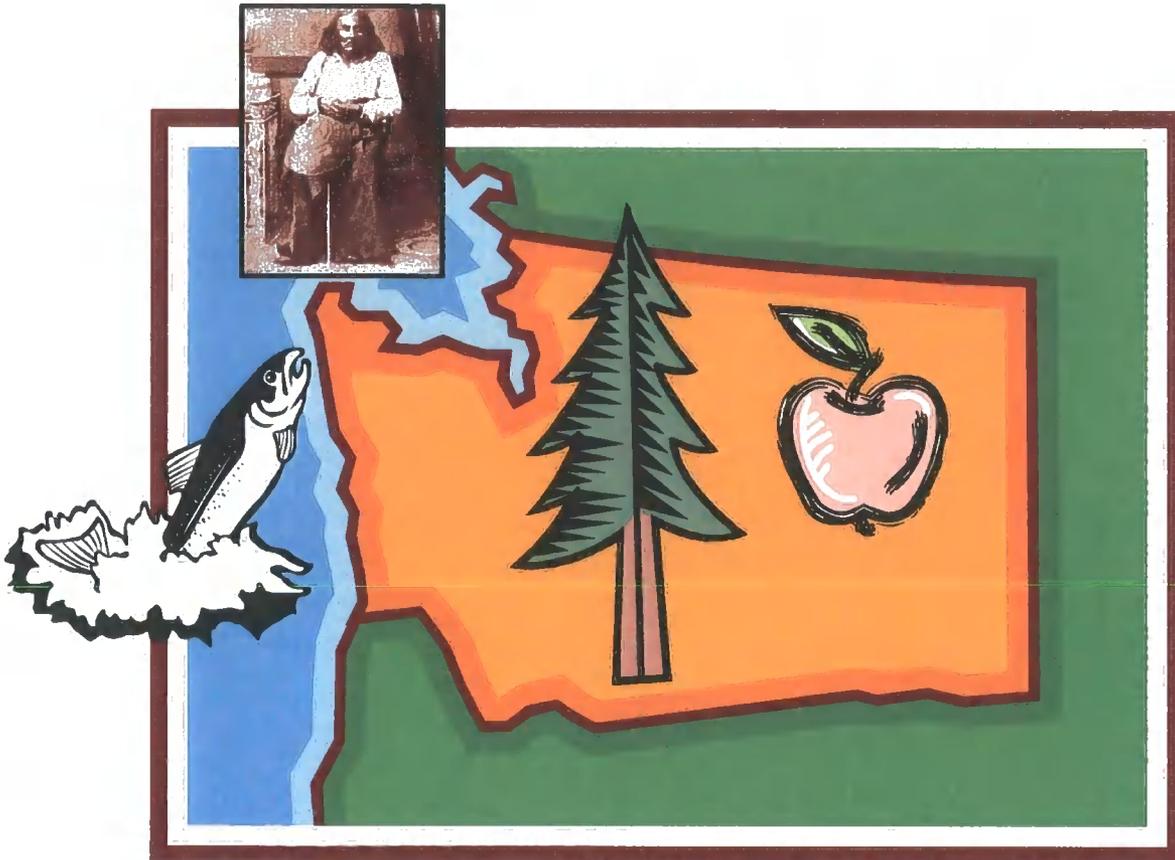


Figure 1.3. Old icons on Washington's map: fish, fruit, lumber, Chief Sealth.

The first would be a tree. In those days, more of New England was committed to farms than forest, and eastern builders preferred PNW Douglas Fir over the softer pines of southeast savannahs for load-bearing posts, beams, floor joists and rafters. The second symbol would be an apple, for fruit grew well east of the Cascades (Jarosz & Qazi 2000) in spots such as Quincy, wrested by irrigation from desert or range land. Naturally the third icon was a salmon, the staple of aboriginal and settler feasts. As the child held the puzzle pieces of Washington, the tree would lie on the Cascades running east of the Sound. The apple would lie east of the Cascades between Wenatchee and Walla Walla in the Columbia basin.

The salmon is prized as a fighting fish by sports fishermen, and fine dining by just about every Washingtonian. On the child's map, a salmon might jump out of the Pacific Ocean where rivers such as the Quinault, Queets and Hoh remain relatively salmon-friendly (despite intensive logging) due to conservation by the Native American tribes which named them. According to the seasons and other factors, salmon migrate between the Pacific and Puget Sound where Seattle lies halfway down the eastern coast. Salmon was the ace up many a failed gold miner's sleeve, and fishing became one foundation of Seattle's economy, just as cod, now an endangered fish, brought New England to prosperity and revolt against Britain (Kurlansky 1998). As the Alaskan Klondike turned into ghost towns, Washington's economy came to rest on fish, trees and fruit – industries relying on cheap manual labour.

Like other settlers on the frontier, many Puget Sound pioneers dreamed of building Seattle into 'A City on a Hill' such as Athens or Rome (Berger 2005). But Puget Sound had more than its share of idealists longing for more rural utopias (LeWarne 1975). Many settlers understood the social ills behind Baron Haussmann's redesign of Paris (Harvey 1993). But Seattle dreamers hoped for a gentler course, as the spectre of communism haunted Europe, and class struggle reared its head among workers in the meatpacking centre of Chicago and in the construction of the transcontinental railroads (Raban 1996).

As Seattle grew in the late-1800s, alimentary essentials such as fresh fruit and vegetables were often supplied by Italian farms on its periphery (2000 HistoryLink.org Essay 3273). Early dairy farms in the Snoqualmie and Kent Valleys, south and east of the city, found themselves, after construction of roads such as the Old Highway 99 (*aka* Pacific Highway) were extended along the eastern shore of Puget Sound, in competition with other dairy centres. One of these settlements was Lynden in Whatcom County on the Nooksack River near the Canadian border (Anderson 1957). In the early 1900s Dutch immigrants flocked to Lynden, which will be discussed in case studies below.

Lumber town Seattle was soon crowned by a university, a portent of its later status as a centre of education and communication. Shortly after the city's founding, civic leaders donated prime property in the neighbourhood of Capitol Hill for the initial site of the University of Washington, just walking distance from waterfront fish and food markets. In 2004, *Language* magazine reported that of 79 cities of 200,000 people or more, only Minneapolis topped Seattle in a ranking of literacy conducted by Jack Miller, chancellor of the University of Wisconsin-Whitewater. US Census data, and other public sources were

compiled to measure literate behaviour. In 2004 the Top 10 were Minneapolis, Seattle, Pittsburgh, Madison, Cincinnati, Washington, DC, Denver, Boston, Portland, and San Francisco. In contrast New York City (49th) and Los Angeles (68th) ranked much lower despite their importance as cultural centres (*Language* 2004; Table 1.1 below). The survey measured educational attainment, number of bookstores, periodicals published, newspaper circulation and library resources of the nation's most literate cities

Table 1.1. Most Literate Cities in US.

Most Literate Cities in US
1. Minneapolis
2. Seattle
3. Pittsburgh
4. Madison
5. Cincinnati
6. Washington, DC
7. Boston
8. Denver
9. Portland
10. San Francisco
<i>Source: Language</i> (August 2004) http://www.uww.edu/npa/cities

Literacy and education are important indicators in reflections on organic and local food and risk, even if they are not the whole story. According to the Hartman Group (1997), a consulting firm based in Bellevue and adjoining Redmond, which is world headquarters for Microsoft, each several miles on the Highway 520 floating bridge over Lake Washington from the main campus of the University of Washington, the concentration of highly educated people in Seattle make it a bulwark of organic consumption. The Organic Trade Association notes that education and disposable income are parameters associated with organic consumption (Raynolds 2004). One assumption of this thesis is that economically vibrant Seattle and its sister port Portland, both with wharves stacked high with containers branded Sea-Land, compare well with San Francisco and the Bay Area of Northern California as models of alternative consumption (Buck, Getz & Guthman 1997; Schäfer 2007). Literacy data dovetail with the assumption that education is a predictor of organic consumption. Pushing things further, Los Angeles' poor literacy ranking at 68th fits geographer John Agnew's characterisation (pers. com. 2003) of organic consumption in LA as motivated by

health and career reasons, rather than the reflective environmentalism typical of the Bay Area and, I argue, Seattle.

Books are not the only hallmarks of Seattle's literary heritage. Newspaperman Emmett Watson, who played baseball with the 1920s' Seattle Royals before pounding typewriters at the *Seattle Post-Intelligencer*, and later the *Seattle Times*, fostered tales of a rainy city of roustabouts that milk-toast east-coast migrants would be wise to avoid. Watson became unofficial leader of Lesser Seattle, a tongue-in-cheek movement to keep the city small and unknown. Although mining outfitter Trager grew with the Yukon gold rush and spawned firms such as Eddie Bauer and REI, Watson drew richly on Jack London's Klondike tales in mythologizing his birthplace (Moody 2003). But Seattle's Wild West past was not all invented history. It was a city of neighbourhoods such as Ballard where Lutheran churches fought hard to outnumber saloons. Roger Sale (1978) and Bill Speidel (1978) separately detail how Doc Maynard, one of the more raffish city founders, drank, living with his wife and ex-wife, while lobbying to retain efficient brothels as an integral sector of the economy.

Unfortunately, racism lurked in the rarely acknowledged abuse of Native Americans and Japanese and Asian immigrants. A beautiful yet disturbing novel of early 20th century life in lumber towns, fishing villages (e.g. La Conner; Figure 1.4 below) and islands of Puget Sound is David Guterson's (1995) *Snow Falling on Cedars*. Bucolic landscapes of strawberry fields on the San Juan Islands, their fruit bound for Seattle markets, are interspersed with incidents of racial tension among settler farming and fishing groups, culminating in the jack march of sheriff's deputies rousting Japanese immigrant farmers to internment camps on the mainland after the Japanese attack on Pearl Harbour in 1941.

But, much like the atmosphere of the 1990s' television sitcom *Northern Exposure*, early Seattle maintained the optimism of a place where racism existed, but people got along better than most other places. The TV series was ostensibly set in Alaska, but filmed in Roslyn, a former coal mining town in the Cascades east of Seattle. This was no imaginative stretch, since villages in the Pacific Northwest – including Forks, Kalaloch and Queets on the Olympic Peninsula (where I have lived) – epitomise the multiethnic ethos of *Northern Exposure*, in the sort of a David-versus-Goliath, love-hate relationship with big cities that Michael Winter (2003) detected in UK ruralities and dubbed 'defensive localism'.

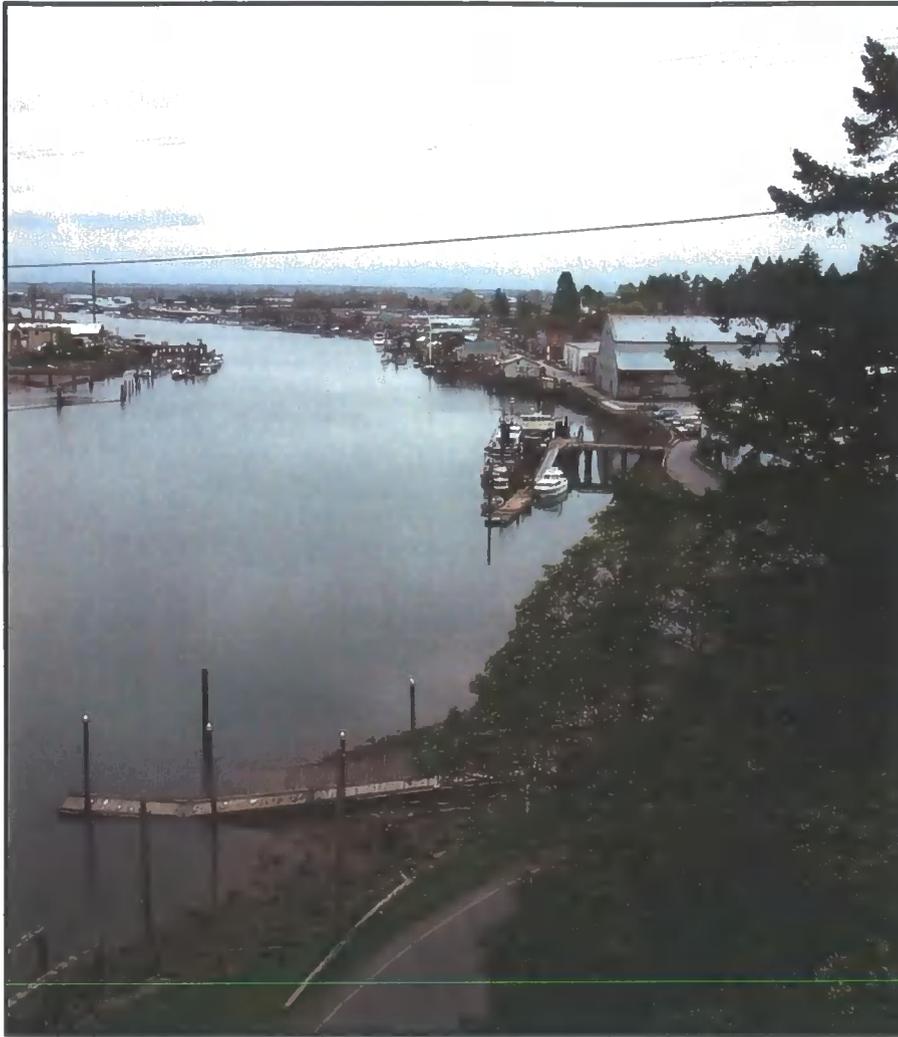


Figure 1.4. La Conner on Puget Sound, its bars, bookstores and nearby strawberry and tulip fields evoke the tales of Jack London and more recently David Guterson.

In 1970 the bestselling novel *Ecotopia* idealized the Pacific Northwest, including parts of British Columbia, Alberta, Oregon and northern California in a fantasy of political secession from North America's environmental nightmare. PNW readers took such fictions rather seriously, imagining a special relationship with nature. They sniffed at the fact that, in the Mid-West, Cleveland's Cuyahoga River had actually caught fire, fuelled by factory discharges in 1936, 1952 and 1969 (*Sustainability Report* 2006). Meanwhile, despite pollution from farms and factories trickling into state waters, Seattle polished its green credentials – not just on the grounds that its own waters had so far not caught fire – but also due to positive efforts to conserve an urban ecology symbiotic with the health of birds, crustaceans, fish and killer whales on the fractal shoreline of Puget Sound. Such efforts are typified by the recent transformation of the old Bloedel-Donovan lumber mill on Lake Whatcom, near Bellingham Bay, into a public park.



Figure 1.5. Ferry crossing Puget Sound with Mt. Baker behind.



Figure 1.6. Mt. Rainier from Gig Harbor.

While Washingtonians fancied a special embrace with nature, they were certainly in denial about some of the more frightening ramifications of that grip. The Pacific Rim is one of burgeoning tectonic fire. This geologic truth was discounted by most inhabitants of Seattle and environs before 1980. School teachers assured pupils that nearby volcanoes were dormant, despite the fact that Mount Baker (10,778 feet/3285 metres Figure 1.5 above) and Mount Rainier (14,411ft/4,392m Figure 1.6) are often crowned by thermal wisps of steam. One of Rainier's shorter sister peaks, Mount St. Helens (8364ft/2549m) waited till May 18, 1980 to blow one-quarter mile off her top, waking residents over 100 miles away. Now teachers in towns such as Renton reassure children by telling them that certain roads are clearly marked as official volcano evacuation routes.

Volcanic eruptions or not, some state citizens and many tourists see such mountain peaks as preserved in a state of nature. They imagine ancient climax forests lying below timberline in the Cascade Range east of the Sound, and throughout the Olympic Peninsula. British writer Jonathan Raban (2004), ensconced in Seattle and writing novels linked to the city, mocks Seattleites who do not realise that industrial pulp forests prevail beneath these glorious peaks. At times industrial logging leads to unprecedented flooding downstream. This may have been true of the Ames Creek flood in 2006 which overran a farm supported by leading food cooperative PCC, managed by one of my sources (Figures 1.7 and 1.8 below).



Figure 1.7. PCC Farmland Trust before the flood.



Figure 1.8. After the flood (PCC Nov. 16, 2006b).

Environmental crossroads

What has changed since Washington became the 42nd state of the Union in 1889? Population and power were two dynamic factors. Hydroelectricity helped Washington grow from just 357,232 in 1889 to 5,894,121 in 2000 (State of Washington, 2002). Since 1970 state population has doubled from about 3 to 6 million, as jobs, amenities and the environment attracted incomers who in the 1960s might have gone to California. Raban (2004) notes that writer Henry James called Seattle ‘a flower of geography’ in 1907, and that since then, ‘It has earned for itself a strange place in urban history, as the first big city to which people have flocked in order to be closer to nature.’ In Chapter 7 we will hear consumers bemoan the passing of virgin forests that harboured environmental markers such as the spotted owl, deer, elk, and predators including bear and wildcats. Seattle and Washington State’s natural self-image has smacked against the windshield of a century of industrialisation.

In his thoughtful book *We Have Never Been Modern* Bruno Latour (1991/1993) declares that rural life was very different ‘after electrification’. This is true of Washington. The 1930s’ New Deal dream of cheap, abundant hydroelectric power was greeted by rural folk eager for radio and other wonders generated by giant public works such as the Grand Coulee Dam on the Columbia River. The Dam attracted more people to eastern Washington, and was celebrated in song by Woody Guthrie (Figure 1.9 below). Coincidentally or not, dams were finished in time to supply the massive electrical needs of plutonium extraction plants on the Hanford Nuclear Reservation in southeastern Washington, for the world’s first atomic weapons in WW-II and the Cold War. All this came at environmental cost, according to one

man I knew well, George L. Schmith. He served with US Sea Bees construction units in the Pacific in WW II. Thereafter he managed concrete form-building crews on dam-building projects on rivers such as the Skagit in the 1950s, and construction of waste holding tanks at Hanford in the 1960s when he observed leakage of radioactive waste into the ground. Although he did not condemn the government nuclear weapons programme, he nevertheless avoided its carcinogenic risks by renouncing swimming in the Columbia River.

Grand Coulee Dam

Well, the world has seven wonders that the trav'lers always tell,
Some gardens and some towers, I guess you know them well,
But now the greatest wonder is in Uncle Sam's fair lang,
It's the big Columbia River and the big Grand Coulee Dam.

She heads up the Canadian Rockies where the rippling waters glide,
Comes a-roaring down the canyon to meet the salty tide,
Of the wide Pacific Ocean where the sun sets in the West
And the big Grand Coulee country in the land I love the best.

In the misty crystal glitter of that wild and wind ward spray,
Men have fought the pounding waters and met a watery grave,
Well, she tore their boats to splinters but she gave men dreams to dream
Of the day the Coulee Dam would cross that wild and wasted stream.

Uncle Sam took up the challenge in the year of 'thirty-three,
For the farmer and the factory and all of you and me,
He said, "Roll along, Columbia, you can ramble to the sea,
But river, while you're rambling, you can do some work for me."

Now in Washington and Oregon you can hear the factories hum,
Making chrome and making manganese and light aluminum,
And there roars the flying fortress now to fight for Uncle Sam,
Spawned upon the King Columbia by the big Grand Coulee Dam.

Words and Music by Woody Guthrie, © 1961/1963

Figure 1.9. Woody Guthrie's Grand Coulee Dam

Despite costly salmon fisheries, fish-ladders and so on, dams have drastically reduced salmon spawning on rivers such as the Columbia. During the Reagan era, new dams on the Snake River were built to satisfy spiralling demands for electrical power, and according to

the *Economist* (April 12, 2001) '[I]t looks as if salmon, often seen as the icon of the Pacific northwest, will yield to symbols of modernity: the light bulb, the air conditioner - and, oh, the French fry.' (The salmon picture is not completely bleak. Public concern about fisheries has prompted officials to list the Elwha River Dam on the Olympic Peninsula for removal.)

In the *Seattle Times*, Raban (2004) argues that a surfeit of natural grandeur weakens Seattle's resolve to adopt architecture and urban ways worthy of a world class city. Only grudgingly does he admit that the 600 foot tall Space Needle, built for the 1962 World's Fair can be a pleasant sight: 'there are mornings of thin luminous fog when it loses its habitual air of hangdog provincial aspiration and succeeds in looking spooky; even, almost, monumental.'

The Space Needle is seen outside the condominium window of *Frasier*, the TV sit-com about an effete-urban Boston psychologist transplanted to rough diamond Seattle. But the other great symbol of the 1962 World's Fair, the Monorail that whisked fairgoers from city centre to the Needle, remains in operation as a tourist attraction but a transport shame compared to the status of its older rival Chicago's L, or elevated train, which thrives in the Loop near Lake Michigan. In the late-1940s the existing Everett-to-Seattle Interurban light rail system was torn up, so today metropolitan Seattle limps along with a bus system that has lost its reputation for punctuality because it is often slowed by cars. Seattle had a splendid freeway system in the early 1970s, based on Interstate-5 running from the Washington-Canadian border to southern California (Figure 1.10 below). But population growth means that today Seattle traffic seems little better than that of notoriously crowded Bangkok. The difference is that Bangkok opened part of a new metro system in 1999, and an underground in 2004, while Seattle had barely started its light rail line in 2003.

In the Reagan-Bush era, many US white collar workers became accustomed to stepping over homeless sleepers in the morning (Figure 1.11). Seattleites were shocked when homelessness became common in their city. In the old days, such poverty was consigned to Skid Road, but now the underclass reached affluent shopping districts and public parks. Had Seattle lost direction?

Now a look at the other case city of Newcastle, before returning to this question.

Figure 1.10. Interstate-5 traffic in Seattle. on a weekday in 1987 when traffic was lighter than in 2006. On a clear day from this 45th NE bridge near University of Washington, one could see Mt. Rainier on upper left and the Space Needle on upper right. This picture is from my report on PSCOG efforts to manage metropolitan and regional traffic, waste and water quality issues. (Scholten 1987d).

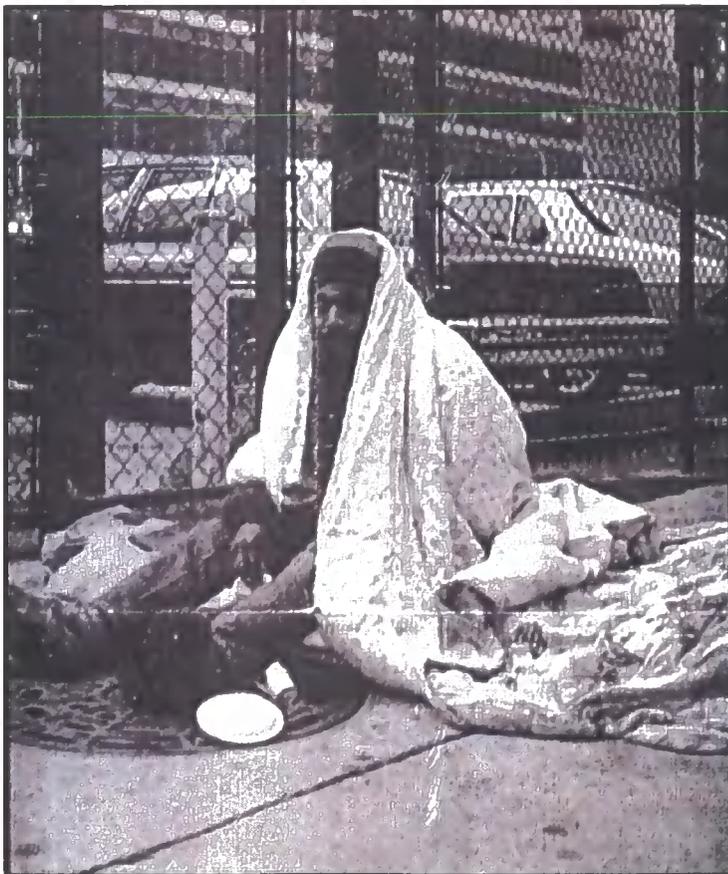
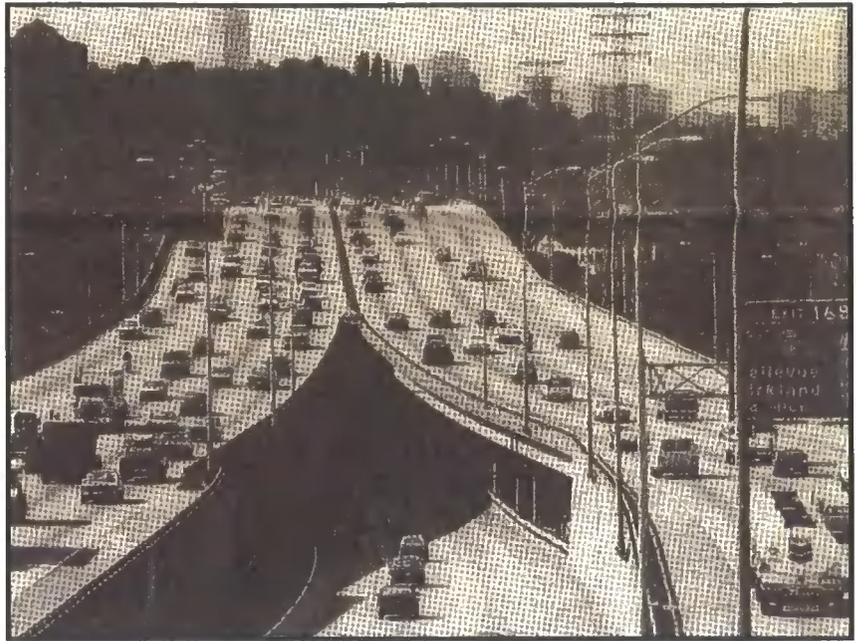


Figure 1.11. Down in Dreamville – US homeless. City streets became home to many people in the 1980-90s. Ready for a cup of hot coffee on a frosty morning, this man told me he was down but not out. He wore sturdy clothes and expected to find a job soon, and a better place to stay.

(Northern Echo 1992 Scholten)

Newcastle upon Tyne

Eight thousand miles east of Seattle, across North America and the Atlantic Ocean, one of the world's classic rustbelt cities wrestles with regeneration. On the River Tyne and the North Sea in northeast England, in the United Kingdom, Newcastle is about half Seattle's size but comparable on many counts. In the 2001 Census Newcastle had 259,500 residents, and remains the twentieth most populous city in England, while the larger Tyneside conurbation including Newcastle is England's fifth most populous. Tynesiders are often called Geordies. The etymology of *Geordie* is obscure, but may stem from Newcastle's support of King George against the Scottish Jacobites, and the term was probably renewed in honour of local George Stephenson who developed steam locomotives for rail coal transport.

Just as Seattle is known for medical facilities such as the Fred Hutchinson Centre at the University of Washington, and Microsoft founding partner Paul Allen's new ventures in biotech, Newcastle has been named one of 11 Biomedical Research Centres of excellence 'among the most outstanding centres of medical research in the world' - and currently shares £450m over five years for research on major diseases. (Newcastle 2006c). Like Seattle in world wars (Berner 1991), Tyneside was an important shipbuilding centre. But when the Thatcher government cut subsidies from two major employers in the region, British Coal and British Steel, 1979-91, Tyneside entered an economic malaise that made Seattle's aviation recession of 1970-72 seem a brief cold. Manufacture of Vickers Challenger tanks and a few oil platforms continued, but Newcastle's era of heavy industry was past.

Transitioning from a smokestack to information economy has not been easy for Newcastle (1992a). Regional development agencies offered financial sweeteners to attract foreign direct investment, but rewards in economic growth, technology transfer and re-skilling have been mixed. Haskell *et al.* (2002) note that German firm Siemens was offered £50 million to open a £1.1 billion microprocessor plant in Wallsend at the eastern end of Newcastle in 1997. But despite a disciplined workforce, volatility on world chip markets forced closure in 1998, and Siemens agreed to repay £18m in grants. Japanese firm Fujitsu also closed a semiconductor plant in County Durham at that time, shedding over 500 jobs.

However, the Northeast won and defended a major economic contributor in the form of the Nissan automobile plant in Sunderland. When I accompanied groups of German engineers there in the 1990s, tour group leaders claimed the Nissan factory emulated the best practice,

i.e. *kaizen*, of rival Toyota. Indeed, efficiency was so impressive that Nissan UK was assigned production of the redesigned Micra into the 21st century.

In Newcastle many brownfield sites have been redeveloped, and an architectural renaissance has become evident on the Tyne, in Gateshead city across the river, in construction of the Millennium Bridge and reconditioning of the Baltic Flour Mills as an art museum. The new Sage Music Centre is a postmodern counterpoint to the classic Tyne Bridge. Designed by Sir Norman Foster and built to celebrate the Millennium, the Sage is a reassuring silver blob reflective of the Jimi Hendrix-inspired, Paul Allen-funded, Experimental Music Centre under Seattle's Space Needle (see chapter 8 for pictures of the latter and Newcastle's Castle Keep). One cultural link between the cities is that Seattleite Hendrix was discovered by Chas Chandler, Geordie bass player with the Animals in the 1960s



Figure 1.12. Tyneside (L-R): Millennium Bridge, Baltic, Sage, Tyne Bridge from Castle Keep (Scholten 2006).

From such sites, the skyline of Newcastle reveals universities and city administration with their information-society aspirations. Newcastle and Gateshead were unsuccessful in their bid to serve as European City of Culture in 2008. But the fact that Newcastle and Gateshead plan to reapply for this distinction demonstrates heightening aspirations on 'the coaly Tyne' (Knopfler 2001) in Northeast England, whose historic importance as a transport node in coal extraction spawned the idiom *Don't bring coals to Newcastle* (see also Hudson 2001; Hobsbawm 1975, 1987). Visitors to Newcastle praise the Metro subway and light rail system

running from its main station in City Centre to an efficient airport on the west, to the mouth of the Tyne past Wallsend, and under the Tyne south to Gateshead (Figure 1.13 below).



Figure 1.13. Tyne & Wear Metrotrain heading for South Shields calls at Kingston Park station. Used by permission. Photo by SPSmiler, spring 2001 www.answers.com/topic/tyne-and-wear-metro, accessed 12Dec06.

As noted above, Seattle transport languishes in gridlock. In 1967 citizens voted against a proposal, part of a package dubbed Forward Thrust for Century 21 developed after the 1962 World's Fair, to build light rail transport, and similar plans were voted down in decades to come. Sound Transit light rail system began in 2003, but it had already spent \$4 billion by 2005 with little to show. In fact, the programme was then already over budget, behind schedule and – astonishingly – not even planned to fully connect the city centre to Seattle-Tacoma International Airport to the south.

Sketched on a 19th century wilderness tabula rasa, Seattle gave way to smog in the 1970-80s. It lost sight of the mountains. Salmon dwindled. Red tides often made shellfish too polluted to eat. Tree cover disappeared, and the nationally known downtown farmers' market was nearly razed by developers. The ecotopic dream of achieving social progress by harmonising science and technology with nature began to resemble the polluted 1970s' cityscapes of Los Angeles than Eden.

Sustainability crossroads

When I left Seattle in 1988, the Brundtland Report of the preceding year had already coined its popular definition of sustainability: 'Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.' One could easily find Ernest Callenbach's local novel *Ecotopia* (1975) in used bookstores. And then Mayor Charles Royer had given the nod to a Quango called Metro, over the unluckily-acronymed PSCOG (Puget Sound Council of Governments), for coordinating regional improvements. Metro was founded by Jim Ellis, who in the late-1950s began grassroots campaigns to clean up metropolitan waters such as Lake, a success still recalled with pride by contemporary citizens (see Chapter 7).

Mayor Royer wanted to show that under his aegis, Seattle had finally got serious about planning water and transport infrastructure with other cities in PSCOG (Scholten 1987d). I followed this process closely; on the regional government beat for the University of Washington News laboratory (*aka* bureau) feeding articles to medium size newspapers. After dozens of interviews with local mayors and city officials, it was clear government officials were adopting the eco-speak of environmental planning. However, attending city council meetings showed that while citizens were quick to share the same lofty environmental goals it was not true that, for instance, the citizens of Edmonds, a bedroom community north of Seattle, wanted a regional sewerage treatment plant located in their backyard. Cynics found little hope that Seattle could properly address local environmental problems.

The Brundtland Commission of 1987 had, nevertheless, created widespread political goodwill in favour of finding solutions, and global expectations gradually focused on what came to be known as the Earth Summit in Rio de Janeiro in 1992. Thereafter the US, in the Reagan-Bush era, disappointed Greens worldwide by refusal to sign the Kyoto Protocols, partly on the grounds that the economic losses from adherence to Kyoto would outweigh environmental gains.

Meanwhile, Seattle was in an economic boom abuzz with brands like Atari, Microsoft and Starbucks, not to mention perennial champion Boeing, which was picking off the remains of the post-Cold War military aviation industry in California. In line with the neoliberal tone of Reaganomics, and despite citizen votes to cap downtown development, Seattle's political leadership adopted policies favouring a high-density, high-rise central business district, encouraging multinational corporations to locate in the city for maximum economic growth

(*Seattle Weekly* May 18, 2005). Seattle's emulation of San Francisco as a global business node ran counter to that of Portland where planners saw less chance of true world city status (see Jarvis 2001 and 2006). Even today it is fair to say Seattle misses Sassen's (1992) list of global cities such as London, New York, Tokyo and Buenos Aires, which are said to have more in common with each other than with their own hinterlands. But its increasing importance for finance with local firms such as Washington Mutual and Safeco insurance now operating nationally, and leadership in computer software, e.g. Microsoft, seem to be moving Seattle up the list.

In light of Seattle's growth, it is fair to ask if environmental sustainability has been losing priority. From Europe where I freelanced articles on the European Union's (EU) common agricultural policy (CAP) involving its own sustainability issues, it appeared that Seattle's reputation as America's most livable city faltered in the digital boom. On visits from my new home near Newcastle to my old home near Seattle, I saw political and automotive gridlock stretching some 50 miles to the south and the state capital of Olympia, even on weekends. Snafus with the much-touted underground Bus Barn in downtown Seattle and the future light rail from Sea-Tac invited despair. Seattle was reluctant to give up its quiet past, and when it did plan for the future it underestimated the high rate of its growth as well as the unintended consequences of such growth. For example, millions of dollars were spent on planning and initial construction of the Bus Barn before it was properly redesigned to accommodate light rail as well as buses.

By the turn of the millennium, an expanding consumer culture belied Seattle's rugged past as a lumber town-turned-jet aircraft builder whose citizens climbed mountains on weekends. Obesity was increasingly seen in adults and children. A city known for a high rate of participation in boys and girls soccer (*aka* football) leagues ironically suffered an increase in commuter traffic as soccer moms drove their spawn in gas guzzling sports utility vehicles (SUVs) from home to school to sport field and back again. The roads they traversed were lined by fast food vendors and supermarkets offering transfat- and HFCS-laden food (implicated in obesity by Schlosser (2001), Nestle (2002), Critser (2003)) in ever more non-biodegradable packaging. Plastic waste accrued on once pristine beaches. This was quite unlike Germany 1988-92, where I saw waste and water problems attacked with zeal unmatched by the UK or US a decade later (Scholten 1992a).

In the late-1970s Seattle dropped its old Boeing-inspired nickname of the Jet City, which was too retro-industrial for environmentalist sensibilities, to the Emerald City, connoting the *Wizard of Oz*. At the time this seemed little more than green-washing. However, a green turn by politicians and consumers was discernible from afar. A ballot proposal to return to a 1950s-style 5-cent bottle and can deposit was defeated by commercial recycler advertising, arguing that many citizens voluntarily participated in commercial recycling. Nevertheless, in the early-1990s, Seattle and outlying communities in Snohomish County mandated household recycling with separate containers for paper, glass and plastic.

NEWS: the Sustainability Compass

In the post-Rio Earth Summit afterglow, several dozen volunteers from a wide range of social, economic and professional sectors held a series of meetings to develop a glossary of quantitative and qualitative indicators to evaluate performance in a number of environmental issues. The group is known as Sustainable Seattle, and the instrument it had produced by 1994 is the Sustainability Compass (SC or the Compass; www.sustainableseattle.org; Figure 1.14). The SC has been used in environmental evaluations as far from Seattle as New Delhi and Stockholm. The SC won awards from the Puget Sound Regional Council (PSRC), and the United Nations (Scholten 1987d; PSRC 1996; UN 2006; Sustainable Seattle 2006). One founder of the group, Alan Atkinson, now heads a commercial consultancy active internationally, and other early members remain active in governments and communities. Briefly, the Sustainability Compass is an instrument to simplify analysis in the N-E-W-S quadrants of Nature, Economy, Well-being, and Society.



Figure 1.14. Sustainability Compass.

The spatial metaphor in the Sustainability Compass flows easily into geographic discourse, and it relates to the present thesis. Most of my fieldwork and analysis involves UK/US comparisons of attitudes and behavior regarding local and organic food in relation to risk. (See *Economist* Dec. 7, 2006 for a polemic on the perils of non-conventional food.) Now is

not the time to exhaust the details of the SC, but a few examples illustrate ideas implicit in it. Local food links to the local Economy and also to Society or local social networks. Organic food is a proxy for Nature if one considers organic processes more natural than conventional farming, and organic food may also relate to Well-being in relation to certain food and health risks. Many people now regard organic foods not sourced locally as environmental risks, without analysis of food miles or air miles (Macgregor & Vorley 2006; Warde 1997).

Risk is often considered purely negative, and where there is scope for global risk such as climate change, a process characterised by uncertainties, risk must surely be considered carefully. On an individual scale risk is more problematic, for as Lupton & Tulloch (2002) titled an article, 'Life would be pretty dull without risk'. An acquired ability to manage risk may make people more resilient. Warde (1997) notes that people's desires are infinite, and so my thesis touches on the exploratory or risky nature of consumption which he found in the antimony of novelty/tradition. This is exemplified by the rapid acceptance of Thai cuisine in cities from Seattle to Newcastle since the early 1980s – a phenomenon that seems to enhance people's well-being. Because consumers react to food choices not just as part of society, but also as individuals with different propensities to accept risk, or explore variety and so on, this research thesis solicited consumers representing a range of risk affiliations in work or pastimes affecting their well-being.

It is well and good that civic-minded Seattleites devised the Sustainability Compass, and noteworthy that it is used in environmental audits around the world. But a few green activities might be drops in the bucket, compared to political-economic forces concomitantly driving the growing population off the path of sustainability. In fact, the range of environmental initiatives debated around Seattle is impressive. A shortlist includes the Save Our Salmon (SOS) campaign, green buildings, pesticide cuts on golf courses, energy schemes such as Flex-Cars and mini-windmills. But a neutral observer from Mars or elsewhere might judge that Seattle's green tendencies which appear bold nationally pale internationally. For example, the European Union was considering bio-mass as a way to relieve oil dependency and raise farmer incomes long before America's flirtation with ethanol began during the war in Iraq ca. 2006. Following the 1992 Rio Earth Summit, European cities from Barcelona to Stockholm sought to improve North-South links in Agenda 21, and transfer knowledge in the Sustainable Cities project ca. 1993-6 (<http://ec.europa.eu/environment/urban/locsm-en.htm>).

More recently, the EU policy of agricultural *multifunctionality* propounded by former farm commissioner Franz Fischler recognizes that rural dwellers provide urban dwellers with more than food, i.e. socio-environmental amenities such as eco-tourism and education, as well as cleansing and softening urban footprints (Wilson 2007). The political-economic facets of multifunctionality include *modulation* of farm support, which probably brings more fairness into government farm subsidy systems than since they were originally established in the late-1940s (Keeler 1988). Multifunctionality and modulation go hand in glove with the decoupling of farm subsidies from production, which could bring rich countries in line with expected reforms in the WTO Doha 'development' round. In passing, observers such as Stiglitz (2002) note that Europe is historically the biggest subsidy sinner in world trade, but that the US nearly matched Europe's level of trade distortion under the administration of President George W. Bush.

These comparisons with EU policies suggest the ultimate effectiveness of green initiatives in Seattle and elsewhere depends on their support in the spheres of civil society, business and municipal government (Murdoch 1995). That is hard to measure. The number of green initiatives underway in Seattle may tell us more about the city's buoyant economy than reveal the aspirations, desires, motivations and tastes of its diverse consumers. Many of these efforts are undertaken by Quangos, but they may be taken without the approval of – or even against the approval of the body politic. Therefore, any thorough forecast of a city's sustainability prospects must take into account grassroots consumer knowledge and action, i.e. attitudes and behaviour on environmental issues such as how food is produced in ruralities and transported to them, in order to gauge the quotient of environmental sentiment among consumer groups.

Another issue is political identity. Are shoppers passive consumers willing to buy whatever is on the shelves – or active citizens willing to resist products perceived harmful, e.g. HFCS and transfats, and to send market signals that they prefer higher quality or more natural fare (e.g. local, organic or traditionally grown foods) in the everyday exercise of their democratic power (Bonnano 2000; Larner 2000)? Establishing where people see themselves on the continuum from consumer to citizen is a significant project in human geography.

Food wars in Newcastle and Seattle

The dominant food paradigm of Europe and North America from WW II to the present is called the Productionist approach by Lang & Heasman (2004: 28-40; also Lowe *et al.* 1994). This paradigm has prioritised the production of greater quantities of food to ensure human health. But it is seen as outmoded due to blame ascribed to it by the rising incidence of diabetes, obesity and cardiovascular diseases, as well as the human form of mad cow disease (see Whatmore 2002). Productionism is also blamed for the high economic costs of government warehousing and subsidies, and political opposition to export subsidies by low-cost food exporters in WTO negotiations.

New Times theorists Stuart Hall & Martin Jacques (1989) might see the Sustainability Crossroads, on the path from the fading Productionist era to the future, as diverging from the status quo, turning either right toward a medical model of individualised big science, or left toward a social model of ecologically organic food systems. Government and business collaboration often promotes big science in hopes of technical innovation and economic growth. Both Seattle and Newcastle host centres dedicated to the 'Life Sciences paradigm' which Lang & Heasman (2004: 28-40) claim privileges food system technologies such as pharmacogenetics to improve individual human health, but place less emphasis on non-humans or the environment. It is reflected by the support of pharmaceutical companies for Newcastle's Centre for Life near the main train station. It is seen in Seattle where south Lake Union property near the central business district is being developed into a biotechnology centre by Paul Allen. The Life Sciences paradigm is in line with industrial and post-industrial economic champions centred in Seattle. Today a child's map of Washington might supersede salmon, trees, and apples with the corporate icons of Amazon, Boeing, Microsoft and Starbucks Coffee (Figure 1.15 below).

Against the life sciences paradigm in what they call food wars, Lang & Heasman (2004) pit the Ecologically-Integrated paradigm, which sees human and environmental health as inseparable. This Ecological paradigm may be seen as more bottom-up, more holistic than Life Sciences - allotting equal priority to natural capital (e.g. land, air, water, genes, biodiversity, oil/energy, etc.), economic capital (money, labour, technology), and social capital (e.g. community, trust, family and foodways). The Ecological approach is favoured by actors in alternative food networks, in their resistance to appropriation by big science and global agribusiness.



Figure 1.15. New icons on Washington's map: Amazon, Boeing, Microsoft, Starbucks & Gates.

Lang & Heasman's food wars thesis offers three choices. We can continue ahead on the increasingly ruinous productionist path, we can turn to the life sciences' capital intensive approach to individual health, or we can opt for the ecological approach integrating human, animal and environmental sustainability. The Brundtland Report and Rio Summit fostered recognition among municipalities worldwide that first, cities' environmental footprints reach far beyond their borders and, second, that if cities reduce the negative externalities of their production and consumption cycles, they can positively leverage global sustainability.

In an apocryphal blues tale, guitarist Robert Johnson meets the Devil at a crossroads where he trades his soul for musical power. At its own sustainability crossroads Seattle might be tempted to exchange its birthright, the aboriginal paradise of Chief Sealth, for a chance to become a world city in a unique global network led by the old club of London, New York and Tokyo and soon to be joined by 'the megalopolis Hong Kong-Shenzhen-Guangzhou-Zhuhai-Macau' according to network society theorist Manuel Castells (1996/2001: 416).

The temptation is not just a positive one of joining the big leagues. There is a corresponding fear of being left out of the loop, excluded from world power networks. So in fieldwork in Seattle and Newcastle upon Tyne over 2002-3, I asked focus groups of academics, firefighters, motorcyclists, and others how they expected their city's environment to develop in coming decades. In Seattle, because of its self-image as an Emerald City located in a virtual ecotopia called Cascadia, people were asked if Seattle could serve as an environmental role model for the country and the world.

Forecasts of the future environment are so precarious as to be almost nonsensical. But not quite, for focus group respondents tendered answers on this subject quite readily. Clearly these are matters of chronic reflection, since they affect the security and well-being of family and friends. There were also frequent manifestations of altruistic care for others, i.e. concern for other people, other creatures and the environment. Responses were mixed. Presaging the floods of November 2006, one Seattle firefighter said rampant deforestation for development was gravely reducing storm drainage. Others feared food miles, energy waste, and the risks and uncertainties of bio- and nanotechnologies, after the US government replaced the precautionary principle with risk/benefit analysis (Scholten 1990). Just as Warde (1997) claims that people's consumption desires are infinite, so it seems their litany of fears goes on and on.

This thesis seeks patterns in people's reflections upon food and risk that contribute to an understanding of wider issues of sustainability. Toward that end the following Chapter 2 reviews literature and theory pertinent to the study, while Chapter 3 discusses alternative food networks (AFNs) and offers empirical examples of actors in them from my fieldsites. Chapter 4 comprises an examination of BSE/vCJD, an archetypal food risk in relation to the ideas of Mary Douglas (1966) on purity and danger as well of Deborah Lupton (1999) on a panoply of risks. A fulsome account of the methodology of this study, including selection of topics, study sites, adoption of theory and guiding principles for survey and interview work and data analysis is given in Chapter 5.

Chapter 6 presents survey data from sub-groups of *academics*, *firefighters* and *motorcyclists* compared to control groups of *others* and *all* survey respondents, relating empirical data on their attitudes and behaviour regarding organic and local food and relationships to risk activities/perceptions such as BSE. Qualitative data and analysis are offered in Chapter 7,

including oral and written data from sub-groups and individuals which helps interpret quantitative and survey data.

Chapter 8 concludes the thesis with a synopsis of findings of the relative positions of Seattle and Newcastle on a continuum from conventional globally-sourced food toward more localised organic food, in the context of risks to health and the environment as agricultural bio-fuels begin to displace areas formerly committed to bio-diversity, crops or grazing.

Now lets us review the literature and theory that inform this study



Figure 2.1. Local conversion to global chains. Hispanic migrant labour helps plant, weed and harvest organic crops on this family farm converted from dairy in Whatcom County.



Figure 2.2. Northumbrian Organic Producers (NOP 2000) launch an organic pig unit at Houghall College, County Durham.

CHAPTER 2: LITERATURE REVIEW OF ORGANIC FOOD & RISK: *Consumption from Eat more! rationality to Eat less! reflection*



A cornucopia of literature exists on the everyday, empirical, philosophic and theoretical aspects of food. From cookbooks and historic provenances of foods, to the biology of so-called natural, or biotechnologically and genetically modified foods, to the anthropological meanings or semiotics of food in putative universals such as Levi-Strauss' (1966: 937-940) 'raw', 'cooked' and 'unclean', to the political economy of food seen in Marx' classic portrayal of food as a factor in capitalist production processes or fetishised goods in mass cultural consumption (Crang 1998), to Bourdieu's (1984) sociology of habitus – to Bauman's (1988, 2001) individualised consumption as the last bastion of personal freedom in a postmodern society – food has more facets than a corn cob has kernels.

But, just as Marion Nestle (2002) claims the nutritionists' traditional prescription to *Eat more!* has been superseded by a new one to *Eat less!* this literature review's intent to *Read more!* is committed to cite only sources appropriate to the theme of: *Risk reflections on organic and local food in Seattle, with reference to Newcastle upon Tyne.*

In some respects the aims of this study are prosaic, limited to empirical investigations of organic consumption by different groups in Seattle, along with more qualitative study of their attitudes and behaviour vis-à-vis food scares and other risks. However, the larger themes to which these mundane consumption practices link are important indeed. That is because they relate to essential definitions of nature, agriculture, food and politics, and to what extent these are human constructs. For example, in the Zeitgeist of 1950s' USA, the dawn of the space age and perhaps the height of logical-positivism, it was a truism that *In the future we won't grow food, we'll have chemical pellets for nutrition.*

This supposedly neutral scientific vision tacitly privileged the agendas of industrialists over farmers while simultaneously challenging the power, if not the ontological existence of

nature. Half a century later, although per capita consumption of food has risen 40% even as earth's population has doubled and food systems have undergone massive horizontal and vertical integration, food still appears more like our ancestors' fare than space age vitamin pills. Even though multinational firms try to use new institutions of globalisation such as the WTO to earn profits via global marketing, the incidence of matching the world brand status of Coca Cola and the Big Mac hamburger is notable chiefly for its rarity. This suggests first, that the exogenous nature of the world may not be as amenable to industrial agriculture as post-World War II (WW II) planners thought, and second, that the endogenous nature of consumers, i.e. their subjective array of changing desires and needs, may be heterogeneous beyond occasional capture by food marketeers. Further, this suggests a more subtle thought, that theories once thought obsolete may, in new configurations of time and space, come back into play.

Theory will, like Ariadne's thread (a double-helixed thread of philosophy and theory) weave through this review. Along with social scientists claiming researchers cannot pick up rocks in a field without a theory, this thesis assumes ideas on food are as ubiquitous as those on rocks. Some citations on philosophy and theory will emerge more fulsomely in the following Chapter 3 on methodology, and chapters committed to data analysis such as Chapters 6 and 7, as well as the conclusion, will pinpoint bits of theory most germane to this study.

Reliability of books and websites

In Chapter 1 we discussed some of the rhetoric (if not hyperbole) ascribed to Chief Sealth on the first Earth Day in 1970. Much of this information was sourced from computer-accessed websites and individual researchers based around the world. Of course Chief Seattle and such red letter days for Greens may be painstakingly researched in hard copy library books, but a growing number of internet (IT) websites and blog pages offer more immediate access. Unfortunately (as we warn undergraduates) accuracy and reliability of IT information is variable, and it is important to note the time a file was accessed, and compare the information with other sources. Fortunately, this is quickly done in cyberspace.

One of the most popular IT publishing sites to emerge in 2003-2004 is www.wikipedia.com, an interactive virtual encyclopaedia edited by readers themselves. A useful site for our subject, i.e. food and risk, is SourceWatch, formerly disinfopedia.com. SourceWatch

(<http://www.prwatch.org/node/3205>) comprises 'over 6,000 articles about PR firms, think tanks, industry-friendly experts and many of the other individuals and institutions that play an important role in shaping public opinion and public policies'. One of its best features is a *Timeline to Global Governance 1986 to Present* (www.sourcewatch.org/wiki.phtml?title=Timeline_to_Global_Governance_1986_to_Present), from the Chernobyl disaster in 1986, to the 1987 Montreal Protocol on greenhouse gases, the Brundtland report of the same year (see below) and so on. While books and other bound publications including compact disks (CDs) retain a greater aura of reliability – partly because electronic, digitised webpages are so quickly and easily altered – IT or web-based sources are inarguably becoming more essential because they respond so quickly to consumption trends and food risks.

Moreover, the reliability of IT information is improving, due to rising *nous* of surfers wary of disingenuousness, greater transparency of authorship and funding, and the watchdog function of sites such as PR Watch and SourceWatch (2005) to expose disinformation. SourceWatch spokesperson Sheldon Rampton admitted that as the erstwhile 'Disinfopedia grew, it came to include a range of people and organizations, some of which are indeed guilty of deceptive practices, but not all.'

The web continues to be a spy versus spy milieu - just as traditional libraries have been, but faster moving. Bearing in mind the obligation for a thesis to source literature which may be verified by examiners, this thesis seeks to incorporate a variety of the most salient works, while evaluating the pluses and minuses of their respective sources. These remarks pertain not just to the bibliography of the present thesis, but also on a deep level to the construction of knowledges which are the starting points for decisions by actors engaged with food and risk – decisions on practises such as pasteurisation, genetic modification (GM), irradiation and animal care.

Post-productivist transition

After a few antiquarian references to place this contemporary study on food and risk in perspective, the organising principle of this chapter follows the transition noted by Philip Lowe, *et al.* (1993) of food systems from post-WW II Productivism into post-Cold War Post-Productivism. Food studies often begin by mentioning Karl Kautsky's (1899) *The Agrarian Question* (1899, in 1980, ed. Frederick Buttel and Howard Newby) which was written, according to Michael Watts (*TDoHG* 2000: 8), when 'the agrarian question in Western Europe rested on a striking paradox: agriculture (and the rural) came to assume a political gravity precisely at a moment when its weight in the economy was waning.' Of particular relevance to our focus on organics is Kautsky's insight that peasants, who might be seen as proxies or forebears for today's marginal organic farmers and others identified with the 'new agrarianism' or 'agrarian populism' contesting corporate globalization, may attempt survival not by technical efficiency but by 'self-exploitation' (Watts 2000; Drummond & Marsden 1999). Self-exploitation is a phenomenon intrinsic to family farms for, as Julie Guthman (2004: 11) writes about the US:

The agrarian ideal is also an owner-operated farm, self-sufficient to the extent that family members provide all the necessary labour, and farm income is sufficient to pay all farm and family needs. In the more explicitly Christian vision of Berry, the household is the last bastion against cultural estrangement (Berry 1986). In the more secularized version, 'Farms are often family centred because the family is the logical unit of production within which to transfer skills and to provide inter-generational continuity in the farm's management' (Strange 1984: 118). Either way, hiring outside labour is considered a sort of moral failing.

Drummond and Marsden (1999) show how Queensland, Australia family farms tried to resist falling commodity prices by adopting technology after World War II (WW II), but in the end returned to what Kautsky called self-exploitation – simply working harder, longer hours and foregoing higher education, holidays and other rewards. Introduction of irrigation, mechanisation and chemical inputs seemed, for a time, to usher in a new era of family farming, but by the 1990s, loss of soil productivity, pollution of river waters and even damage to coral on the Great Barrier Reef showed the unsustainable effects of such intensive agriculture on the environment, as more family farms merged with others or exited from agriculture. US family dairy farms tried just as heroically to harness technology to family labour (a pattern mitigated in Canada and Europe by milk quotas and other policies), but since 1980, the number of dairy farms has halved (Scholten 1997; *Hoard's Dairyman* 2005).

Yet Kautsky's ideas on labour found new resonance in the 1990s when farmers' markets proffering natural and organic foods boomed in the US, and the traditional family and non-mechanised hand labour connoted by such alternative products became a selling point to consumers. Many labour-related questions orbit around the concept of self-exploitation. In subsequent chapters we will intermittently discuss the 'conventionalisation of organic' thesis developed from the mid-1990s by Buck, Getz, Guthman and other researchers from the University of Santa Cruz and elsewhere in California, the state which Guthman claims epitomises the process. Guthman's labour concerns are also taken up by Washington state geographers such as Lucy Jarosz (2003 AAG) who observes fatigue among organicists finding themselves '40-something years old, working long hours without health insurance'. Like conventional farmers (their putative rivals), organic farmers worry about succession, i.e. who will take over the farm? Nor are these questions outside the remit of a thesis concerned with consumption, for not only do consumers *eat the view* (a phrase adopted as titles by AFNs in both the UK and the US) via reflections prompted by product labels showing, realistically or not, lovely cows in beautiful meadows, but some of them develop subjective loyalty to the farmers producing these products, just as surely as members of the World Wildlife Fund (WWF) invest subjective interest in survival of the panda.

Agriculture was considered outside the production logic that drives other extractive and manufacturing industries. This was due not only to the vagaries of nature such as climate and rot, but also to the stubborn ability of families and other social groups to resist agglomeration by more highly-structured and capitalised competitors. Families reach deep into their capacity for self-exploitation when farm ownership is at risk. By the late 1980s, much fuss was being made on the projected impacts of globalisation on when protections were removed (e.g. subsidies cut, and tariffs rendered transparent or 'tariffied') from industries such as autos, computers and steel in the Uruguay Round of trade talks. Notably for the first time since inception of General Agreement on Tariffs and Trade (GATT) negotiations in 1947, this round incorporated agriculture (culminating in the UR Agricultural Agreement, under the aegis of the new World Trade Organisation in 1995). Observers sensitive to the peculiarities of agriculture vis-à-vis industry (i.e. farming's susceptibility to nature, plus the capacity of small farmers for self-exploitation) suggested agriculture was the ultimate test of those contesting globalisation.

As a discipline for assessing GATT-era globalisation, agricultural geography, traditionally a specialist subset of economic geography, was found wanting. Economic geography was in this writer's understanding linked (precariously, particularly in the US, where Marxist economics were often treated more as ideology than neutral theory). The crucial aspect of traditional Marxist theory relevant to the study of food systems is that people find meaning, even identity, in their productive capacities. But times were changing. Dixon (1999: 151-160) cites William Friedland's proposal in 1984 of a:

Commodity Systems Analysis framework for describing the stages through which a commodity is transformed and how it acquires value. He challenged us to think of commodities as entities with a social as well as a physical presence. ... Since then, many commentators have argued that power is shifting from producers to consumers.

Although marketeers find the establishment of world brands elusive, continuing integration of world transport and easing of political barriers to trade (US grain sales to the former Soviet Union, etc.) world food commodity trade widened and deepened, with new patterns of trade between developed and developing nations. Immanuel Wallerstein (1979) interpreted food commodity patterns in terms of his world systems theories drawing on materialist interpretations of Fernand Braudel and Karl Polanyi (Wallerstein 1979 in Jones, Jones & Woods 2004: 9-11, 20, 41; also Polanyi (1965 [1944])). To some extent these materialist interpretations derive from Karl Marx and his disciple Vladimir Lenin's (1917) imperialist analysis of trade. Paul Glennie (*TDoHG* 2000: 26) writes Braudel was part of the French Annales School advocating 'total history' as a synthesis of human and social sciences which is similar to the approach taken by Bruno Latour in his study of the pasteurisation of France.

What is common among these approaches is the assumption that social change – including dietary change – cannot be understood by studying countries in isolation. While that assumption is persuasive, it should be balanced against the prospect that some countries play bigger roles on the global stage, regardless of size. Small Switzerland is a banking giant. Leaving aside the question of whether or not foodie towns such as Seattle belong on the list of world cities such as London, New York and Tokyo described by Saskia Sassen (2001), it is a contention of this thesis that Seattle, like San Francisco, is 'punching above its weight' as a centre of organic consumption in the US, and is therefore worth studying in relative isolation. History is replete with cities that dramatically influenced material culture

regionally or further abroad, such as Jena for optics, Meissen for china, and Venice for glass art - now perhaps eclipsed by the glass of Dale Chihuly (2002) in the Seattle-Tacoma area.

But this thesis has no quibble with another assumption from the Annales School, i.e. that social trends (such as organic consumption) are embedded in their present and past contexts. Bob Jessop (1994: 260-63; Peck & Tickell 1994: 280-315) is known for describing the reorientation in recent capitalism from Fordist, Keynesian welfare states to 'hollowed-out Schumpeterian workfare state[s]' in the advent of Reagan-Thatcher neo-liberalism. Powers (2000) describes how after the demise of the USSR, neo-liberalism became the 'centre-piece' of 'development theology' at home and abroad. What distinguishes contemporary neo-liberalism from traditional liberalism is the new emphasis on free movement of capital and investment under the aegis of the supranational WTO. (Hoekman & Kostecki 1995: 251-2) acknowledge 'pressure on rational governments to engage in investment incentive competitions' but they claim empirical work by Wheeler and Moody (1992) shows the real key to attracting foreign investment is infrastructure. A decade before the establishment of the WTO in 1995, other international financial institutions (IFIs) began, to borrow the terms of Michel Foucault (1975), to 'discipline and punish' developing country borrowers resistant to laissez-faire economic policies via structural adjustment programmes (SAPs). In *Globalisation and its Discontents* (2002) Joseph Stiglitz critiques the International Monetary Fund (IMF) and even the World Bank (where he was chief economist) for sacrificing human capital in the strict conditions it imposes on governments (e.g. privatise public utilities, cut subsidies to farming, health and education) – conditions the US itself frequently violates.

What does neo-liberalism have to do with organic consumption in Seattle? In geographical discourse, Alessandro Bonnano (2000) and Wendy Larner (2000) decry the tendency of neo-liberalism to deskill citizens in democracies to mere consumers in a world economic system. Such fears have foundation, but it is worth recalling that a great fear of 1950-60s' Fordism was the supposedly intolerable life of the auto assembly line worker who worked at the same factory from apprenticeship to retirement. In hindsight, such a steady pay check has its attractions, for at least such workers had enough disposable income to support membership in bowling leagues. In *Bowling Alone* (2001) Robert Putnam portrays social networks in post-Fordist America as falling apart. However, other studies contradict this critique of neo-liberal economics. In 2004 social scientists at the University of Michigan reported that, contrary to expectations, parents spent about four more hours weekly with their children than

the average in the early 1980s (Source: University of Michigan. Note: My family has participated in their semi-annual questionnaires and interviews since 1966.)

Closer to our purpose here is the fact that alternative food production and consumption practises are not limited to the Left. Organics appear on the agendas of some libertarian and rightist groups in the US, who join the refrain against industrialised food. The fact that neither the Left nor Right can claim organics or alternative food networks as their sole domain leads to another, albeit nebulous thought: no matter what the established political-economic system social groups produce heterogeneity.¹

Matt Reed (2001: 131-146) relates 'How the contemporary campaigns of the UK organic movement have arisen from their composting of the past' with some roots among British fascists such as Oswald Mosley and his 'blood and soil' German counterparts before WW II. However, the early 20th century impetus of Rudolf Steiner's anthroposophy on the ongoing biodynamisch strains of organics (Figure 3.8. below), which are associated with courses he taught at Breslau, Poland in 1924, or with the Goetheanum in Dornach, Switzerland, can hardly be linked to blackshirts.

Schmitt *et al.* (2004) claim women accounted for one-third or more of researchers and practitioners in the early biodynamic and organic movements. Both Erika Riese and Sister Laurentia reported 'difficulty' with male 'biodynamic colleagues' at the Research Circle in Stuttgart. Whether this is typical gender friction – or emanates from National Socialist exhortations for women to focus on 'Kinder, Küche, Kirch' is a good question. For example a Catholic nun in Fulda, Sister Laurentia Dombrowski, corresponded with horticultural researcher Erika Riese in Dornach, and joined the Soil Association founded by Lady Eve Balfour in England in 1946, subscribing to their journal *Mother Earth*. Schmitt *et al.* relate how women's networks such as these led to the diffusion of herbal biodynamic preparations for composting to the US, where immigrant Maye E. Bruce caused consternation among anthroposophists in the UK and Europe by combining them 'in a simpler method in her quick-return-preparation' and selling it in America where it apparently was adopted by the Rodale Society.

Yet organics are more often associated with the left than the right. On contemporary right-wing talk radio stations in the US - such as KVI Seattle – with formats headlined by pundit

Rush Limbaugh, callers are apt to stereotype the left as organic muesli-eating tree-huggers. This suggests that on the level of political-economy (if not health and nutrition) organics are an central battlefield in capitalism's drive to subdue nature (for insight see Murdoch & Miele 1999: 465-484).

But, the flexibility of British geographer Stuart Hall, whose *New Times* (1989) approach identified contestation of US intervention in Vietnam and apartheid in South Africa, might suggest we can take organic practises (particularly in local short food chains, or SFCs) as contemporary Leftist tropes. Resistance and opposition to capitalism's neo-liberal globalisation reached a media peak in the 1999 WTO ministerial meeting now known as the Battle of Seattle, where a main gripe of thousands of protesters was not just agribusiness appropriation of production epitomised by patented 'terminator gene' seeds, but ultimately the commodification of every last, intimate item in people's private food consumption.

Neo-liberalism is an adaptation of the neo-classical free market economics of Friederick von Hayek, although its devotees found it politic to tie their laissez-faire supply-side theories to the (anti-mercantilist) liberalism of David Ricardo and Adam Smith. However, Noam Chomsky (2003: 120, 138) believes that while Smith welcomed free trade in goods such as clocks and wine, he feared the 'free movement of capital and foreign investment' and assumed 'the invisible hand' of self-interest would prompt the British to invest funds domestically rather than overseas. Jessop (2001) also popularised the term embeddedness, a term he says he discovered:

in the guise of the Parisian regulation school. This offers specific institutional answers to the old Marxist question of how, despite its structural contradictions and class conflicts, capitalism can continue to expand for relatively long periods. It stresses that economic activities are socially embedded and socially regularized and that stable economic expansion depends on specific social modes of economic regulation that complement the role of market forces in guiding capitalist development.

This thesis focuses on consumption and risk in Seattle. However, let us pause to consider that attitudes and behaviour by consumers vis-à-vis organic food and risk are just the tips of waves of cultural evolution, individual development, political networking, economic reordering, scientific and technological developments, environmental change, etc. As Latour (1991/1993: 51-52) suggested in *We Have Never Been Modern*, organic food is another example of a quasi-object, 'a surface for the projection of our social needs and interests'.

Moving up the scale from individual consumption to global change suggests that the cusps of agriculture's Productivist/Post-Productivist-Transition, industry's Fordist/Post-Fordist transition, and the end of the bi-polar political and economic Cold War signified by the Fall of the Berlin Wall and rapid change to the Post-Cold War era which we now experience correspond with Francis Fukuyama's (1991) *End of History*. All these transitions heralded western liberalism as the political and economic culmination of the Enlightenment. (For now, let us simplify argument by ignoring Fukuyama's chief theoretical rival, Samuel R. Huntington, whose (1996) *Clash of Civilizations* thesis was bolstered by al Qaeda's 2001 attacks on the World Trade Centre and the Pentagon, in what Osama bin Laden announced was an economic war of attrition against the West.) As Joseph Stiglitz (2002), William Greider (1997), Power (2001), and currency trader George Soros (1998) and others have detailed, monetarist economists on the right saw the demise of communism as an opportunity to spread neo-classical economics around the world, an economic democracy in which, in the words of Milton Friedman, people vote with their dollars.

But, even in the eyes of some prominent Republican Party members, liberalism was hijacked by neo-liberal ideology, and neo-conservatives on the US right. Christian fundamentalists are credited with swinging reelection in 2004, and some of them, such as former cabinet member John Ashcroft are perceived as anti-environmentalist, anti-organic, pro-biotechnology and pro-GM foods (Appelo 2004). Evidence that an anti-environment crowd is in charge of the White House comes from a former Bush II cabinet member. Christine Todd Whitman, the former Republican Governor of New Jersey, whose (2005) book *It's My Party, Too* recounts her disillusion after serving as Secretary of the Environment during Pres. G.W. Bush's first term 2001-4. *The Indianapolis Star* (January 15, 2005) explains that, 'Her particular niche as a concerned environmentalist with an impressive track record of reform in New Jersey and her later conflict with the right wing in the Bush administration over national environmental policies are interesting reading on consensus building and moderation in politics.' A *New York Times* (January 26, 2005) book critic noted the Republican falling out:

It is one of the more fortunate footnotes of last week's inaugural festivities: When President Bush was sworn in for his second term, Christie Whitman, the head of the Environmental Protection Agency during his first term, was thousands of miles away, attending a corporate board meeting. ... But given the furor Mrs. Whitman has ignited among some of the president's most fervent supporters, it's a wonder she made it out of the capital without celebrating conservatives using her as pinata....

With Whitman, the Bush II administration lost a veneer of eco-credibility. *The Economist* (March 5, 2005) leader titled 'Greening Bush: an unusual but sensible, suggestion for the homecoming president' claims the Republicans' environmental record was better than even they give themselves credit for. For example, 'cap-and-trade' rules have proven effective free market instruments for reducing sulphur dioxide, since Bush Senior established them in the 1990s' Clean Air Act. *The Economist* condemns the 'incompetent design' of the Kyoto protocol (which came into effect for signatories in early 2005), but admits sudden US withdrawal from the world climate talks in early 2001 disturbed Greens at home and abroad. Further, despite showering US farmers with EU-like subsidies, 2001-2004, Bush II provided weak funding for enforcement of existing laws. Although the federal Environmental Protection Agency (EPA) mandated clean-up of the Nooksack River north of Seattle in the mid-1990s by demanding that state and county authorities develop nutrient management systems on individual dairy farms, enforcement funds were scarce by 2004, and a spike in fecal coliform levels affecting shellfish in Portage Bay on Puget Sound in October 2004 worried observers (pers. coms. with Conservation District advisor Dec. 2004). The reality and appearance of Bush II policies have encouraged more people to increase consumption of organic food, reflected in the sector's year-on-year rise.

Global regulatory mechanisms for a shift from a hotchpotch of communist, social-democratic and liberal democratic regimes to world-wide neo-liberalism under the WTO were put in place during the GATT negotiations during US administrations going back to Harry Truman in 1947. But the dominance of neo-con ideologues such as Paul Wolfowitz in the Bush II administration put neo-liberalism in high gear.² For years the US and its capitalist allies brandished the carrots of greater global wealth via freer trade in goods and services, while slipping the sticks of regulations allowing unprecedented laissez-faire movements of capital into global trade (i.e. electronic currency movements that dwarf goods trade). Anti-globalists viewed it bad enough that rich countries reneged on promises in the 1994 Uruguay Round Agricultural Agreement (URAA) to cut subsidies harming poor food exporters, and that institutions such as Codex Alimentarius Commission, a joint FAO/WHO Food Standards Program (IFOAM 2004: 28), certified for world trade what they saw as products such as rBGH, and GM-seeds bearing prohibitions on future non-licensed use (violating protestors saw as millennia of common law). But what was apocalyptic not just on- but off-farm was the ability of world financial markets to discipline and punish poor countries which deviated from the admonitions of international financial institutions such as the World Bank and

International Monetary Fund. The *Johns Hopkins Guide to Literary Theory and Criticism* (1997) offers insights on Foucault's political thought:

Beginning in the mid-1960s Foucault's interests turned to Structuralism, a relatively new intellectual trend that opposed 'philosophies of consciousness' such as existentialism, Phenomenology, and humanist forms of Marxism and psychoanalysis. The tendency of structuralism to reject the vantage point of the author or subject in favour of that of the text or object may be found in Foucault's *Order of Things* (1966) and *The Archaeology of Knowledge* (1969.)

In the early-1980s the WB and IMF began to enforce a 'Washington consensus' with a lexicon of privatisation, fiscal conservatism - and a 'competitive exchange rate' even though a review in the *Economist* (March 5, 2005) on the bankrupting of Argentina claims a 'floating exchange rate, while no panacea, might have provided the early alarms and flexibility that Argentina lacked.' The French regulationist school offers insight on such gloomy scenarios. (We may consider that historical Regimes of Accumulation in Europe begin with the Greek and Roman Empires, succeeded by the so-called Dark Ages, and Feudalism in spotty relation to the Holy Roman Empire from Charlemagne (c.800AD) and regional empires of the Bourbons, Habsburgs, Prussians and so on. Paul Kennedy (1987) discusses how the Dutch, in the liberal spirit of the Enlightenment, pushed back Feudalism by wresting rights for towns, citizens and guilds from Mercantilist Powers, allowing nascent Capitalism to rise. For notes on French regulation theory and the stages of Capitalism from the mid-19th century to now, see discussion below from Atkins & Bowler (2001).

When western liberal democracy's bipolar rival, the communist USSR, crumbled 1989-91, the Soviets' weakened military posture left the US as the only remaining military superpower. Moreover, the ideological vacuum left by the demise of communism weakened the intellectual arguments of the world's few remaining socialist entities, including not just Albania, Cuba, east Germany and North Korea, but also social democratic entities in Scandinavia (e.g. the Swedish model). Politics, like nature, abhors a vacuum, and neo-liberalism was ready to fill the void.

In regulationist jargon, the world had moved from a neo-corporatist regime of accumulation installed after WW II in which the Keynesian welfare states of Europe and North America were regulated via negotiation (lately, 'co-opetition') by representative bodies from government, business and unions. Among the largely Christian-Democratic governments of

Western Europe, this corporatisation reached its apotheosis in Co-determination (Mitbestimmung) in which union representatives sat on company boards. In France, John T.S. Keeler (1988; N.B. Keeler was advisor on my undergraduate dissertation on the EU Single Market) has recounted how a neo-corporatist alliance between large farmers and peasants led to domination of the EEC budget by the production-tied subsidies of the Common Agricultural Policy (CAP). Swinging her handbag, British PM Margaret Thatcher drew on neo-liberal philosophy to attack the protectionist EEC regime of accumulation initiated under Sicco Mansholt. Thatcher's demand, 'I want my money back!' was a harbinger of neo-liberal demands, a call to roll back the supranational state, as long as it was in the interests of the US. Across the Atlantic, Thatcher's ideological partner Ronald Reagan resorted, against the prescriptions of the conservative economic creed, to massive deficit spending in a campaign to beat the USSR in the Cold War.

US neo-liberals now claim Reagan won the Cold War (despite its launch in the 1940s as a policy of economic and military 'containment' under Democrat Pres. Harry Truman and advisor George Kennan (see NSC-68). They also claim Reagan showed deficits don't matter. If they are wrong for long, the result will be weakened funding for the military (Kennedy 1987) – as well as subsidies to conventional agribusiness which organic activists claim unfairly bolster industrial farming.

Embeddedness, ethnicity & literacy in Seattle

Jessop's idea of embeddedness is a useful tool to unpack the impulses behind Seattle's leadership in organic or alternative consumption. But it is a complicated scenario. For 150 years, Seattle has been an key seaport, attracting trade and settlers from most parts of the world. Chapter 1 related how, after the retreat of Russian and British colonisers, Chief Sealth and his Native American compatriots accommodated settlers from the eastern parts of the US. Immigration was dominated by northern European or eastern US groups until the mid-20th century. Official discourses privileged Anglo-Saxon and Scandinavian people in Seattle, making other ethnic groups more 'invisible'. This is despite the fact that large numbers of Chinese labourers were recruited for the railroads, and many Japanese immigrated to work in horticulture or landscaping. One gardener told me she thought the secret of Seattle's inimitable parkscapes featuring bamboo, cherry trees, magnolias and rhododendrons, is the Japanese aesthetic (pers. comm. Toni Case 2005).

Successive waves of immigration included Italians, credited with establishing truck farms in north Seattle's Ravenna district, for sale in fruit & veg markets downtown. A Netherlander, Henry Van Asselt, born in Holland in 1815, was one of the very first white settlers in Seattle, arriving two months before the historic Denny Party (*Seattle PI*, Nov. 5, 2001). Van Asselt invited Chief Seattle to his wedding and started a dairy farm on the Duwamish River (a site later part of Boeing Field), before moving to central Seattle where he began the city's first sash and door company. However, until the 1960s, more Dutch were found dairying in the Nisqually Valley to the south, or Snohomish, Skagit and Whatcom Counties north to the Canadian border (LeCompte-Mastenbrook 2004). After WW II came immigration by Asians including Filipinos and Koreans. Indeed, wars and ethnic strife are frequent motivators to emigration, seen by more recent waves of incomers from Cambodia, Laos (especially the Mung, who assisted the US against North Vietnam), and Vietnamese. Before and after the collapse of the USSR in 1991, waves of Russians and Ukrainians made Seattle home. The City's Black population rose to about 9% in the latter half of the 20th century, propelled partly by military service people who found civilian jobs and stayed on (This post-WW II pattern is also seen in Alaska.). Partly owing to its proximity to Fort Lewis and McChord Air Force base, Seattle became a music mecca decades before The Kingsmen ('Louie Louie'), Jimi Hendrix or Kurt Cobain. Biographer Michael Lydon (1998: 53-54) details not only how Ray Charles, a journeyman rhythm & blues - and country music - player from the South, first tasted stardom in Seattle, 1948-49, but also influenced 15-year-old Quincy Jones.

At this writing, thousands of Somali-Bantus are leaving refugee camps for homes in Washington State. Those relocated in ruralities frequently become involved in commercial agriculture, and family enterprises supplying urban markets. Seattle's neighbourhood farmers' markets are brightened by these Africans' colourful garb, penchant for bargaining, and alacrity in learning English (2004 Young-Scholten & Strom).

Skid Road (1951), Murry Morgan's respected history, suggests an apolitical lumber town, whose harbour became a provisioning point for miners en route to Alaska's Klondike Gold Rush of 1897-1898. More recently, Washington native and writer Fred Moody (2003) builds on Murray's Skid Road images, portraying Seattle as the last peaceful (if soggy) place on the continental United States where itinerant dreamers or losers (e.g. civic booster Doc Maynard is a good example of both) could forget the Civil War and nefarious Indian wars that followed, a place with such a traditional obsession with being 'nice' (as opposed to

being a 'winner'), that East Coast urbanite, director and co-writer Nora Ephron chose it as the backdrop of her sentimental (1993) film *Sleepless in Seattle*. For those who have the time – and many do - this Pacific Northwest lumber town has always been a good place to read.

That it is also a city in painful transition was better shown by another film, this time capturing romance in the grunge milieu of over-educated-under-employed 20-somethings, (1992) *Singles*, written and directed by part-time Seattelite and longtime Zeitgeist master, Cameron Crowe. While the Kurt Cobain-worshipping denizens of *Singles* litter their grungy rooms with cardboard pizza cartons, the characters in *Microserfs*, Douglas Coupland's (1996) novel of elite computer geeks at Microsoft are more apt to collect organic tofu and organic juice containers. Manuel Castells claims in his (1996-2000) three-volume set, *The Information Age: Economy, Society and Culture*, that world-wide inhabitants in *The Rise of the Network Society (Vol. I)* share commonalities in their consumption of New Age music and natural food reflecting the concerns of the 1992 Rio Earth Summit. But in *Microserfs*, organics are more lifestyle artefacts than focus. Manifesting what Fred Moody (who in the early-1980s supported his writing career by subcontracting typesetting for Microsoft) called *The Demons of Ambition* (2003), Coupland's *Microserfs* spend 16 hours a day writing software. Extended work jaunts reduce them to paranoids in locked offices – fearing a 'flame' email from Bill Gates, yet pining for praise. It is a vigil relieved only when concerned fellow geeks slip 'flat' foods under their doors, such as Kraft cheese singles – industrialised food customary in the lunch pails of Boeing workers.

As mentioned in Chapter 1, shortly after the city's founding civic leaders donated land for the University of Washington (*Lux Sit* is its Enlightenment motto), just walking distance from fish and food markets. *Language* magazine (2004: 9) reported that of 79 cities of 200,000 people or more, only Minneapolis topped Seattle in a ranking of literacy conducted by Jack Miller, chancellor of the University of Wisconsin-Whitewater. US Census data, and other public sources were compiled to measure literate behaviour. In 2004 the Top 10 were Minneapolis, Seattle, Pittsburgh, Madison, Cincinnati, Washington, DC, Denver, Boston, Portland, and San Francisco. In contrast New York City (49th) and Los Angeles (68th) ranked much lower despite importance as major cultural centres. The survey measured 'educational attainment, number of bookstores, periodicals published, newspaper circulation and library resources' as the nation's most literate city. According to the Hartman Group (1997, 2004), a consumption consulting firm based in Bellevue (adjoining Redmond, the growing city that

is world headquarters for Microsoft, both a couple miles on the Highway 520 floating bridge across Lake Washington to Seattle), the high level of education characteristic of the city made it a logical bulwark of organic consumption.

Seattle's high education levels reflect its high proportion of young urban professionals and gay people without children, but with earnings commensurate with high costs of central city housing. *The Seattle Times* (ca. 2002) reports that according to the 2000 US Census: Out of the top 50 largest U.S. cities, Seattle has the second smallest percentage of people under 18 years old. The lack of children is confined to the city limits, especially north of the ship canal and in neighbourhoods like West Seattle, Montlake and Queen Anne. Outlying cities such as Mill Creek, Sammamish and Maple Valley have many more children. In some of these areas 1 out of every 3 people is under 18.' Novelist Fred Moody, who lives with his family on an island in Puget Sound, decried the yuppie-driven exile of children from once-family neighbourhoods such as Greenwood, near Greenlake and the municipal zoo, as well as Queen Anne Hill above the Space Needle and Elliot Bay. But the reasons for fewer children may be less nefarious than Moody hinted, reflecting merely that some Greenwood homeowners continue living there when their offspring leave the nest.

Whether in yuppie neighbourhoods or not, education is a key to alternative food consumption. The Organic Trade Association (2002, 2003 see Reynolds 2004, etc.) notes that, along with disposable income, the leading parameter associated with organic consumption around the world is education. This implies that, even if income of highly-educated families does not support high organic consumption, education predisposes their attitudes to pro-organic behaviour such as gardening, networking and sharing food.

Since an underlying assumption of this thesis has been that Seattle (and its fellow port and cultural cousin Portland, Oregon – both stacked high with ship containers marked with the logo of MNC Sea-Land) compares well with the Bay Area which Buck *et al.* (1997) extol as a leader of alternative consumption, these literacy data dovetail perfectly with this assumption. Pushing things a bit further, LA's poor ranking at 68th is congruent with John Agnew's characterisation (pers. comm. 2003) of organic consumption in LA being motivated by health reasons, rather than the environmental-consciousness typical of the Bay Area, and I argue, Seattle.

But although Seattle's history was, perhaps more than most US cities, characterised by peaceful coexistence among immigrant groups, they tended to settle in disparate communities (leading in part to Seattle's present day characterisation as a city of neighbourhoods called Ballard, Capital Hill, Chinatown, Columbia City, Lake City, Magnolia Hill, Queen Anne Hill, Rainier Valley, West Seattle, the University District, and so on. Labour disputes degenerated into racial brawls. Even the most visionary politicians at times betrayed prejudice. The melting pot recipe was far from complete. Seattle proved that libraries and universities are no guarantee against ethnic profiling.

That Seattle did not escape racism is recounted in David Guterson's (1998) novel *Snow Falling on Cedars*. Japanese farmers, peacefully growing fruit, veg, strawberries, etc. on islands in Puget Sound, find they have not completely escaped the racism they fled in Seattle. Despite the fact that many of their forebears emigrated from Japan to the Pacific Northwest in the 19th century, they lost farms and businesses when ordered to internment camps on the mainland during WW II. According to G.W Elfendahl (March 20, 2001), Walt Woodward was a lone public figure in condemning relocation as unconstitutional. Over 200 of the 278 Japanese-Americans to be exiled from Bainbridge Island to California were US citizens. Woodward's editorialising against this civil rights violation made him the model for the newspaperman in Guterson's novel. Pres. Reagan apologised and made reparations to Japanese-Americans in the Civil Liberties Act of 1988, but when Bainbridge Island's Sakai Middle School taught 6th graders that internment was morally wrong, islander Mary Dubrowski argued for a more 'nuanced' view in the context of the Japanese attack on Pearl Harbor in 1941. This view is consonant with support for the Patriot Act passed after the al Qaeda terrorist attacks in 2001, legislation which worries Arab- and Muslim-Americans (*Seattle Times*, Sept. 6, 2004).

In Pres. George W. Bush's post-9/11 expression of neo-liberalism, ideas on empire and ethnicity thought passé or taboo have re-entered public discourse. Dubrowski criticised teaching on internment as 'one-sided'. She may have a point, since ethnic Chinese escaped internment, perhaps based on reasoning that the US was an ally of China (a preoccupation of *Time* magazine publisher Henry Luce and his politician wife Clare Booth Luce, as well as the powerful 'China lobby' based on mid-west US church groups sponsoring missionaries in China (see Dean Acheson 1969). But Dubrowski based her views partly on a (2004) book, *In Defense of Internment* written by former *Seattle Times* editorial writer Michelle Malkin, and

her understanding of Malkin's complex arguments may be flawed. Malkin claims WW II internment is so politicised that a vetting must be made of the historical record. In fact, Malkin concludes internment was 'abhorrent', but defends the right of the US government to inter aliens and citizens in other situations. Born in Philadelphia, Malkin's positionality as the daughter of Filipino parents makes it tenable for her to demand strict policies by the Immigration and Naturalization Service in her syndicated newspaper columns, appearances on Fox TV, and blogsite: <http://michellemalkin.com/>

WW II internment is still contested, but it is worth noting a recent sign of Seattle's multiculturalism: former King County Executive Gary Locke, an Asian-American, was elected as State Governor, 2001-2005. Although many Asian-Americans have moved into positions of greater economic and political power since WW II, their early contributions in horticulture remain delightfully visible among staff and vendors at Seattle's neighbourhood farmers' markets, not to mention the cherry-tree bordered Quad at the University of Washington and the Japanese section of its Botanic Garden.

Ethnic Makeup (Sources: US Census Bureau and Synergos)

The following map shows the overall ethnic makeup of the Seattle, WA area. In the case of this map, ethnic makeup is defined as an individual who falls within one of four categories --- White, Black, Asian, or Hispanic. Furthermore, the map indicates the density of each ethnic group by selectively color coding based on the dominate ethnic group. The dark colored areas in each category is an indicator of where that ethnic group has the highest concentration of that group as compared to the other groups. It is important to understand that even in the highest concentrated areas that that does no preclude another ethnic group from being present. To determine the number of people that live in an area you should view the population density map. Sources: US Census Bureau and Synergos Technologies, Inc., www.ersys.com/usa/53/5363000/ethnic.htm

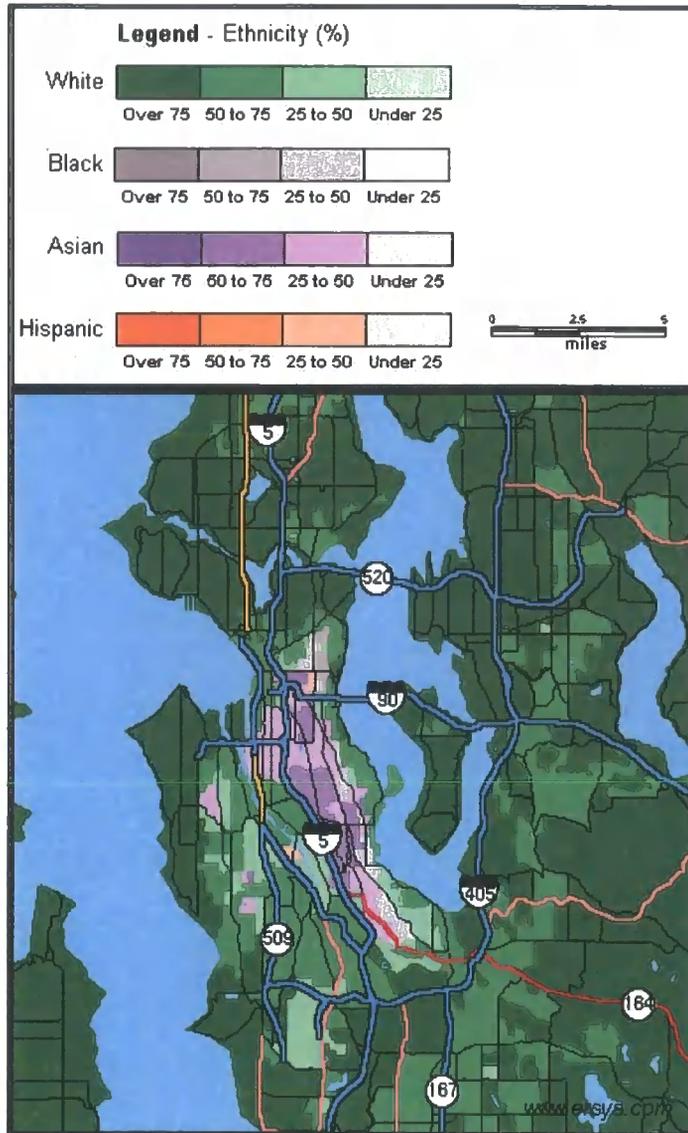


Figure 2.3a. Ethnic Make-up 2000 Map.

	Seattle		Bremerton		Tacoma		Olympia	
	Count	%	Count	%	Count	%	Count	%
Pop. 2000	563,374		37,259		193,556		42,514	
White	382,532	67.90	26,950	72.33	128,696	66.49	35,343	83.13
Black	46,545	8.26	2,723	7.31	21,187	10.95	772	1.82
Asian	73,512	13.05	2,005	5.38	14,508	7.50	2,454	5.77
Hispanic	29,719	5.28	2,457	6.59	13,262	6.85	1,863	4.38
Other	31,066	5.51	3,124	8.38	15,903	8.22	2,082	4.90

Figure 2.3b. Ethnic Make-up 2000 Statistics. Synergos Technologies, Inc.

Like a lacquered table, Seattle is multi-layered in immigrants who nearly always assimilate, but often introduce artefacts of their native cultures. Decades before socialist Joseph Schumpeter described capitalist fixes during the world depression of 1929-39, Seattle was multiply-embedded in conflicting strains of politics and economics. According to Charles P. LeWarne's (1971) *Utopias on Puget Sound* Scandinavian and European socialism and communitarianism vied with the militant internationalism of IWW Wobblies - and the strike-breaking *Realpolitik* of business, police and private security, as seen in the Everett Massacre of 1917. Although Seattle retains a profile as an affluent, highly-educated city, whose Scandinavian socialist tendencies ensured a Democratic vote in the 2004 election, its talk radio stations are mostly attuned to a white male, right-wing, neo-liberalist demographic.

Jonathan Raban (2003) captures the counter-strains of Seattle's environmental and political landscapes in his novel *Waxwings*. A British academic in the University of Washington (and pundit on a politically-correct radio station) is buffeted by the Left-Right culture and gender wars of white Seattleites – even as an ambitious, illegal Chinese immigrant, remodels his house for cash, opening his eyes to the realities of survival in an era of cut-and-thrust globalisation that did not exempt Seattle in the fin de siècle dot.com crash. Raban is an English-born writer who moved to Seattle in 1990, claiming that he took an apartment briefly inhabited by Elvis Presley on a visit to the 1962 World's Fair. His literary reputation in the US was established by publication of (1991) *Hunting Mr. Heartbreak*, a semi-personal road novel from New York to the American South, ending in Seattle. To a remarkable degree, Raban 'gets' the places he encounters, rendering tales that ring true to the native ear.

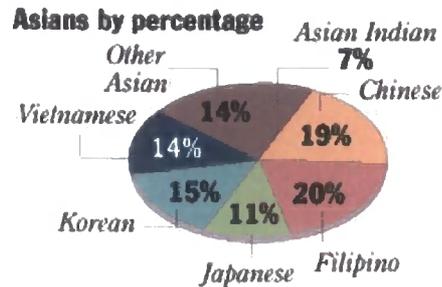
Earlier, location-oriented, quantitative-turned-qualitative geographer David Harvey (1990: 3) thrust Raban into his discipline by citing his 'highly personalized account of London life in the early 1970s' *Soft City* (1974) 'at that cusp in intellectual and cultural history when something called "postmodernism" emerged from its chrysalis of the anti-modern to establish itself as a cultural aesthetic in its own right.' Harvey's reference to Raban is quoted at length because it links to questions of whether or not consumption of organic products is a characteristic of software city Seattle, compared to that crucible of the industrial revolution, Newcastle upon Tyne, which lags behind Seattle in transitioning from an industrial economy (in which Marx says workers in, say, arms, ships and steel find identity in production) to a service economy (in which Bauman claims service workers and even residual industrial



Figure 2.4. Asian Indian population growing fast.
http://seattletimes.nwsourc.com/census2000/maps/asianindian_27.html

Asians in Washington

The Asian population grew rapidly during the 1990s led by Asian Indians whose numbers nearly tripled. Despite the surge of Chinese, Koreans and Vietnamese, Filipinos are still the majority Asian group in the state.



	1990	2000	% change
All Asians	195,918	322,335	65%
Filipino	43,799	65,373	49%
Chinese	33,962	59,914	76%
Korean	29,697	46,880	58%
Vietnamese	18,696	46,149	147%
Japanese	34,366	35,985	5%
Asian Indian	8,205	23,992	192%
Other Asian***	27,193	44,042	62%
Multiracial****	**	73,406	-

* Total does not include multiracial

** 2000 was the first time more than one race could be selected

*** People who are Cambodian, Laotian or other Asian ethnic group not listed, or who selected more than one Asian background

**** People who selected Asian and a non-Asian race.

THE SEATTLE TIMES

Figure 2.5. Asians in Washington Pie Chart,

http://seattletimes.nwsourc.com/census2000/maps/asianindian_27.html accessed 5mar05

workers find identity in consumption). Raban's gift is an ability to render social history in clear but popular form. Since moving to Seattle, the expatriate has become a civic gadfly in novels, historical accounts and newspaper pieces. For instance, Raban's (1996) *Bad Lands* recounted the dashed promise of the transcontinental railroad to farmers and town boosters in the Great American Desert between the Great Lakes and Seattle, from the late 19th century to the Dustbowl of the 'dirty thirties'. He has written for the alternative newspaper *Seattle Weekly* (now owned by Village Voice newspapers) and the mainstream *Seattle Times*. Mocking the eco-naiveté of Seattleites who imagine they inhabit a natural Eden, he refers to the conifer fringe beneath snow-capped mountains as 'industrial forests'. Here Raban offers a populist version of academic discourse on the nature of Nature with a big *n* – a recurring theme of this thesis precisely because it is one of everyday Seattle media debate.

Blogger Dan King (2003) claims (with a nod from Raban who commented on the blog) that in pricking the dot.com bubble, *Waxwings* uses Seattle as a character representing the arrogance of US cities in *fin de siècle* America such as Carmel, California, which lost millions on the stockmarket, manifesting what Federal Reserve Chairman Arthur Greenspan

called 'irrational exuberance', flying too close to the economic sun before the dot.com crash and 9/11 brought political-economic gloom.

But Raban also treats Seattle on its own. He acknowledges the city's embeddedness in an astonishingly beautiful environment (perhaps conducive to organic consumption), contrasting its recent birth of Microsoft (headquartered in nearby Redmond), and past century with aviation giant Boeing. Although *Waxwings* was written before 9/11, or the official announcement of Boeing's headquarters move to Chicago, Raban reveals the city's dynamics. *Waxwings* is a metaphor of hubris fallen to earth. Microsoft chairman Bill Gates was increasingly spotted in TV clips from Bangalore, India, where MS was sourcing more of its software. Boeing's civilian airliner business, centred on Puget Sound, was challenged by the military business on which it grew. James Wallace of the *Seattle PI* (August 6, 2003³):

By the time Boeing Chairman Phil Condit began to seriously consider moving the headquarters, Boeing was a much different company than the one he joined as a young aerospace engineer in the 1960s. Boeing was expanding far beyond its commercial airplane roots, as a defence and space powerhouse. Condit believed Boeing should adopt the General Electric model that has been so successful -- a lean headquarters separate from the main businesses.

Trust & risk in Ludwigshafen & Seattle

Based on an ESRC group study comparing the chemical towns of Ludwigshafen, Germany and Grangetown, Scotland, Peter Phillimore (Phillimore & Bell 2005) describes how ethnography seeks to uncover knowledge 'below what is said'.

This is a challenge when unions and civic leaders are apt to defend companies like BASF (whose 1921 explosion cost over 500 lives on the site which remains its world headquarters), or Boeing (whose prototype B-29 bomber crashed spectacularly onto a Seattle meatpacking plant in 1943, taking 35 lives. See Serling 1991/1992). Firefighters in both cities are trained to fight chemical fires with a radius of 1km. Living with such risks might be interpreted says Phillimore, in terms of a self-censoring Orwellian nightmare - or in Ulrich Beck and Anthony Giddens' risk society thesis as a dark, if unspoken sense of dread (This thesis seeks to unlock how and why some of the same Seattle firefighters trained to combat chemical fires at Boeing plants also delight in organic gardening.). In Ludwigshafen, Phillimore finds that Tim Ingold's (2000) arguments 'work better than Beck's in the way they ascribe people's ability to exist in proximity to a potential fireball as a 'familiarity that

breeds acceptance' and, more importantly, a prideful acceptance embedded in knowledge of the skills, training, and technology of BASF – not to mention its safety record which compares favourably to competitors Bayer and Hoechst. Phillimore argues that Ingold's sense of 'dwelling' is operant in Ludwigshafen, where BASF provides employment and espouses concern for the environment and social responsibility (funding community tennis courts, an orchestra and even a wine cellar) – and I will argue this sense of 'dwelling' has operated in Seattle's relations with Boeing and Microsoft – a symbiosis that may be weakening as they extend the multinational, even transnational nature of their activities.

Phillimore reiterates Ludwigshafen is 'not a town consumed by dread', and the trust of its citizens in BASF is not (what Marx would call) 'false consciousness'. Cautioning that Beck's risk stories of uncertainty, insecurity and alienation are not all gloom, but attenuated by the fact that 'Beck gives us more to think about', Phillimore nevertheless claims persuasively that studies of industrial company towns (posing physical risks) may be best understood in terms of Ingold's 'taskscape' in which familiarity with the special skills needed to keep risks dormant results in the 'naturalising of the environment'. (Coincidentally, I lived and worked in Ludwigshafen for two periods comprising two months 1980-81, building houses for BASF officials. I agree with Phillimore that instead of dread, the dozens of citizens I met – from professors and managers to technicians and hotel and food service workers – seemed fully versed in this German chemical town's unique risk/benefit situation, and optimistic in what Phillimore calls 'a public culture of trust and confidence evident in Ludwigshafen'. Nor is this to deny the rich role played by black humour in everyday German life – a cultural trope perhaps closer to the UK than the US, where the list of non-taboo humour topics is shorter!)

Risk defined personally

Risk is integral to this study. Food risks such as BSE/vCJD are of interest in how they interact with consumers' attitudes and behaviour. There are, of course, other forms of risk, such as physical risk, and this thesis attempts to correlate them to people's attitudes and behaviour regarding organic consumption. So perhaps it is time to define physical risk as used in this thesis. Physical risk comprises a situation in which, 'If you make one false move you die.' From youth on a farm (working with large animals, heavy machinery, in confined silos as well as on high roofs), through decades of work as a carpenter and construction

worker (cranes, power saws, nailers and other machinery, high voltage, heights, and toxins including asbestos), and risky activities (motorcycle touring and racing; rock-climbing, etc.) much of my life has been lived a step from disaster. My wife has grown to understand that participants in such activities seldom focus on the risk inherent in such activities, but concentrate on trained procedures which maximise safety. In the case of walking on roofs several stories above ground that means always knowing which rafter to grab if a foot slips – and being strong enough to hang on if it does. Although familiarity with risk can raise self-esteem (as Lupton 1999 attests), most chronic risk-takers are familiar with the adage ‘pride goeth before a fall’ (a situation that also defines ‘pratt’). It must be said that physical risk is not uniformly welcomed by participants in risky professions or hobbies, but their attitude to risk may involve a mental assessment similar to the following:

Yes, my activity is riskier than usual, but those who think everyday activities are riskless deceive themselves. Lightning may strike them in their beds. One can die driving home, be hit by a bus – even drown in three inches of water. What is different about me is that I’m trained and experienced to manage risks in work and hobbies. When it comes to chemical towns like Ludwigshafen, or aviation towns like Seattle, I can’t believe academics (who fly jumbo jets around the world, lugging laptops composed of chemically-derived materials) question the pride that residents in Ludwigshafen have in BASF, which rose from WW II ruins to safe prosperity. ‘This academic risk assessment is ridiculous. Chemical industry is necessary to modern life. If not in Ludwigshafen, where? No wonder BASF is esteemed when Ludwigshafen looks so good compared to the centrally-planned chemical desert around Katowice, Poland, the Trabant works in old East Germany – or even the Hoechst works near Frankfurt-am-Main.

Perhaps the root problem of academic studies based in the UK is that they are more prejudiced by *class* than in Germany, France or the US. It’s the old question of why so many upper and middle-class people in the UK (where scientists such as Priestley and engineers such as Brunel once fostered the chemical potions and bridges that make the modern world possible) find the grit and grime of industry unacceptable in such twee manner. Why are engineers and street cleaners well-trained and respected in Germany, but not the UK? If dirt, as sociologist Mary Douglas (1966/2002) said, is matter out of place, it’s strange there’s more of it about in Britain. The phantom worker (*Phantom-Arbeiter*) above may protest too much. His rant assumes the ubiquity of risk, while superciliously hinting that voluntary risk-takers are safer (or at least happier) than risk-averse people. Similarly, some motorcyclists express more concern for their machines than personal safety, as shown in this email from a Seattle-based racing club:

From: Errol [pseudonym] To: 'members

Sent: 2005 1:19 AM Subject: cheap street bike wanted)

i have a friend he is a beginner. he is looking for a sportbike. something in the 1000-1500 dollar range.

needs a cheap bike to learn on. *something he can crash and not cry about*. ex500, f2, f3, zx6, whatever.

if you have something like this, please contact me off list.

But the *phantom worker* ought to exclude Professor Phillimore from a blanket charge that British social scientists suffer anti-industrial misconceptions supposedly endemic in the national intelligentsia. Phillimore is more judicious than that. Though quick to acknowledge that epidemiological data, mortality rates from cancer, etc. are suspiciously hard to obtain in Ludwigshafen, he is not ready to ascribe this to base Orwellian motives. This is in line with Phillimore's (1998: 22) paper comparing health in Sunderland to Middlesbrough. Acknowledging that a 'narrative of reassurance' somewhat stifled public debate, Phillimore maintained evidence was 'persuasive' if not 'conclusive' that Middlesbrough suffered more respiratory disease than Sunderland and that, 'The interpretation of the same data as evidence of harm, is no more 'right' epidemiologically than as inconclusive distraction. What this work illustrates however, is that the interpretation of evidence is necessarily political, and as such vulnerable to being represented in a dominant narrative as reflecting powerful social interests.' Bush *et al.* (2001; see also 2002) give insights into the risk perceptions of healthy people. In places such as Middleborough, residents joke that even the birds cough – but they seem to maintain a sense of well-being by noting other people who suffer worse pollution.

Risk and fear are in the mirror of the beholder. Our *phantom worker* might think it ridiculous that UK academics not permitted by the British Red Cross to donate blood in their own country because of exposure to BSE/vCJD – waiting in uncertainty for the first symptoms of dementia presaging a fearful death – can so condescendingly patronise the citizens of Ludwigshafen. The UK citizens should pay brave BASFers for assuming disproportionate chemical risk. But perhaps they secretly envy them. After all, the little exposure Germans have had to BSE/vCJD is probably totally concocted by greedy, sloppy British agribusiness. Meanwhile, Ludwigshafen, bomb-free and largely accident-free since WW II, is likely safer than London where government policy has exposed it to al Qaeda attacks like those on New York and Washington in 2001. In this mindset in which training, experience and judgement (à la Tom Wolfe's (1986) *The Right Stuff*) instil confidence, risk is the frisson making every day a little glorious. Such risk-managers may, at least in their salad years as 20-somethings,

pity office workers as drones denied primal thrills because, as the title of Deborah Lupton and John Tulloch's (2002) article suggests, 'Life would be pretty dull without risk'.

Phillimore's recognition that confidence manifested by citizens of Ludwigshafen is based on knowledge of safety training procedures at BASF parallels Lupton & Tulloch's conclusion that, 'Risk-taking, therefore, is far more complex than is suggested in the traditional social scientific literature. It may be based just as much on knowledge - of the self, of one's own bodily capacities and desires - as on ignorance.' In subsequent chapters of this thesis, surveys and focus group transcripts will embellish this and another position of Lupton & Tulloch, i.e. that risk-taking may also be rational behaviour. Such risk-takers may logically prefer organic food not only for its presumed benefits to the non-human environment, but also for their personal long-term health.

Agricultural geography to geography of food

Sarah Whatmore (2000 *TDoHG*: 10) notes that when the disciplinary niche of agricultural geography began to lose its theoretical momentum, Ian Bowler & Brian Ilbery (1987) suggested the field might find stimulus in political economy, and that Peter J. Atkins (1988: 282, 281-3) went even further by calling for 'the end of agricultural geography and the dawn of a "geography of food.' Whatmore writes that, 'Until the 1950s agricultural geography was a specialist subset of economic geography', itself a sub-discipline of human geography which, writes Roger Lee (2000 *TDoHG*: 197-99), 'studies people's struggles to make a living' by employing some of the same mathematical tools employed by the meta-discipline of 'intending to represent economies as asocial mechanisms'. While it has been said that David Harvey brought economics back into a geography made lifeless by location theory with his (1973) *Social Justice and the City*, it was Doreen Massey who brought the social back to geography with works such as (1984) *Spatial Divisions of Labour*. More recently Seattle researcher Lucy Jarosz (2000: 279-283) characterises organic and alternative food networks as 'social relations' in an approach that works very well on the micro-level of farmers markets, community supported agriculture (CSA) and alternative food networks (AFNs, although Jarosz uses the term agro-food networks). In Jarosz' geography department at the University of Washington in Seattle, HoD J.W. Harrington says many approaches 'work productively' side-by-side in the Department – a former base of location theorists such as W. Isard and Peter Haggett.

Here it might be said that many geographers forsook the location theory of Isard, and of Richard Chorley & Peter Haggett (1965) as a barren, positivist spin on the environmental determinism fostered by Alexander von Humboldt (1769-1859), Friedrich Rätzl (1844-1904) and his disciple Ellen Semple (1863-1932). Location theory was the wrong tool to quell the political and racial issues epitomised by the Chicago, Detroit, London, Miami and Paris riots of 1968. In the 1970-80s, strands of economics and social relations reinvigorated the explanatory power of the discipline, just in time for the advent of Ford Escorts – or TV Dinners – manufactured from parts or ingredients from 100 countries around the world. Modern times made the sourcing of foods, like Fords, so disaggregated that it made more sense to discuss food studies than agricultural geography.

Paul Cloke, Chris Philo & David Sadler (1991: 1-2) highlight *Horizons in Human Geography* (1989) edited by Derek Gregory⁴ and Rex Walford as a far-reaching response to the 1960s' work of Chorley & Haggett. Gregory's contribution was rather anthropological in approach, influenced by the work of Edward Said's (1978) *Orientalism* presaging the cultural turn in geography and food studies which are useful in the present thesis. Cloke *et al.* (1991: 1-2) write also that *New Models of Geography* (1989) edited by Richard Peet & Nigel Thrift drew on Chorley & Haggett (1967) in developing their 'political economy' slant on human geography. But in agriculture and food studies, Fred Buttel and Harriet Friedman are still synonymous with the political economy approach in the US.

The cultural turn in food studies, hearkening back to Claude Levi-Strauss (1966), was taken by anthropologists, sociologists, human geographers and others such as Beardsworth & Keil (1992), Stephen Mennel (1985), Arpad Appadurai (1986, 1988), Phil Crang (1994), Ian Cooke & Phil Crang (1996), David Bell & Gill Valentine (1997), Alan Warde (1997), Alan Warde & Lydia Martens (2000) and others.

In a chapter in *Reading Economic Geography* (2003) Trevor Barnes dispels mystery in the thesis-counter-thesis-synthesis dialectics of geographical theory and philosophy (see 2003 Peck, Sheppard & Tickell). This essay, 'Inventing Anglo-American Economic Geography, 1889-1960', has implications that extend beyond 1960 to the present. Barnes (2003: 11) claims 'economic geography was invented somewhere between the time of the first telegraph and the first radio'. This is a potentially disconcerting revelation to anyone oblivious to

previous historical eras (e.g. mercantilism, a pre-telegraph era when, John Law and Michel Callon show, problems of command and control were as difficult as financing the guns, ships and men to carve an empire) whether working within economic geography, its sub-disciplines of agricultural geography, in food systems as Atkins suggested, or anything else.

In a talk at Durham University Geography Dept. in 2002 Barnes argued that the paradigm shift from location theory to human geography are not purely Damascean in nature, sparked simply by, e.g. the new social vision of one David Harvey, but equally by contingent, almost chance developments predicated on funding, networks of researchers, diffusion of academic journals, citations, and the research assessment exercise (RAE) in the UK. These are what actor network theorist Bruno Latour theorised as networks of human actors and non-human actants (In some ANT conceptions, a network is a political ecology in which the organisation of an assemblage is more important than the identities of its constituent parts.). If there is irony in the demise of location theory, it is that it was concurrent with the rise of cheap computers that made the discipline's mathematics calculable by more scholars.

Barnes relieves the intellectual nausea felt in the paradigm shift from location theory to a confusing array of human geographies after 1968. Noting that, 'Thomas Edison (1847-1931) said that his genius consisted of '1% inspiration and 99% perspiration', Barnes hints geography is no different. While defending economic geography – despite its relative youth (compared to, say botany or mathematics) – as a useful tool, Barnes tacitly admits that geographers, approaching, measuring and mapping the world from different tangents, each with unique senses – are bound to interpret their subject as variously as the apocryphal blindfolded people describing an elephant. This is no bad thing. On the contrary, it takes the sting out of paradigm shifts, 'from learning statistics, punching computer cards, and formally deriving abstract models.... ..to learning qualitative research methods, knowing the lexicon of political economy, and reading exotic social theory by Parisian intellectuals...' Barnes' sticks are sufficient to keep geographers honest, while his carrots encourage us to roll with 'contingency' (p. 24) and go back to the blackboard, humble-but-unembarrassed to attempt better pictures representing human and non-human nature.

David Sibley (in Cloke *et al.* 1991: 184-5) noted that positivist spatial analysts have great expectations of finding order in the cosmos, compared to ethnographers, qualitative and certainly postmodernist researchers expecting greater roles for free will, contingency, or

anarchy. Sibley finds the divide between the two *Weltausschauungen* deep, and he blames obsession with tools such as 'point-pattern analysis' for leading positivists away from deeper truths in nature. Yet I would posit, both positivists and ethnographers seek order in their studies, if only for ways to tell the stories of their work. Let me add, while location theory may have lost status as a cutting edge tool, it is arguable that some of its principles remain relevant. Location theory is another arrow in the researcher's quiver, although the present study finds greater use for the arrow of ethnography.

Atkins' (1988) suggestion to reframe agricultural geography as the geography of food was prompted partly by the evolution of ag-geog from its origins in the colonial era, when environmental determinism was presumed to be the explanation for the location of food production and consumption. The need to develop new approaches to globalising production and consumption circuits was also prompted by the inadequacy of the theories of Paul Vidal de la Blache and Carl Sauer (who, reacting against Rätzl and Semple, properly stressed variability in human response to the environment), and of course the abstract location theories of Isard, Chorley & Haggett

Atkins' call was also logical because agricultural geography was traditionally inward-looking, excessively tied to location theories such as those of the 19th century German tradition of J.H. von Thünen (1826: 22, 44) which (although I would argue von Thünen remains useful in examining competition between organic supply chains based in different areas), were nevertheless out of step with the pace of globalisation by the late-1980s. Ag geography had to be revitalised because food systems were now more complex. This is a process familiar in economics, i.e. the development over time of ever more complex divisions of labour. In food systems, this is a process that might have been deductively predicted from neo-classical economic theory. On a material level, it means that as food processing is disaggregated into more sub-processes, and ingredients (like auto parts) are sourced from more suppliers, food systems develop spatially according to the competitive advantages of different sites, in production of raw agricultural commodities, while other (likely more industrialised) areas develop expertise at intermediate processing, before shipment to (often rich developed) countries for final processing, before distribution and consumption – or possible re-export as higher-value items to other countries, sometimes those producing the raw materials originally.

Doreen Massey (Jones *et al.* 2004) has developed her theory on the New International Division of Labour (NIDL) in this vein, building on David Harvey's reintroduction of Marx into human geography. Massey's theory seems congruent with Wallerstein's quasi-geographical concepts of a core, periphery and semi-periphery, but observers such as Peter J. Atkins (*pers. com.*) claim Wallerstein's theories are fragile in the presence of counter-examples. One bit of counter-evidence may be Singapore, which in the 1980s developed under Lee Kuan Yew's benevolent authoritarianism into a Newly-Industrialised Country (NICS included Japan, Korea, Thailand and Taiwan). Although Robert Gilpin (1987) analysed the economic success of these so-called Asian Tigers in terms of export-led-growth made possible by US market entry, in payment for their client roles in US Cold War anti-communist activities, Singapore took a nonaligned path to prosperity.

Be that as it may, Massey's NIDL seems to correlate with Wallerstein's World Systems theory which Jones *et al.* (2004: 9-11) describe as three modes of production: (I) mini-systems of hunter-gatherers or basic agriculture based on barter; (II) world empire in which farm surpluses support an elite class of military-bureaucratic elites; and (III) our world economy based on capitalism and profit. Massey's NIDL can be seen as the configuration of the world economy after about 1985, when manufacturers such as Ford, Toyota and Honda were first able to manufacture what Ford called its Escort - 'a world car' with components supplied by 100 countries. Although in some respects this global supply network represents beneficial technology transfer from rich to poorer countries, the deep structure of the NIDL remains. For instance, Peter Dicken (2003) writes that Japanese manufacturers have a 90% market share in Thailand. While this NIC has had the power to demand that Japanese brands sold locally must be assembled locally, profound symptoms of the NIDL remain; sophisticated research & development activities remain in Japan. This is true for countries less advanced than Thailand such as Vietnam, and perhaps even Brazil, where turn-key Japanese assembly plants are supplied the most sophisticated sub-systems, such as engines and transmissions, from factories in Japan, although Womack *et al.* (1990) found some remarkable examples of high quality production in Brazil.

The pattern has been even more pronounced in civilian airliners, where Boeing has only grudgingly allowed manufacture of some substructures (e.g. 747 jumbo jet vertical stabilisers in Japan, and 737 wings in China) abroad while R & D is centred in Seattle, and engine development and manufacture is largely kept in the US or UK. Relations in the NIDL are

changing. Around the turn of the century, Boeing decided not to compete against Airbus by developing a bigger successor to its 747 jumbo because, while it expects China to be the largest market of the 21st century, it will be one based on small or medium passenger loads. IBM's line of personal computers was sold to a Chinese company in 2005, subject to approval by US authorities. While dramatic, all of these developments are in line with Massey's NDIL, Raymond Vernon's 'product cycle' and neo-classical economic theory. What remains consistent in each theoretical scenario is that the highest-value operations are controlled by the strongest economic power (usually the US or another rich 'western' power) if not actually conducted within its geographic borders. Jessop, Peck and Tickell might argue that it is only a matter of time till neo-liberal 'hollowing-out' of the nation state makes transnational companies, i.e. TNCs headquartered in more than one country, so powerful that even R & D may be relocated outside rich western capitalist countries to save labour costs. Evidence for this is Bangalore, India, where Microsoft outsources software. Massey, like Wallerstein, is wary of the inimical effects of free-ranging global capital. But her description of the division of labour is perhaps less paranoid than that of Wallerstein, who hearkens to Marx in identifying the capitalist powers' Machiavellian establishment of a compradore class of individuals or countries to absorb and deflect resistance by the working class. In Marx's depiction of what we call game theory, it is always in the interest of the working class to structure conflict in terms of just two parties: (i) workers vs. (ii) capital.

But it is in the interest of capital to structure economic relations in terms of three parties: (1) workers, (2) a buffer, comprador, social middle class' or 'newly industrialising country' such as Asian NICs, and (3) capital. These might compare metaphorically with Wallerstein's division of countries into (1a) periphery, (2a) semi-periphery, and (3a) core countries, respectively. According to Jonathan Cloke capitalism in the British Empire made effective use of compradors when it, for example, relocated Indian bureaucrats to South Africa, or to Fiji where its effects linger in poor income distribution and political unrest (pers. comm. with Jon Cloke, Jan. 2005). A current example of the NIDL begins in the relatively undeveloped region of Issan in northeast Thailand. Issan produces sweet rice, which is trucked hundreds of kilometers south to Bangkok, where it is checked for inferior rice or adulterants, then processed and shipped to nodes of the rich world such as Central Market in Seattle. Some of this rice is shipped as bulk commodities to multinational processors on other continents which turn it into value-added products including ready meals and desserts. Siam Grains, whose modern factory I photographed in Bangrak, Bangkok in 2004, has begun a niche line

of organic rice. Instead of being fumigated with insecticide, it is vacuum-packed before shipment to the EU and US.

Failures of pol-econ

In the UK, calls by Atkins, Bowler, Ilbery and others to reinvigorate agricultural geography were followed by swathes of research in the 1990s. First the status quo was audited and alternate paths for uncompetitive EU and UK farms to augment incomes were investigated. These included alternative farm enterprises (AFEs, see Ilbery *et al.* 1998) and other gainful activities (OGA off-farm). Although UK farm structures (e.g. most dairy farms, and arable farms in East Anglia) were judged to be more economically competitive than their French and even German competitors, many UK farms were low-income operations dependent on subsidies, especially hillside farms often designated as Less Favoured Areas (LFAs).

Andrew W. Gilg & M. Battershill (1998: 25-40) investigated whether LFAs could prosper with more eco-friendly production in France', and they invoke Marsden & Arce's (1995) caveat that the globalisation process cannot be seen as 'all embracing and all explanatory'. Noting that LFAs typically have undergone less application of non-organic inputs, and are thus easier to certify organic, Gilg & Battershill's conclusions are optimistic. However, examinations of the geography of organic farming in the UK found most of it located in areas previously favoured by conventional farming where growing seasons are longest, and within marketing distance of the major cities of London and Birmingham – not in the upper Pennines or around Newcastle. These findings are congruent with Peter Atkins' observation that about one-third of farming world-wide is located in peri-urban areas surrounding cities. They also chime with identification of organic farming and marketing in Canada by Beauchesne & Bryant (1999) who found most on the fringe of urban centres such as Montreal, Ottawa and Toronto, where a critical mass of organic demand and supply stimulated innovation and market growth.

Terry Marsden, Richard Munton & Neil Ward (1996: 361-375, 363) pondered the failure of political economy to find complete 'coherence within agricultural geography' - or what Atkins (1988) called the geography of food. Why indeed did supposedly rational farmers and consumers produce and buy organic food when conventional food left them more disposable

income? It became clear that BSE was at least partly responsible for (pricey) turns to nature and quality (Murdoch *et al.* 2000: 107-125).

It became clear that the turn to nature involved not only the activities and role playing of, say, *performativites*, as Judith Butler (1990) might describe consumer-vendor relations in farmers' markets. Lewis Holloway (2002) described farm-based tourism in Italy's Apennines which, through its website, attracted adopters of sheep who might never see their sheep in reality, but apparently enjoyed reflecting on them in virtual reality.

We have discussed food scares as a strong negative motivator for alternative and organic food consumption. Of course there are also strong positive motivators, such as aesthetic desire for freshness, good taste, and the gustatory and psychic thrills of novelty. But in this infinite web of desire is what might be called an apparent desire to escape present ambiguities by retreating to the imagined trustworthiness of imagined traditions.

Authenticity is one path to imagined safety. Angela Tregear & M.J. McGregor (1994) tested consumer perception of authenticity by a series of focus groups in which participants discussed and rated a range of products from northeast England which advertised (by connotation or denotation) their provenance as authentic northeast fare. Products included Wensleydale Cheese, Newcastle Brown Ale, and Phileas Fogg crisps. That groups rated the Wensleydale more authentic than the more recently devised crisps probably testifies to respondents' accurate knowledge of traditional foods.

Performativity in Judith Butler's work suggests that traditional activities such as canning, and cheesemaking demonstrations at farmers' markets, along with face-to-face vendor and consumer relations, are another means to reexperience past with present. Butler borrowed the word performativity from philosopher J.T. Austin, writes Tamsin Spargo, 'to describe the way in which gender is produced as an effect of a regulatory regime that requires the ritualised repetition of particular forms of behaviour' (See Butler 1990; and Tasmin Spargo 1999: 72, 74). Performance and performativity can apply to multiple genders, and in fact men and women perform demonstration and vendor activities at markets in the US, UK, FRG and other countries. But the fact that, as Lucy Jarosz (2000) and Amy Trauger (2004) observe, women are high profile in alternative food networks, makes performativity a productive analytical concept to understand the ubiquity and effectiveness of women in AFNs.

However, my 2002-2003 fieldwork revealed what may be called Seattle's organic farm gender scale (Scholten 2004 AAG paper; cited in Jarosz 2005 forthcoming) with a possible *GRass Ceiling* demarcating obstacles to women seeking CEO positions in MNC firms on the Industrial-Organic scale. The GRass Ceiling hypothesis predicts that, whenever alternative or organic farms/firms reach certain scales (perhaps >\$1m sales annually), they adopt gendered norms typical of other non-alternative industries, just as the counter-culture owners of Ben & Jerry's Ice Cream company finally resorted to Wall Street management norms. Sallie Marston's article (2000: 219-242) seem to parallel my ideas on an organic/alternative gender scale on farms and firms. There are significant counter-factuals to the GRass Ceiling, such as the female president of Cascadian Organic Farms/Small Planet, now a subsidiary of MNC General Mills (*Seattle P-I* Dec. 16, 1999). Research on the question is still underway, but at the time of writing, it appears Cascadian is the exception that proves the rule – or perhaps where feminine performativity is mobilised as a selling point by an organic MNC. (N.B. Henry Buller and Carol Morris told me on July 6, 2004 at Exeter that their PhD student Genevieve Groom was coming to conclusions congruent with the GRass Ceiling.) Furthermore, informants in Whatcom County say women's resistance to machinery sometimes blocks their adoption of economies of scale. Please see Figure 2.6 below.

Ilbery, Bowler, Clark, Crocket & Shaw (1998: 355-64) found some answers in AFEs or pluriactivity. While regions such as Northumbria undoubtedly had untapped tourist potential, farmers who attended the annual Great North Meet conferences with me observed ruefully that not every farm could survive by converting space to a Bed & Breakfast. Ilbery & Kneafsey (1999: 2207-2222) paid attention to continental efforts to add-value via farm-based tourism and farm products through place-linked or tradition-linked certification such as Protected Designations of Origin and Protected Geographical Indications (PDOs and PGIs). While the EU complained of US agribusiness efforts to appropriate agriculture via biotechnology in GATT URAA 1994 conventions on intellectual property, Europe staunchly protected the lexicon of its own food heritage. The ultimate example of this in EU PDOs is probably champagne. Although German *Sekt* producers long to call their festive

 ORGANIC FARM GENDER SCALE 		
Smallholder names changed! * 2002-4		
Scale & Products	Network	Actors & Gender
Industrial-Organic (>\$250,000 gross income)		
Cascadian-Small Planet Foods-General Mills: fresh, canned, frozen fruit & veg, and 160 prepared foods.	Skagit County farm shops, national-global supermarkets.	Cascadian-SPF CEO male sells to MNC. 2004 General Mills CEO is male; Cascadian/SPF CEO female.
Horizon-Rachel's-Dean Foods: milk, yogurt, desserts.	US, UK supermarkets; Spain (Dean).	2004 CEO Dean is male; Horizon-Rachel's CEO is male.
Badger Mountain Vineyard: wine.	Washington state – Japan.	Father, son & married couple owners.
//////////////////// Organic GRass Ceiling //////////////////////		
Family-Organic (< \$250k)		
Ken & Jenny Farm: chicken, compost, fruit, veg, herbs.	Whatcom Co: – region & global MNC supply.	1 male owner-farmer. Wife keeps books & teaches.
Elm Hall: flowers, fruit & veg.	What – Seattle FMs.	1 man & 1 woman partners.
Sam & Wife: Cheese.	Skagit, Snohom, What, Seattle FMs & supers.	1 ex-Cascadian man & wife.
Small-Organic (<\$50k)		
Betty's: flowers, fruit, herbs, veg.	Skagit – Whatcom Co. FMs & restaurants.	1 woman.
Hi-Skies: plant starters.	Snohomish Co. FMs.	2 women part-time.
Fireman's Wife: flowers, veg.	Kitsap Co. FM.	1 woman & husband.

Figure 2.6. Scholten OFGS 2002-4.

bubbly *champagne*, the French region of Champagne has a geographic monopoly on that product name. Undoubtedly this curbs the global sales of Sekt on New Year's Eve, when revellers in global cities toast the New Year. Many more examples exist among cheese products. Producers of parma cheese in Parma, Italy, where parma cheese and ham were developed over centuries seek to keep parma as their own brand – but farmers near Seattle cite 'our free market philosophy' in claiming the right to use the word 'parma' in foods competing with those exported by cooperative farmers in this region called the Third Italy (Amin 1994/2000). But despite the appeal of PDOs and PGIs to connoisseurs, Ilbery & Kneafsey (1999) found the only appellation consumers consistently had *trust* in was *organic*. This finding resonates with those of Lockie *et al.* (2002). But Makatouni (2001: 1) found less than perfect trust:

Existing research reveals that organic food is perceived as food without 'chemicals' and 'growth hormones', food that is 'not intensively' produced and is grown as 'natural' (Davies *et al.* 1995). Consumers purchase organic food mainly for health reasons. They consider it to be better for children, because of lower pesticides and fertiliser residues (Latacz-Lohmann and Foster 1997; Morris 1996; Davies *et al.* 1995; Tregear *et al.* 1994). Moreover, apart from health-related reasons, better taste, being like home-grown, being free from BSE and from food additives are motivations for buying organic food.

According to Grunert and Juhl (1994), Grunert (1993), and Sparks and Shepherd (1992), the trends towards increased consumption of organic food can be linked to a broader concern with environmental issues. Ethical and moral reasons for buying organic food are also apparent in previous research (Morris 1996)...The main deterrents to organic food purchase are high price, availability, satisfaction with the conventional food, lack of trust, the limited choice and lack of perceived value (Mintel 1999; Morris 1996; Davies *et al.* 1995; Roddy *et al.* 1994; Tregear *et al.* 1994).

The International Federation of Organic Movements (IFOAM-SOEL 2004: 30) reports:

In February 2000 the European Commission introduced a logo for organic products that may be used throughout the EU by producers operating in accordance with the provisions of the EU regulation on organic production. The logo may only be used on organic products where 95% of the ingredients are organic products that originate from the EU and that have been processed, packaged and labelled in the EU or on imports from countries with an equivalent inspection system.

A study of 40 Quality Assurance Schemes (QAS) in the UK by Carol Morris & C. Young (2000: 103-115) called 'Seed to shelf', 'teat to table', 'barley to beer' and 'womb to tomb' drew on *Farmers Weekly* as a data source as well as *Farmer's Guardian*. Four key discourses were analysed: (1) discourses of organisational change within the agro-food chain, (2) discourses surrounding the definition of quality, (3) acceptance of, and resistance to, QAS, and (4) discourses which construct a particular representation of consumers.' Morris & Young also note EU quality programmes such as FAIR, and EU Objective 5b funding (with which the QUANGO One NorthEast (ONE) and University of Newcastle upon Tyne's David R. Harvey developed the Northern Uplands Red Meat Initiative in the 1990s.

Quality, note Morris & Young, is shaped by the interactions of actors (p. 104) with differing interests in horizontal and vertical supply chains. Notions of quality are still evolving, and are contested by actors depending on their position on horizontal or vertical food chains. Morris & Young (2000: 105) note, 'While "farm assurance" is often distinguished from quality assurance, and specifically relates to standards in on-farm operations, the terms are often used interchangeably.' Significantly, Morris & Young find that, while quality parameters are important in wholesaling, UK retail consumers lack understanding of appellations and certificates of origin - excepting the Soil Association's organic logo, a fact which anti-corporatist Naomi Klein (2000) might find ironic.

Quality, it may be added, is constructed according to conventions. Clear definitions of *conventions* by David Lewis (1969: 42) are tendered in syllogistic and prose forms in Storper & Salais' *Worlds of Production* (1997: 18-19):

The word 'convention' is commonly understood to suggest at one and the same time: a rule which is taken for granted and to which everybody submits without reflection, the result of an agreement (or a contract), or even a founding moment (such as the Constitutional Convention). Thus convention refers to the simultaneous presence of these three conventions: (a) rules of spontaneous individual action, (b) constructing agreements between persons, and (c) institutions in situations of collective action; each has a different spatio-temporal extent, and they overlap in complex ways at any given moment in any given situation. ...'

Conventions are negotiated according to power relations between actors. Results include material standards such as texture and hue of ripened tomatoes, processes utilising material items, or *actants* in Latour's (1991/1993: 17, 89) actor network theory (ANT), such as Boyle's vacuum pump developed in a 17th century laboratory experiment, or manuals written and disseminated by associations of organic farmers in the late-1990s (Guthman 2004).

There are also superb definitions of Conventions Theory and ANT in Morgan, Marsden & Murdoch (2006: 19-21). In his book *Producing Places* (2001: 33-34) Ray Hudson compares the ANT of Latour, Law and Callon to the structuration theory of Giddens. There is a suggestion that ANT privileges non-humans too much, downplaying human agency. As an aside, my fieldwork suggests that objects such as email and mobile phones encourage human contacts, and have helped spread alternative food networks (AFNs). Perhaps these are some of the reasons why John Wilkinson (1997: 305-339) suggests *convention theory*, as developed by French social scientists, as a new paradigm for analysing the agrofood system.

The clustering of conventions, practices, and institutions in differing worlds of production is explicitly addressed in work conducted by Storper & Salais (1997). They are interested in different forms of regionalization and localisation in the global economy. He argues that the spatial connectedness of firms and industries can be explained not just in terms of proximity to raw materials and supplies of labour but also in terms of 'know-how', that is, 'non-codified traditions and ways of doing things [that are] essential to the job. This know-how is enshrined in conventions, habits, routines, and other localized practices. It comprises the

‘industrial atmosphere’ of discrete locations and localities and gives these regions and localities comparative advantages in given industrial sectors.

The uneven geography of economic activities reflects, then, geography of knowledge, that is, the varied spatiality of codified and non-codified knowledge forms. So although the term organic is trusted more than terms such as ‘fresh’ or ‘natural’, there are reports that regard for EU (or USDA) organic logos is geographically patchy. There may be a range of reasons for this, and that is why it is important for social scientists to explore the meanings of organics ethnographically, i.e. actually to ask consumers what they understand about organics, and what aspects of nature or traditional methods are connoted or denoted by applicable rules, whether *Bio-Dynamisch*, OTA, OGA (UK), or USDA-NOP organic.

As envisioned, political economy *did* stimulate research. It certainly helped quantify the continuing drop in the number of on-farm labourers, as farmers in the UK and across the EU sought to boost net profit by substituting machinery for labour, and in some instances establishing machinery rings for harvesters and other expensive equipment. Yet, by the mid-1990s Marsden, Munton & Ward (1996: 361-375) reckoned with the growing consensus that pol-econ failed to explain all of agriculture and failed to explain all of consumption. Cultural geography could partially explain the stubborn persistence of crofting in the Hebrides Islands, or hillside and suckler cow farming in the Pennines. And the propensity of low-income working class consumers for fat- and salt-rich processed foods can be explained in terms of tradition and taste by care-givers (Warde 1997: 48, 130, 137-141, 195).

Leading commentators such as Fred Buttel (1997) and Harriet Friedman (1989, 1994) have clung to political economy as the ultimate framework for assessing national and global food systems, in approaches tied more closely to Marxist notions of pol-econ power than Ben Fine’s (1996) systems-of-provision theories. But Dixon (1999) rightly cites Friedland as a harbinger of what is variously called a *turn to consumption*, a *turn to quality* – or *the cultural turn*. These terms are germane to this study of organic food and risk as will be seen below.

Signing the turn from agricultural production to consumption, Atkins & Bowler co-authored the (2001) text *Food in Society: economy, culture, geography*. From the school of French regulation theory (see Aglietta 1979; Lipietz 1987) they take ‘food regimes as an organizing concept’ for understanding how food reflects cultural, economic, geographical and political

power in a sequence of three periods of the capitalist era.⁵ Atkins & Bowler (2001: 32) pinpoint Le Heron (1993) and Friedmann & McMichael (1989:93-117) as ‘advocates of the concept as an organising concept’.

Of great relevance to this thesis on food & risk is Atkins & Bowler’s (2001: 33) identification of the ‘boldest criticism of the food regimes concept’ emanating from David Goodman & Michael Watts (both identified with the terms *political ecology* and *alternative agro-food systems* or *AAFNs*) as well as Dominic Moran *et al.* (1996). I will mostly treat with Goodman and Watts as they are influential in the literature of organics and alternative food networks, and portray them as the philosophical antitheses of Friedmann & McMichael with Foucault, in what I humbly offer as a list of binaries of structure and agency. Binaries⁶ such as these have been *associated* with either Structure or Agency – even if they are not necessarily synonymous with them. So, in the manner of lists-makers Tickell⁷ & Peck please consider my own list below.

For now, let us ponder Atkins & Bowler’s (2001: 34) claim that Le Heron (1993: 75-6) ‘is also critical of food regimes as an ‘accumulationist account’ that relies heavily on explaining international regulation in terms of US hegemony.’ It may be granted that while (fortunately) a high degree of variety continues to mark local and regional food systems worldwide, it is doubtful this reflects essential weakness of the US as regulator of the world system.

Neo-colonialist theory suggests that developments in Gulf War II show *owning* commodities at their source may be desirable, but *controlling* – or *regulating* – food and oil is more than sufficient to hegemony, while precluding some of the consequences of long-term occupation suffered by past, failed colonialists.

Table 2.1. Binaries of structure & agency (Scholten March 10, 2005).

Structure	Agency
Structuralism	Post-Structuralism
Fordism	Post-Fordism
Modernism	Postmodernism
Productivism	Post-Productivism
Liberalism-to-Neo-Liberalism	Social Democracy
Parisian Regulationists	Alt. Agro-Food Networks
Homogeneity	Heterogeneity
Determinism	Free Will
Top-Down	Bottom-Up
Political Economy	Political Ecology
Harriet Friedmann	David Goodman
McMichael	Michael Watts
Structuralists focussing on Food Regimes: Mennell, Murcott, v. Otterloo (1992). Also Lipietz (1987); Whatmore (1995); George; Wallerstein; Fine (1996); Lester Brown.	Questioners of Food Regimes: Goodman & Watts (1994); Moran <i>et al.</i> (1996); Pritchard (1996); Arce & Marsden (1993).
Michel Foucault	Husserl / Heidegger
Discipline & Punish	Phenomenology
Behaviourism	Consciousness
Bjorn Lomborg	Rachel Carson
Risk/Benefit	Precautionary Principle
Maximum Yield	Sustainability
Chemical Inputs	Tilth & Crop Rotation
Agribusiness	Community Supported Ag
Sir John Krebs (ex-FSA)	Sir Donald Curry. Tim Lang.
Ann Veneman, Clayton Yeutter, Carla Hills	Jeremy Rifkin, Wendell Berry, Jim Hightower
Rep. Nathan Deal, R-Ga.	Rep. Jim McDermott, D-Wa
Monsanto CEO Hugh Grant	Michael Pollan
Food Miles	Local Food
USDA Cafeteria	Seattle Public Farmers' Markets

Atkins & Bowler (2001: 34) offer a 'structuralist' précis of 'the recent history of global food production and consumption under capitalism' as Three Food Regimes thus:

The First Food Regime: Mid-1800s-1914: a post-mercantilist era of relatively free trade (the British Corn Laws were rescinded in 1846) and intercontinental transport extension in a context of relative international peace (to ignore the US Civil War, Boer War, Russo-Japanese War and other tragedies). Parenthetically, it is worth noting that pancake flour – the world's first quick-fix food - was first marketed at this time in the US. This period is sometimes argued as the first wave of globalisation. Certainly the first food regime was an extensive system insofar as this international 'regime of accumulation', but significantly it was not bound by the strict accords such as multilateral GATT or WTO enforcement of 'most-favoured-nation-status'. Of course the First Food Regime entered a three-decade limbo after the establishment of the USSR (favouring autarky or barter) and the World Wars.

The Second Food Regime: 1947-1970s: Atkins & Bowler (2001: 27) grant that, 'The term Productionist (or 'productivist') has been used to summarise [it]...' It is significant that this second regime is concurrent with the span of the Bretton Woods economic system, which dominated world trade from the immediate post-WW II period until Pres. Nixon floated the US dollar in response to Vietnam War inflation.

The Third Food Regime: 1980s-present: Atkins & Bowler (2001: 29) cite Goodman & Redclift (1989), Goodman (1991), and Harriet Friedmann (1994) in an analysis which dovetails with my own understanding of the last 20 years – although I would add Dan Morgan's (1973) *Merchants of Grain* to complete the picture: in 1971 the US economy was destabilised by inflationary Vietnam War military spending, and inflation sparked by sale of the contents of American grain silos to the Soviet Union in a huge grain deal more in the interests of multinational ITT than US consumers. The US-USSR grain deal is too often forgotten because the breakdown of Bretton Woods gets the preponderance of attention.

Discussion of Food Regimes is must be truncated here. But other parts of this chapter shed light on how the cusp between Second and Third regimes is roughly in line with those between the Productivist/Post-Productivist Transition in food – and the Fordist-Post-Fordist transformation in the wider world economy which is discussed extensively by Ash Amin, Robert Salais, Michael Storper, inter alios.

Location Theory to Harvey & Beyond

A theorist of great past and perhaps contemporary importance is Johann Heinrich von Thünen. Geography was in the mid-20th century driven by location theorists such as Peter Haggett and Izard. In food studies, location theory hearkens to von Thünen who explained spatial organisation of rural farming in relation to transport costs to urban consumers. (Ironically, respected location theory practitioner David Harvey levered a disciplinary paradigm shift in a turn to *human* geography in his 1973 *Social Justice in the City*.) For a time, von Thünen was thought outmoded by the transport revolution in canal, ship, rail, truck and air transport, in conjunction with refrigeration and other technologies to limit food's perishability. But E. Melanie DuPuis' (2002: 173, 174, 183) *Nature's Perfect Food*, a tour de force on the development of US dairy chains, provides examples from 19th century upstate New York implying that von Thünen's theories have variable effects in time, depending not only on topography (whether farms are in mountains, ravines or wide plains), but also when successive technologies come into play; this was seen in an awkward succession of alliances and rivalries between coops and processors in different geographic areas.

A 21st century example of this may be that, while naive consumers may assume all is love and peace among cooperatives and organic vendors, Washington state organic farmers report increasing competition from California organic growers whose longer growing season makes them relatively lower-cost organic producers (Jarosz 2004 AAG paper). Nevertheless, among conventional and organic consumers alike, when the negative influence of food risks is put aside, freshness and tastes are positive values most often cited. Since freshness and taste are particularly hard to fake in organic food, the tyranny of distance remains significant, and von Thünen's ideas on place and space remain analytical starting points for many issues relating to food and marketing. Most of the present study will be situated within Lowe *et al.*'s (1993) Post-Productivist Transition. The PPT is a historic cusp occurring contemporaneously with the advent of anthropogenically-created risks diffuse globally. These new risks are powerful technologies capable of irreversible damage. They include nuclear power, lab-created chemicals, and GMOs. For food, this historic cusp follows general patterns (e.g. non-food goods, services and capital) dubbed Fordism/Post-Fordism in Europe), Industrialism/Post-Industrialism (in the US), Modernism/Post-Modernism (wherever critical studies have gained credence), or other models attempting to describe how and why Developed Countries are said to have entered an Age of Consumption marked by mature, disaggregating markets (see Amin 1994; Castells 1998; Raymond Vernon 1966).

Hazard, Risk & Uncertainty: practical definitions

Lay persons sometimes use terms such as hazard, risk and uncertainty as synonyms, but here are finer definitions that are germane but practical for this thesis on food & risk. *Hazard* may describe accidents or dangers due to natural causes such as earthquakes, floods and disease. It should be borne in mind that floods often have an anthropogenic component, and the same is true of so-called natural diseases such as salmonella that can flourish in intensive agriculture. *Risk* has a historically thinner corpus of literature than food, but since the dawn of the nuclear age, works theorising risk and uncertainty have proliferated. Many products or processes of mass consumption have become foci of public uncertainty, such as pasteurisation of milk, fluoridation of water, use of oestrogen-related chemicals in toiletries, and non-sugar cola sweeteners (e.g. aspartame, now banned in the US). Risk is sometimes said to be calculable from statistics on problems including cancer, car crashes and crime that can be calculated by insurance underwriters according to actuarial tables. *Uncertainty* is characterised by difficulty in calculation due to a dearth of information or theoretical insight. Thus, although the *unknown* nature of nuclear and genetic technologies would in some rarified discussions (e.g. the emerging field of bio-ethics) delegate them to the sphere of *uncertainty*, our more wide-ranging discussion will treat the terms risk and uncertainty almost interchangeably, except when there is clear reason to distinguish between them. Ergo:

- Anthropogenic risk: from human causes involving uncertainty, e.g. GM foods.
- Hazard: dangers such as earthquakes or radiation not linked to human causes.
- Risk: e.g. car crashes and non-human caused cancer calculable in large populations.
- Uncertainty: risks difficult to calculate due to lack of information, e.g. GM.

That risk has hit a historic moment in the Post-Productivist Transition goes without saying if we accept Ulrich Beck's (1986) *Risikogesellschaft* example of genetic modification (or unprecedented practises such as the mass feeding of ruminants to birds, mammals including ruminants, and humans in our complex food and pharmaceutical system) as representative of a new order of social risk embodied in BSE/vCJD, colloquially known as Mad Cow disease. Beck's thesis found fallow ground in Britain, where it was translated by Mark Ritter and published in 1992 as *Risk Society: Toward a New Modernity*. Although Melanie DuPuis (2002: 269) notes Anthony Giddens and Christopher Lash worked with Beck (1994/2004) developing ideas on 'reflexive modernization', and that Lash and John Urry (1994) developed 'a notion of reflexive consumption', she finds these theoretical filigrees too bound

up in arguments over modernism and postmodernism. This thesis concurs with DuPuis. While finding some insights on Beck by Giddens (famous for his 'third way' structuration theory), Lash, Urry, and others useful, this thesis finds most elements necessary to understanding consumer reflection on food and risk as *already present in Beck's solo works*.

The prominence of Beck's theories has invited the inevitable dialectical backlash. While risk theorists such as Deborah Lupton explore the chinks in Beck's armour, Lupton seems genuinely to admire the carapace as a whole. Peter Phillimore also shows abiding respect for Beck, although in a talk about the BASF chemical plants in Ludwigshafen, given at Durham University (Feb. 17, 2005) he said Germans joke, 'Only Brits take Beck seriously anymore!' Of course, those believing there is nothing new under the sun - an idea perhaps older than Aristotle - would question claims that Beck's risk society is anything new. They may argue that early applications of steel and germ warfare were technical leaps as far as nuclear weapons, but this writer is not convinced. Many writers before Beck portrayed the atomic age as a new level of anthropogenically-created risk on the order of global Armageddon. Nevertheless, there are important new elaborations of Beck's risk society, and we shall refer to them in this and following chapters (Lupton 1999; Tulloch & Lupton 2002; *inter alios*).

Conservation vs. Sustainability

In passing, let us address the claim that Greens and environmentalists of the sort who founded the Audubon Society and Sierra Club ignored social justice. This is important, because the same claim is presently lodged at proponents of organic food.. The claim is that *social Darwinist* robber barons of the 19th century went right on exploiting humans, even when persuaded that game animals such as elephants and lions should not follow dodos and carrier pigeons into extinction. There is something to this; it is true *conservation* was one rare goal upon which US factions from laissez-faire capitalists to communists could agree. But it is unfair to paint the early conservation movement so black and white. Not all conservationists were tree-huggers indifferent to human welfare who, as Ronald Reagan famously claimed, wanted to 'turn the White House into a bird's nest'. A prime counter-example is, ironically, a Reaganite hero - Pres. Teddy Roosevelt, synonymous with the conservation of wilderness areas such as Yellowstone National Park. Roosevelt's wilder comments ('weak nations must submit to the strong') smacked of Herbert Spencer's social Darwinism, but this rich asthmatic boy-turned trustbuster was also famous for maxims of

social justice saying that ‘until the US was a tolerable place for the poorest of its citizens, it wouldn’t be a great country for the rest of us.’ Furthermore, Roosevelt presaged Brundtland (1987) by nearly a century in statements on conservation chiming with sustainability goals for future generations as well as the present. These comments are attributed to a speech made by Roosevelt at Osawatomie, Kansas, August 31, 1910:

Conservation means development as much as it does protection. I recognize the right and duty of this generation to develop and use the natural resources of our land; but I do not recognize the right to waste them, or to rob, by wasteful means, the generations that come after us.

While useful theoretically, the Productivist/Post-Productivist literature divide is not an utter dichotomy. This is perhaps related to the idea that, like a Hegelian dialectic, as Productivism was taken to its logical extreme in Europe and North America, its contradictions (i.e. negative externalities regarding animals, environment, humans and social justice) became the mainspring to the Post-Productivist Transition. Hindsight can tempt us to be too glib about historic changes. Peter J. Atkins (1973 PhD thesis) has shown that, contrary to claims that the London milk supply moved to the countryside after ‘cattle plagues’ of the 1880s, this geographical shift was already underway due to improved transport, milk cooling, and rising urban land values. As discussed below, Melanie DuPuis (2003) divests us of the myth that liquid milk was a mainstay of early colonial diets in North America, although it was used widely for butter and cheese. Atkins found historical records suggesting that over 500,000 human deaths linked to bovine tuberculosis in Britain could have been attenuated, had pasteurisation begun decades earlier as in France and the US (see Atkins 2001a and 2001b).

Sociologist and semiotician Latour (1988) has shown improvements in sanitation were already underway in France due to adoption of the germ theory of disease, before the technology of pasteurisation became part of public health policy. Latour’s work and collaborations with others such as Michel Collon and John Law have had much cross-disciplinary influence, extending to use of actor network theory.

DuPuis (2002: 19-20, 50, 66, 67-68, 112) subtly parses the nexus of health, poverty and political power. While acknowledging the rise in urban infant mortality from diarrhoeal ‘cholera infantum’ in the rise of ‘bottle feeding’ (i.e. non-breast feeding) in crowded, unsanitary, industrial urban slums of the 19th century, DuPuis claims mortality rates were lower in affluent families in town and country - no matter how infants were fed. Rich or

poor, breast was best – a tradition enshrined in Prussian law in 1794 (DuPuis 2002: 51); this was a cultural and intellectual precedent for the food and drink purity law (*Reinheits-Gebot*) which guided German approaches to food and risk after unification in the 19th century. This Teutonic enshrinement of food tradition (which reverberates in current Mad Cow crises) is worth putting in counterpoint to a different approach in the US: that of a technical, productivist fix spawned by religious fervour. DuPuis traces the career of social reformer Robert Hartley, inspired by visions after 1814 in the Second Great Awakening, who became New York City's 'earliest pure milk advocate'.

It is important to say that Hartley's mission was taken up later by John Mullaly, who in the 1830s sought to strike a temperance blow at urban brewers and distillers who profited from sales of by-products to the city 'swill milk' producers. Mullaly's proposal was to encourage 'country milk' outside New York City. Peculiarly, Hartley ignored evidence that human breast milk was safer and superior for infants (and even invalid adults), while advocating an 'industrial vision' in which rural farmers would diversify from their small butter and cheese-making production (usually a family's ancillary business, alongside the arable crop focus) into providing liquid milk for city dwellers. Although it took some persuasion to get enough farmers to begin filling cans for the city, the timing was fortunate, to expand the nature of milch farming before low-cost grain production in the US heartland decimated the competitive advantage of grain farmers in New England and the Mid-Atlantic states. It also helps explain how in upstate New York, Cornell University developed into one of the world's leading dairy centres, an advocate of technologies from pasteurisation to rBGH.

Although she like myself enjoys milk, DuPuis asks: 'Why do we drink the stuff anyway?' Although early American widows often inherited milch cows, she demolishes the myth that consumption of liquid milk was universally high in Euro-American culture. Before technologies such as pasteurisation and bottling were developed even many farmers regarded milk as 'white poison' (Atkins 1992 in DuPuis 2002) until it was processed into butter or cheese. DuPuis' gives anthropological explanations of how American culture moved from ideas of *organic perfection* (linked to advertising images of cows and milkmaids), to modernist ideas of *progress* (alternating images of white-coated technicians with those of healthy children drinking milk), culminating in conventional milk as a highly-processed, geographically ubiquitous product still extolled as nature's perfect food.

Nestle (2002) shares DuPuis' concerns. Both question the nutritional suitability of heavy promotion in the US National Dairy Council's campaigns (although Nestle prefers milk over sugary colas in schools). They suspect over-consumption of dairy products as a contributing factor in teenage obesity (though both are loath to suggest that raised IGF-1 levels in rBGH milk have contributed to teenage obesity – one controversial view of Robert Cohen (1997; see also Smith 2003: 94-7, 184-5, 191). In my earlier research (Scholten 1989b), Monsanto public relations officers in Belgium told me rBGH milk did carry above normal levels of IGF-1, but these were destroyed in the stomach and thus would not boost human growth. Monsanto's contention that our stomachs stop IGF-1 is disputed by the *Canadian Gaps Analysis Report* (Health Canada, 1998 in Smith 2003: 95) which stated that IGF-1 'can survive' the gastro-intestinal tract 'and is absorbed intact', and further that, 'The full significance of this finding also was not investigated' by the FDA which certified rBGH in the US'. Thomas MacMillan (2002) found that the introduction of rBGH involved strong lobbying by industry, and fundamental disagreements between US regulators and those in Canada and Europe. It is no wonder consumers are confused by food debates.

Nestle relates how after WW-II, US per capita teen milk consumption fell as consumption of pricier colas rose dramatically. In Coke and Pepsi's billion dollar cola wars, Pepsi took the biggest gamble by signing King of Pop Michael Jackson at his apogee of celebrity. When Pepsi's million dollar endorsement paid off in sales, it convinced many reticent farmers that, whether or not milk is nature's perfect food, it must be marketed. The cola wars finally turned milk farmers into promotional fighters. With the *Got Milk?* and *Got cookies?* ads of the 1980-90s more US kids chose milk over cola, as long as milk is delivered cold and fresh. Cozy animal themes on Tetra Pak cartons appeal to pre-teen schoolchildren, but by ages 12-14 kids feel milk is 'not hip enough' according to Michael Brandl of Germany's Central Milk Marketing Association (Scholten 2000: 175); that's when 'concept' and 'life-style' ads of Formula 1 driver Jacques Villeneuve and model Kate Moss with '*Milk Moo-staches*' can persuade teens to consume milk. The *Got Milk?* ads were so successful they entered the vernacular, spawning imitations in other industries (*Got pizza?*). The US campaign was imitated in a UK campaign in which cartoon images of boxing champions frightened by a spider are saved by a girl drinking milk - *The White Stuff* (itself a takeoff on Tom Wolfe's (1986) *The Right Stuff*). The UK ads were popular with consumers and met first year sales goals, but were pulled from the media due to funding problems, perhaps related to the break-

up of MilkMarque cooperative by the UK Monopolies and Mergers Commission – boding declines in the incomes of UK dairy farmers.

While these notes from the EU and US relate to conventional milk consumption, they illustrate lessons for other foods too. First, they show the importance of advertising, second that it must be targeted to appropriate age and social groups. Finally, the last half century shows that as teens' pocket money has increased (from family allowances and after school jobs) price is less of a factor. In 1960s' school vending machines, a dowdy milk carton sold for about 10 cents (\$0.10) while bright red-logoed Coke sold for twice that. Coke sales rose. Today price is not the key factor (personal conversation with MoB of Darigold milk cooperative, September 11, 2001) for teens and adults. The fastest selling new dairy product in the US Pacific Northwest in the early millennium was Nesquik a 12 ounce plastic chocolate milk drink bottled by Darigold for Nestlé. Its flashy packaging and resealable cap indicate that lifestyle marketing and convenience are as important as price.

That the phenomenon of drinking large quantities of liquid milk was largely confined to the US, EU and Antipodes is unremarkable when much of the world's adults lack the lactase enzyme necessary to digest lactose in cow's milk. DuPuis muses on the racial assumptions implicit in Caucasian veneration for milk, but perhaps debate has moved on. While developing countries have some appetite for Western pop culture (e.g. cola, jeans, music), their taste for milk can link more to its nutritional than cultural properties. A sign of this is announcement by Vietnam's Sport Science Institute of a plan to increase the population's overall height by 6.35cm over the next 25 years, beginning with a pilot study of 10,000 children to investigate milk's health benefits (Associated Press, Nov. 2004). Vietnam's dairy initiative is tied to its aspirations in world sport. Milk critics might argue that larger body size may help Olympics competitors in their twenties, but it may also exacerbate painful joints in old age. Sceptics may blame productivist dairy academics and practitioners for tempting Vietnam's health authorities into inappropriate dietary decisions, an example of what Marx called 'false consciousnesses. Others claim dairy products prevent osteoporosis in Asian women. In fact, the director of the Sports Institute, Duong Nghiep Chi, has considered risks as well as benefits of a dairy diet. Citing obesity in prosperous Singapore and Thailand, Chi says Vietnam must not jump from undernourishment to obesity, but find a healthy, balanced diet now including more rice and livestock products.

Balance is hard to find, particularly when consumers, confused by contradictory claims, find it hard to trust what guidance they can find from public health authorities (O'Neill 2002). Nestle (2002) ascribes this confusion to a combination of factors most apparent in the US, e.g. lobbying by the agro-food industries for what she sees as dangerous food propaganda to impressionable pre-teens, and growing hegemony in school cafeterias by the fast food industry. Nestle was aggrieved when dairy promoters captured US Secretary of Health and Human Services Donna Shalala, wearing an eagle pin from Pres. Clinton along with a 'Milk Moostache' ad touting calcium for prevention of osteoporosis (2002: 78-81). Nestle's hesitancy over such quasi-presidential dairy politics is understandable when we consider that since WW-II most nutritionists have known it is the *combination* of foods and exercise that determine health, and thus government endorsement of any single food can be misleading. A more charitable view may be that governments, more than nutritionists, have multiple aims, and in this case Shalala may also have been promoting healthy *lifestyles* – as part of an anti-drug campaign – as much as hyping milk.

As the UK, US and other nations prepared for the wars of the 20th century it became apparent that many urban males were (compared to hunter-gatherers of pre-agricultural eras) short, underweight and sickly. In an article in *The New Yorker* (2004) Burkhard Bilger explores the work of Steckel and Komlos, two scholars working in 'anthropometric history' who found height is contingent on diet and childhood diseases. Of course national armies had an interest in recruits' height and strength. Nestle describes the rational advice issued by government nutritionists as simply to eat more of all types of foods. Cures for goiter entailed prescriptions to eat more fish (or the industrial Rx of iodised salt in the US), more fruit, more eggs, more steak. *Eat more of everything!* was the rationalist prescription of the past, writes nutritionist Nestle (2002: 2-3, 4, 30, 32-38, 76; see also DuPuis 2002). Nowadays, Nestle (2002: 3, 30, 38-50, 76-77, 83, 126) is frustrated that, since she began advising on government food pyramids in the late 1980s, industry has muddied the clarity of her call for consumers to *eat less* salty and high-fat foods, specifically red meat, dairy products and processed foods. She urges greater nutritional understanding among consumers, and more self-reflection on their diets and lifestyles. The food industry, which she depicts as being as avaricious as the tobacco industry, waters down government warnings into unconvincing advice to *eat in moderation*. However, a current example makes Nestle's case. The *New York Times* (Feb. 13, 2005) reports fast food and processing industries are racing to develop a substitute for transfat, which has been substituted since the 1980s as a putatively safer

substitute for butter and palm oils high in saturated fat. Unfortunately, transfat has not only proved as deleterious to arteries as traditional oils, but it actually seems to diminish so-called good. Yet, in line with Nestle's fears, a coalition of edible oil producers and food manufacturers have lobbied the USDA to mitigate government warnings because consumers don't want tastes to change.

Further testimony to why consumers are confused on food guidance is the fact that even the Centre for Science in the Public Interest (often critical of the food industry) has flip-flopped on transfat since the 1980s. Meanwhile, Whole Foods, a chain of 166 natural and organic food-oriented supermarkets in North America and the UK, sells no foods with transfats – a policy that, in the light of the government's trans fat debacle, may strengthen customer trust in 'organic' as a meaning connoting known health risks, rather than the uncertain properties of foods concocted in agribusiness laboratories.

Tim Lang's food wars & health

Opinion on health issues often gravitates to two poles: (1) a natural pole appealing to a Rousseauian past of social equity; and (2) a modernist, purportedly politically-neutral technical fix (e.g. pasteurisation or irradiation) usually entailing profit for its proponents who stigmatise their opponents on the natural pole as un-scientific Luddites. In their book (2004) *Food Wars*, Tim Lang and Michael Heasman defend the natural pole, castigating the failure of agribusiness and free market consumerism to improve health. A related article by Lang (*THES* Dec. 2004: 21) articulates the views of pro-natural informants to this thesis, including nutritionists, coop workers, market vendors, organic farmers and consumers:

Productionism has run out of legitimacy because it is too crude for today's complexities. But what might replace it? Two emerging paradigms compete for the honour. One is the life sciences integration paradigm; the other is the ecologically integrated paradigm. ... Each gives primacy to biology, one by ratcheting up still further food's productive capacity, the other by placing long-term ecological survival at the centre of the entire food supply chain. The holy grail of the life sciences paradigm is probably now nutrigenomics (whereas biotechnology gets all the publicity)... You eat a diet tailored to your family's history of cardiovascular disease; I eat a diet of selenium-and-hypocene-enriched food.... The modern challenge of food policy is not more big science, but more thinking across the policy boxes based on subtle science; science engaging with a social vision... That's the lesson of not just child obesity, but the profligate use of oil to cart bottled water or soft drinks thousands of polluting food miles...

Lang & Heasman (2004: 34-40) claim the polar binary splits into food wars between: (i) a holistic view dubbed 'ecological public health' connoting a more equitable distribution of wealth encouraging lower income consumers to exercise and consume more 'natural' fruits and veg characteristic of upper income diets; opposed to (ii) 'life sciences' welcoming the wonders of nutrigenic foods scientifically prescribed according to an individual consumer's genetic history and delivered in future via nanotechnology inside their bodies. This nature/science dialectic is not the only staple of debate on food & risk because the *meanings* of 'nature' and 'science' vary, depending on whether discourse emanates from the US, or UK – and even more markedly shaded discourse in continental Europe. Thus, DuPuis observes the greater acceptance in the EU of the precautionary principle advocated by Jeremy Rifkin (1998) for GMOs, compared to his native US where he is marginalised as an alarmist (DuPuis 2002: 232, 215-16, 230). DuPuis illustrates the subjective character of food scares, referring to the low level of US public concern over strawberry farmers' use of pesticides such as Capstan and soil fumigants such as methyl bromide, banned by the 1987 Montreal Protocol but still used - compared to higher public disdain for rBGH in milk.

Post-productivism the era of reflexive consumption?

Organic consumption may be situated within study of Post-Productivism, and *turns* to *reflective* consumption are associated with food scares (Murdoch & Miele 2001). In *Hybrid Geographies* (2002) Sarah Whatmore (2002) links consumer mindsets 'discordant with those of industrial food production' to food scares. She writes that, 'Perhaps the most archetypal event in recent times is known as Mad Cow Disease.' Creutzfeldt-Jacob Disease (vCJD) was linked to BSE by the UK Ministry of Agriculture, Fisheries and Food (MAFF) in March 1996. After MAFF's fumbling of BSE warranted its succession by a new Department of the Environment, Food and Rural Affairs (March 8, 2005), DEFRA issued background notes:

BSE was first identified in the UK in 1986. More than 183,000 cases have been confirmed in the UK to date, of which more than 95% were detected before 2000 (over 99% were born before August 1996). The epidemic peaked at an annual total of more than 37,000 clinical cases in 1992 and the number of new clinical cases is currently at the lowest level since recording began. There were 90 clinical and 253 cases detected through testing in 2004, the vast majority in cattle born before August 1996.

While it is hard to precisely date any paradigm shift the dates 1986 and 1996 are benchmarks to this thesis. One more date is crucial, suggesting Productivism was long

attended by gadflies: in 1962 Rachel Carson published *Silent Spring* and quickly popularised her warnings not just in academia, but also via US television talk shows. Carson's thesis on the negative effects of insecticides and pesticides on songbirds shook the public's belief that industrial science was winning control of hostile nature. It was a challenge to modernist theories of science constructed to support anthropogenically-centred, quasi-biblical imperatives 'to subdue the earth.' It helped usher words like 'ecology' and 'symbiosis' into the vernacular by the mid-1960s. Forty years later, Carson appears prescient, a John the Baptist for later environmental legislation.

Before pursuing Productivist/Post-Productivist analysis, references from antiquarian studies help distinguish the outlines of food systems from the beginnings of agriculture to the present day. It is clear that current ignorance, confusion and debates over soil fertility and human nutrition, are millennia old. In *Food in History* (1973/1980: ix) Reay Tannahill reaches back even further, half a million years into prehistory, from hunters, fishers and gatherers through the Green Revolution, to our present 'world of the underfed' and 'world of the overfed' to bridge 'all the twentieth century '-ologies' – archeology and anthropology, biology, ecology technology, and zoology among them'. Tannahill's relates the diffusion of foods such as maize, potatoes and tomatoes. She details the haplessness of early European settlers in Jamestown facing starvation without the sustenance of Native Americans, and of how their fellow Europeans, led by the Portuguese and succeeded by the Dutch, organised the brutal 'slave trade triangle' (Jones *et al.* 2004: 41) with maize as a cargo to Africa where it was food for returning cargoes of slaves. Maize became part of a new international trade structure involving sugar in Brazil and the West Indies, which 'were perhaps the first societies in human history to be dependent upon imports for all food beyond the barest necessities' (Tannahill: 219). Although maize (*aka corn*) spread rapidly around the globe, its popularity fell in Europe, and human health suffered in Africa where a dearth of foods rich in 'vitamin C and nicotinic acid' (Tannahill: 205) kept the 'disease of the mealies' or pellagra at bay. Tannahill writes that Britain supplied the West Indies with tripe and other fish, and Newfoundland fisheries sent cod to Brazil.

Mark Kurlansky is another popular writer who specialises in transdisciplinary subjects. In *Salt: A World History* (2002) Kurlansky relates efforts to provide this mineral essential to human life that - from the Chinese salt mines of 3000 BC to the advent of refrigeration in the late-1800s – has been a key component to food preservation for fixed or nomadic

populations. In his (1997) *Cod: A Biography of the Fish That Changed the World*, Kurlansky details how as cod became a staple of slaves on Caribbean sugar plantations, it fostered an economic boom and imaginings of political independence in New England fishing towns. Meanwhile, the whole cod, maize, rum, sugar and slave trade funded the gentility of English country estates portrayed in Jane Austen's (1814) *Mansfield Park*.

Tannahill notes a nutritional cycle in which high protein diets fuel military prowess; she cites Herodotus' description of the Scythians as 'a people without fortified towns, living ... in wagons which they take with them wherever they go, accustomed one and all to fight on horseback with bows and arrows, and dependent for their food not on agriculture but upon their cattle. (Herodotus: IV: 47 in Tannahill: 118). Tannahill attributes the 'baleful energy' of Mongol armies (Tannahill: 1998: 118-123) to livestock diets featuring:

high consumption of mare's milk which has twice as much vitamin C as human milk, and four times as much as cow... [and another factor....] The amino acid tryptophan (contained in meat) is necessary to the biochemical manufacture of serotonin, a neurotransmitter that operates in parts of the brain that control aggression, sleeplessness and response to pain. Recent research has shown that reducing the tryptophan in the diet helps to reduce aggression. If the reverse is also true, it would contribute a further biological reason for the dynamism most nomadic peoples have shown throughout history.

In the late 20th century, some vegetarians and New Age lifestylists implicate high protein diets as intrinsic to militaristic societies (Beardsworth & Keil 1992): 253-93). The meat-rich diets of Americans have been blamed for a mentality of 'muscular Christianity' leading to interventions abroad. Popular books of the 1960s such as zoologist Desmond Morris' (1967) *The Naked Ape*, Robert Ardrey's (1966) *The Territorial Imperative*, and even the club-wielding apes in Stanley Kubrick's (1968) sci-fi film *2001* suggest a similar cycle of carnivorousness and aggression, and effectively increase popular consideration of vegetarianism as a consumption option in the US. Lest these references to pop culture appear superfluous, consider that these seeds in the 20th century Zeitgeist may presently be expressed in greater ethical concern by many consumers for animal welfare than, say, plant biodiversity threatened by GM. When Peter Singer published *Animal Liberation* in 1975, animal welfare was on the agenda of few universities, which were then more influenced by B.F. Skinner's behaviourism (1972). Now many universities address animal welfare (Scruton 1998), and at UC Santa Cruz, Phil Howard (2005) finds, 'In the focus groups, the treatment of animals elicited the most emotion', ranking higher than 'environmental impacts'.

Nutrition in warfare and exploration is a theme taken up by Jared Diamond in (1999) *Guns, Germs and Steel*. Diamond has a sense of contingency in history, not limited to the role of health (or immune systems) in conflict. In sum, Diamond claims northern Europeans' long association with livestock not only improved their physical stamina for warfare and the rigours of global exploration, but that the greater variety of zootropic diseases endemic in Europeans and their domesticated animals became a (mostly) unintended, but effective, weapon of biological warfare against populations with less resistant immune systems. Diamond's follow-up (2005) *Collapse* is critically faulted as a hodgepodge of environmental disasters, but joins a growing chorus (e.g. 2004 film *The Day After Tomorrow*) warning that anthropogenic stimulation of global warming and disruption of ecological systems could be precursors of human unsustainability.

Diamond claims disastrous decisions exacerbated problems such as deforestation and soil infertility, leading to food shortages, social friction and death in once-vibrant settlements in Greenland, Easter Island, Mayan cities and contemporary Rwanda. Soil exhaustion contributed to these dystopias. As a harbinger of collapse, Diamond laments US withdrawal from the Kyoto climate accords in 2001 as an abdication from leadership: when the US is expected to lead research and development of fuel cells, hydrogen, solar, etc., it continues to consume petroleum, while its 4% of the global population contributes 25% of the carbon loading. Time will tell if the IPCC can tempt the US into the new market for pollution trading permits. At a Gordon Manley climate lecture at Durham University Geography Dept. (Nov. 18, 2004), former IPCC Pres. Sir John Houghton expressed confidence that this is the case. However, with the coal-dependent Chinese economy growing ca. 10% per annum, time is running out for the atmosphere (IPCC 1988).

Earth Day 1970 to Present

By the end of the 1960s the European Economic Community (EEC) had achieved food self-security via the intensive farming practises of the Mansholt Plan. Japan had risen from the ashes of WW-II via export-led growth encouraged by its anti-communist mentor the US (Robert Gilpin 1987). Meanwhile, John Kenneth Galbraith's (1968) *The Age of Affluence* described a US population troubled by talking points such as advertising (Packard 1955), planned obsolescence, and conformity but, as it basked in the American century, confident that Fleming's penicillin had vanquished bacteria and mysterious scourges like polio were being surmounted by Jonas Salk. Eisenhower's Vice President Nixon met Soviet PM Khrushchev at Disneyland in LA. Many Americans were nervous, but confident that despite Sputnik's 1959 surprise, the US would better the USSR in space and in earthly consumption.

The 1960s opened with relief that the excesses of McCarthyism were past, Pres. John F. Kennedy promised a New Frontier in space, and material comforts abounded in America, as the first US-Soviet grain deal was debated more vociferously than food aid to developing countries had been in PL-480 surplus disposal programmes. Beyond a magnanimous gesture in the Cold War, the deal would also raise incomes of US farmers while lowering government storage costs. But the 1960s saw cracks in agricultural Productivism even before the times became more marked by racial strife, protests and assassinations. As noted above Carson's (1962) *Silent Spring* increased public awareness. Although many labelled Carson a crank, significant numbers of consumers began to question the safety of chemical inputs on the birds and bees – and their own food.

By the first Earth Day, May 1, 1970, the US provided apparent leadership to the world environmental movement. But by the mid-1980s its leadership was shared with Scandinavian and other European countries exercised about industrial and transport pollution called acid rain (*Sauer-Regen* in Germany where dying conifers along River Rhine autobahns suggested diesel particulates were the pollution source). As mentioned in Chapter 1, the definition of sustainability from former Norwegian Prime Minister Gro Harlem Brundtland's (1987) World Commission on Environment & Development became a green touchstone, and the Brundtland Report also sought social justice for the South which, in effect, was being told by Northern environmentalists to halt economic development and remain the lungs of the earth. Former German Chancellor Willy Brandt had chaired commissions similar to Brundtland, and in his book *North-South* (1980: 169)

Brandt proposed: 'an orderly transition from a world economy and industry based on oil, to one that can be sustained through renewable sources of energy'. At the 1988 United Nations World Congress on Climate & Development in Hamburg that I attended as a photo-journalist, Brandt said the North could stabilise climate by technology transfer to move the South out of poverty and that: 'without sustainable development in the Third World, the environment is not long out of danger' (Scholten 1989a: 5b).

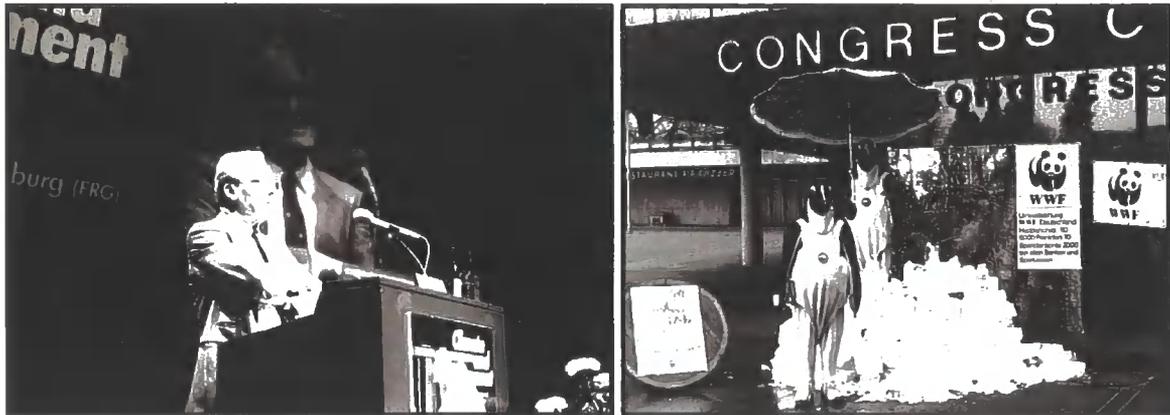


Figure 2.8. Brandt on tech transfer (Scholten photos 1989a). Figure 2.9. Climate activists in Hamburg 1988.

While Brandt won applause calling for North-South cooperation, and activists protested melting ice caps, even eminent scientists in Hamburg were beset by uncertainty. Climatologist Michael R. Glantz of the National Centre for Atmospheric Research (NCAR) in Colorado, was unwilling to commit himself for or against the inevitability of global warming – or humankind's responsibility for it – warning that 'the only thing definite is the sea level is rising' (Scholten 1989: 6b). Around Puget Sound many people believe that phenomena known as La Niña in the Equatorial Pacific and El Niño in the Tropical Pacific are responsible for topsy-turvy rain patterns. For example, Los Angeles uncharacteristically received about 17 inches rain in the first two months of 2005, compared to just two inches at Bellingham, north of Seattle – a reversal of their 'normal' forecasts.

In the 1980-90s, as Brandt, Brundtland and other heavyweights raised governmental, academic and public awareness that climate change could not be fought at the expense of poor country development, the late David Pearce (1989, 1993) became synonymous with costing the earth, a phrase copasetic to economic geographers since it represented methodologies for estimating the value to humans of environmental goods such as animal

welfare, bio-diversity, beautiful landscapes, clean air, and wilderness. Although such environmental audits are complex, attempts at them were being made over a decade ago. At the University of Newcastle upon Tyne, Guy Garrod and Ken Willis whose methodology used 'contingent valuation (CV)' surveys in which inhabitants of Yorkshire National Park prioritised desired landscapes in relation to a possible rise or fall in business activity (Scholten 1997: 181). Costing the earth remains a useful tool in environmental discourse, and can be linked to Seattle's Sustainability Compass, introduced below. Meanwhile some environmentalists use James Lovelock & Lynn Margulis' Gaia theory which has increased the appreciation of climatologists for feedback in natural systems, whether or not they feel the spiritual impulses suggested by the theory's namesake, the Greek goddess Gaia.

Even in the late-1980s there was general agreement on the negative role of manufactured chlorofluorocarbons (CFCs) in the widening of the ozone hole. CFCs match the profile of novel risks in Beck's *Risk Society* (1986/1992), and consensus on their dangers led to a global ban in the 1987 Montreal Protocol, but uncertainty persisted on anthropogenic blame for climate change. In a 2004 Gordon Manley lecture in Durham Geography Department, Phillip Stott criticised calls to prioritise global warming *above all else* as a bandwagon of the Left, which he said had warned of global cooling in the 1970s. Atkins *et al.* (1998: xiv) note that in the last 10 millennia known by geologists as the Holocene, 'it is often forgotten that the last major withdrawal of ice from temperate latitudes was only 10,000 years ago and that many natural systems have spent much of that time adjusting to changed natural conditions.'

Perhaps the best-known critique of global warming (and eco-degradation such as deforestation and erosion) is made by Scandinavian writer Bjørn Lomborg (2001). Lomborg claims he once hearkened to the doomsday scenarios of NGOs such as Lester Brown's Worldwatch Institute, but that statistics and other verifiable scientific evidence reveal a heterogeneous picture with grounds for optimism. One reviewer claimed *The Sceptical Environmentalist* was the most significant work on the environment since its opposite, Carson's *Silent Spring*, in 1962. Lomborg is a darling of the *Economist* which despite urging George W. Bush to highlight the environment, touts free market economics as the best system to secure human and environmental health. Recently Lomborg employed economics in arguing for basic methodological corrections congruent with Pearce's costing the earth. Likewise, Lomborg does not question climate change, but touts the creativity of humankind to confront it, if governments prioritise education, health and human capital.

This zone of uncertainty on climate change is akin to uncertainty on GMOs. Perhaps GM soybeans really have less protein than 'natural' varieties. Perhaps rBGH sold in the US is not the precise product licensed by the USDA. Perhaps pollen released by open air GM maize trials in Mexico has already contaminated ancient strains of corn.

Danny Miller (1999: 1239-1255) is one who addresses such problems of knowledge construction in light of imperfect information, varying quantitative definitions of risk, and so on. Unfortunately, the discourses of activists and their nemeses such as Monsanto can become so shrill that consumers turn away. Surprisingly often, I have heard even committed organic consumers mutter, *What is organic anyway?* That is why it is important to ask consumers face-to-face how they perceive the personal, commercial, government and NGO discourses competing for their attention.

Multifunctionality regulated by the EU & beyond?

In her landmark book *Agrarian Dreams* (2004: 108-9, 172) Julie Guthman details how California organics replicated much of what it set out to replace. She claims that, except for outlying areas supported by ecclesiastical or philanthropic groups:

The success with which organic farming was adapted to a California model of agricultural industrialization suggests a path dependency that few acknowledge. Against a background of urban wealth and cultural support for social experimentation, both of which bolstered demand, organic production was otherwise layered onto an already existing landscape of agricultural industrialisation.

Guthman (2004: 108) draws on Massey's (1984) 'geological metaphor – upon existing landscapes of California agriculture and the social relations they embody, making some adjustments within but rarely transforming structures and practices.' In essence, Guthman identifies a teleology begging the question (since California originates so many cultural turns, from surf music to what Ritzer (2000) called the 'McDonaldization' of food): *Will what happened in Californian organics happen here?* It seems to me that Seattle enjoys the urban wealth and cultural support for social experimentation that bolsters organic demand, that Washington State suppliers, despite envying California's longer growing season, enjoy social relations more conducive to alternative food networks (Qazi & Scholten 2005). This is because, as Guthman (2004: 13) claims, 'California never had much of an agrarian smallholder tradition.' From the early settlements after the 1849 Gold Rush, configurations

of farms (for reasons extending back to Spanish colonial missions and estancias) were large, even corporate in character. In contrast, Washington State's Department of Agriculture claims 85% of its farms fall into the typology of family farms. Guthman observes that, no matter how California organic farmers see their own operations, the ones which best meet traditional ideas on organic process as well as certification are medium-sized farms earning \$100,000 to \$1 million annually.

In the EU, researchers asked: *Will European organics be Californicated?* I have argued (2004-6 with Post-Organic Futures working group 10; IRSA 2004 & CABI book project) that EU regulation may preclude that. Guthman details California's history of civic boosterism in which land values are taxed according to 'best use', but Washington State has long zoned agricultural land for lower levels of taxation, compared to business and commercial land in urban areas. This is also true of early members of the EU. While the USDA supports the 2002 National Organic Programme because it is a thriving economic sector, and the UK Government entertains calls by the 2002 Curry Commission report to shorten food chains, many EU countries more strictly regulate school meals, food advertising on children's TV, and bolster local and organic food chains. Regulation matters. In Europe, the value of food self-sufficiency is not forgotten. Nor is the role of the countryside as a reservoir of labour – or safe haven to wait out urban industrial depression – an entirely abandoned concept. But compared to California, EU countries including even laissez-faire Britain maintain relatively farm-friendly tax and zoning codes, which improve the outlook for organics. Evidence for this was presented at a meeting of Anglo-German rural researchers at Exeter University by Karlheiz Knickel (2004; Knickel & Peter 2005) outlining EU policies that organic actors outside Europe long to hear from their own governments:

The countrysides of Europe and the diversity and richness of their agricultural systems represent an undeniable social, cultural, ecological and economic patrimony for European society as a whole. Many people value agricultural land and the countryside as open space. In a more modern language, rural and environmental amenities are provided by agriculture. Agriculture also contributes to the maintenance of our cultural heritage and the economic viability of rural communities....Multifunctionality is the central feature of the European Model of Agriculture (EMA), which became a cornerstone of the Common Agricultural Policy (CAP) in the European Council in Luxembourg in 1997.... It is stressed that policy must aim to provide a supportive environment for new, future-oriented and indeed market-driven activities in rural areas and for a reorientation in resource use. The rapidly increasing importance of quality food markets with a regional image, and of provision of public goods through nature and landscape management contracts, are clear signs of such a reorientation.

At the Exeter meet, Henry Buller and Geoff A. Wilson debated whether or not multifunctionality represented an entirely new policy, as Knickel insists. There was agreement that multifunctionality hearkens to the role of the countryside in *dual production*, as seen in Marx's view of nature and rurality, in which the land produces not just commodities, but generates social relations among producers such as farmers, woodcutters and blacksmiths who find identity in their work. Wilson added a realistic dash to his vision of a rural idyll in a paper in which his Transition Theory (2007; also Wilson & Rigg 2003) situates multifunctionality in European agricultural development. If EU policy and funding continues to favour multifunctionality, ramifications may entail a rehabilitation of Gilg & Battershill's (1998; 2000) suggestion that less favoured areas of Europe might hold comparative advantages in organic and alternative farming. Wilson notes the current existence of several modes of production in agriculture, and predicts their retention in a sort of Production Funnel encompassing activities from productivist agriculture to a heterogeneous mix of local, organic, ethical niches plus hyperproductivism, nanotechnology, pharming, and other technologies. Hyper-Productivism might appear in Europe for crops as bio-fuels, nutrigenics or pharmaceuticals grown *contemporaneously with handcrafted organic or speciality foods*.

Chapter synopsis

According to Robert Kates (2003) Alexander von Humboldt dreamed of a university incorporating human knowledge, from arts to biology, chemistry, engineering and ethics to zoology. Likewise, Kates sees the concept of *sustainability* as an integrating link between academic disciplines. One proxy for sustainability is organic food, and thus, although this study is situated within human geography, scholars from many disciplines populate this literature review. Let the walls come down!

Navigating the literature on food risks can be sidetracked by other meanings of food, from its selection from natural flora and fauna, its preparation and transformation from what Lévi-Strauss (1966) called 'the raw, the uncooked and disgusting' to presentation as wholesome nutrition. We can be immured in canyons of cookbooks, e.g. Arpad Appadurai's (1986, 1988) Indian cuisine which might in fact be an example of what E.J. Hobsbawm & Terence Ranger (1983) call *The Invention of Tradition*. Or one might examine urban scooter punk-cum-TV-chef Jamie Oliver's attempt to enrol young males in his passion for fresh natural

herbs and a newer, healthier British cuisine, for an attempt to reground contemporary cultural sensibilities not just in metro-sexual sensitivity, but in a more exciting, if not macho, postmodern exploration of the kitchen. It is also tempting to follow the ethical discursions of Peter Singer (1975) and Roger Scruton (1998) on human-animal relations. It is worth asking whether relatively new trends such as vegetarianism, veganism and so-called animal *rights* are reactions to BSE – are filling a void once filled by traditional religion.

Any voyage through food literature finds that the age of exploration was launched less by existential epiphanies than by prosaic demands for salt, spices, fish and other foods (Tannahill 1973; Diamond 1999; Kurlansky 1997, 2002). Only recently has it been recognised that hunter-gathers were taller, healthier and longer-lived than their city-dwelling progeny (2004 *New Yorker*) who, sustained by agricultural surplus developed record-keeping and other cultural systems capable of transmitting the knowledge systems, the precursors of modern, globalising food systems which, a century or two ago, began to improve our health and stature – and more recently find us fatter and shorter than consumers of the mid-20th century. It is hard to swallow, but the historical fact is that Italian tomatoes of a few hundred years ago would go unrecognised today, according to Mark Harvey (1999; 2002). Loathing what he sees as undue resistance by organicists to GM technology stemming from a failure to recognise that foods have always been altered by society, Harvey calls the Soil Association, Greenpeace, the British Medical Association and Prince Charles all ‘nature fundamentalists’ (pers. com. Jan. 9-11, 2002).

Knowing potatoes were foreign to Eire before Columbus is an hors d’oeuvre to the main course of understanding the food trade’s role in global exploration, development of transport, navigation, financial institutions and nation-building. The Dutch and, later, British East India Companies are just two examples (Kennedy 1987). Thinking of food as economic activity begins to delimit the scope of the literature suitable to an academic study of organic food & risk. The growth of civilisation in the Indus, Mesopotamian and Nile river valleys, denoted by establishment of social institutions such as the priesthood, army and civil manager class – was supported by food surpluses grown by agricultural workers (Tannahill 1973/1988). Already the word *class* has raised its head. And when we consider civil wars, or rival civilisations – in essence competing over the fruits of agricultural surplus – we immediately think of technical advances in warfare – some of which could be adapted as agricultural mechanisation. To take the charitable view, the swords fixed to the wheels of Assyrian

chariots, terrible in aspect, are almost as technically sophisticated as the horse-drawn reapers that harvested the American prairie – and disrupted the rural economies of Emile Zola's France a century ago. Waves of grain appeared on plates around the world, new manifestations of political power. As commodities centres like Chicago rose in counterpoint to the draining of the rural pool of surplus labour – the meanings of food gradually delinked themselves from the sphere of production *to consumption*, from tilling the soil to swilling the froth in *Supersize Me!* fast-food culture (Spurlock 2004).

Food in human history is a dramatic mural to present reifications of food. One wonders if the present popularity of organics in Seattle has as much to do with changing signs of class (Fussell 1983) and 'being a snob' (Downey 2003) as it does with safety and the environment. Certainly, despite Ritzer's (2000) explorations of the insidiousness of McDonalidization, there is a case to be made that in rich developed societies, the links between producers and consumers are being reforged. A *Real-Politik* exposition of political economy, such as Fred Buttel's examination of Monsanto's successful certification and sale of synthetic bovine growth hormone (rBGH, *aka* rBST) consigns grassroots (see Goodman & DuPuis 2002) contestation of this agro-industrial appropriationism of agricultural systems (and products produced and consumed within farming which Marx and others considered 'dual production') identified by Ben Fine (1996) to the margins. Yet, organic production and consumption, often seen in farm-to-table short food supply chains, direct sales in farm shops or via the internet, in alternative agro-food networks (AAFNs in Goodman 2003) have for a decade been the fastest growing sector of agriculture in Europe and North America – a fact pivotal in engaging the support even of those who grudgingly acknowledge a 'turn to nature' 'nature' and 'quality' (Murdoch, Marsden & Banks 2000) such as USDA Secretary Ann Veneman in her defence of NOP organic standards. Part of the impetus for this thesis' preoccupation with organics is a renewed aesthetic project by urbanites to consume the countryside or revalorise 'environmental goods' (David R. Harvey 1998). But the *primum movum* is BSE or mad cow disease and its human form CJD which Whatmore (2002) has called 'perhaps the most archetypal of food scares.'

BSE may epitomise a hybrid disease, one possible only via modern technology and misappropriation of human intervention, on the level of nuclear waste or GMOs. Although even Foucault has warned against imagining we are main players in an apocalypse, Beck's *Risikogesellschaft* (1986) as is a touchstone for food as contested territory between the

globalised forces of modernity epitomised by Monsanto, against the champions of a perhaps mythologised nature such as the UK Soil Association, and what US writer Michael Pollan (2003) calls pioneers of 'the original organic dream'. While all of these forces contain germs of hybridity, their inter-dialectics produce new syntheses of what local, regional, national and global cultures will apprehend as new forms of 'natural' or 'industrialised' food.

Conclusion

In the simplest terms, proxies come readily to mind for actants in the topic of *Risk reflections on organic and local food in Seattle, with reference to Newcastle upon Tyne*. Binary proxies include nature/agribusiness; political ecology/neo-liberalism; organic food/GM food; or globalised conventional food/biodynamic food.



Figure 2.10. Biodynamic farmer fingers soil. Author holds horn at Ceago vineyards in California.

But Jonathan Murdoch (1997) warns against specious binaries. This leads us to what may be an important insight for those theorising turns to culture and nature in our era of Post-Productivism (Lowe *et al.* 1993) and Transition (Wilson & Rigg 2003; Wilson 2007) to some type of multifunctionality. This insight is hybridity, subject of the quietly powerful book *Hybrid Geographies* by Sarah Whatmore (2002). Hybridity satisfies Murdoch's caveat that we should not be misled by either/or binaries on nature/technology. Careful reading of Guthman (2004: 178-185) reveals her opinion that organic *process*, rather than certification, codification and regulation is the best route to sustainability. Hybridity in all but name.

Organic food is more than growing a few strawberries on mulch, or a trip to the shops. At its heart is a struggle for political power, economic wealth, and social cohesion. Bruno Latour (1991/1993: 56, 17, 89) claims *We Have Never Been Modern*. Aristotle might agree. Black boxes assume the veneer of scientific *truth machines*. But Latour shows they are nothing new on the vacuum pump that, along with inventor Robert Boyle, was subjected to rigorous review by his toughest peers including Thomas Hobbes. Explaining the term *quasi-objects* borrowed from Michel Serres (1987), Latour (1991/1993: 54) explains how:

it is the glory of the Edinburgh school of social studies of science to have attempted a forbidden crossover.... They used the critical repertoire that was reserved for the 'soft' parts of nature to debunk the 'harder' parts, the sciences themselves! In short, they wanted to do for science itself what Durkheim had done for religion, or Bourdieu for fashion and taste; and they innocently thought that the social sciences would remain unchanged, swallowing science as easily as religion or the arts'.

A few pages earlier in the book Latour graphs 'Purification and mediation', plotting 'The Multiplication of Hybrids' produced by interaction of the 'Nature Pole – The Modern Dimension' with the 'Subject/Society Pole'. Drawing us into his analysis, Latour suggests any proposed truth machine is inevitably as much a product of Society as of Science, and thrusts the reader into a world of proliferating quasi-objects. Latour's insights on hybrids are congruent with those of Whatmore. And while one retains respect for Beck's (1986/1992) *Risk Society* thesis, based on the novelty of ubiquitous risks such as nuclear and GMOs, they are ultimately new only as a matter of degree, or scale, from the invention of stone axes.

It becomes plain, too, that the war between deep ecologist advocates of organics and the proponents of GM is, respectively, between those advocating the precautionary principle (minimal risk in Scholten 1990) versus those favouring a risk/benefit approach to biotech.

Both Latour and Whatmore challenge our definition of nature. So does Mark Harvey (1999) in his defence of GM tomatoes. And while we are not automatically forced to acquiesce to precipitate GM certification, testing outside laboratories (see Mark Tester 2002) or consumption by unwitting consumers, we are forced to acknowledge that nature itself is a hybrid, in an inescapable double hermeneutic with ourselves (see Andrew Sayer 1984/1992).

One more thought, before turning to chapters dedicated to methodology and empirical data from Seattle and Newcastle. Just as Latour claims we have never been modern, it may follow that we have always been hybrids. Half a century ago school teachers explained the

difference between humans and animals by saying humans use tools, but monkeys do not. By now we have seen enough TV documentaries showing monkeys using sticks to dig their dinner to know that's not true. It follows that if tool-making does not mark a strict dichotomy between animals and humans, the same may be true of reflection and emotion. If so, Peter Singer (1975; 2002) is right to contend that human responsibility to other species is greater than once assumed in animal welfare, and manifestly in human social relations. If Singer is correct, perhaps we should allot more weight to animals in conjectures on food systems.

¹ Data on fertility and sex change from biology and population studies support Karl Polanyi's (1944) idea that all political systems rest on some form of public legitimation. Game theory suggests multiple human motivations (altruism to selfishness) maintain social stability (*Economist* Jan. 20, 2005).

² Paul Wolfowitz, unilateralist architect of Gulf War II, was reported to quash a drive to make him president of the World Bank in early 2005 (*Economist* March 5, 2005). But that was the post held by the anti-corruption zealot, at least until early 2007.

³ See *Seattle P-I*, Sept. 5, 2001.

⁴ Derek Gregory presented 'Performing Cairo' at Durham University on May 2, 2002.

⁵ One suspects observers of grain cartels such as Dan Morgan (1979) are receptive to 'food regimes', since they are delineated by crises of capitalism such as the OPEC oil embargo that followed US inflation incited by the 1971 Nixon grain sale to the USSR.

⁶ Helen Jarvis (pers. com. May 16, 2007) disputes my 'conflation of binaries with dualities of structure: these are not in any sense equivalent. A duality of structure is an understanding of mutual co-constitution expressly developed to overcome the problem of a structure vs. agency binary or dualism (see Giddens 1984:5; Jarvis *et al.* 2001:89). I'm grateful for Jarvis' comment, and insights this suggests into Giddens' structuration theory, *aka* Third Way.

⁷ Tickell divulged in a Nov. 18, 2004 talk at Durham that, 'Jamie and I've always had a thing for lists.'



Figure 3.1. Organic pioneer Betty began by studying biology. Labourers in background are an aspiring restaurateur and school teacher.



Figure 3.2. Organic pioneers contest globalisation out of boxes. In NE England, this scheme prioritises logistics and drivers with local knowledge.

CHAPTER 3: ALTERNATIVE FOOD NETWORKS NEAR SEATTLE – *and Newcastle upon Tyne*



This chapter describes my fieldsites near Newcastle upon Tyne, in northeast England of the UK, and around Seattle and Puget Sound in Washington State, of the Pacific Northwest US. The farms and firms recorded here are based in private gardens or public allotments, on family farms linked to cooperatives, or in large corporate entities sometimes supplied by smaller family farms. All are engaged in the process of alternative agriculture, a broad church whose networks intersect places, usually along food supply chains, between farms, farmers' markets, cooperative marketing venues, and consumers' tables.

In the next section we will discuss meanings of key phrases such as alternative agriculture, and food networks in competition with conventional intensive agriculture which has held hegemony from WW II until recently. Case studies of actors, activities and networks in alternative agriculture will serve as background for analysis of my quantitative, qualitative and ethnographic consumer surveys in subsequent chapters. Here we will discuss gender issues and the scale of farms and firms in AFNs within local, regional and global economies. A key issue is whether or not alternative farms or firms on the highest scale can legitimately claim to be *alternative*. Julie Guthman's (2004) conventionalisation thesis informs those like Michael Pollan (2001a&b; 2003) who claim that they have been subsumed by globalising capital, and that their high scale induces inevitable harm to environmental sustainability via food miles – alongside violations of social justice including gender equality.

Alternative food networks: definitions & discussion

First, a discussion of terms. At University of California at Santa Cruz (UCSC), David Goodman and Margaret FitzSimmons (2003) refer to AAFNs in their work. Their colleague Julie Guthman, in her book *Agrarian Dreams: the paradox of organic farming in California* (2004: 219), refers simply to 'alternative agriculture [as] an umbrella term for agronomic practices that are opposed to conventional agriculture, including sustainable, organic, low-

input, biodynamic, and regenerative practices.’ It is important to understand what AFNs and AAFNs are *not*. What they are not – or at least appear not to be is *conventional* food. Conventional food is the assemblage of commodity food sourced primarily on price in which the consumer is anonymous. Alternative food networks unite farmer and customer, often face-to-face, in an exchange of coin for food products that add value in meanings beside the nutritional qualities of the food itself. These additional values generally are linked to some combination of ties to human health, animal welfare and environmental sustainability.

Commentators such as Fred Buttel (see his 1998, 1999 and 2001 papers on rBGH/rBST) and Harriet Friedman (IRSA 2004) have clung to political economy as the ultimate framework for assessing national and global food systems. Their approaches are perhaps tied more closely to Marxist notions of political-economic power than Ben Fine’s (1996) systems-of-provision theories. Dixon (1999) sees this as a harbinger of what is variously called a turn to consumption, a turn to quality – or the cultural turn. Colin Sage (2003), who attended workshops with Goodman and FitzSimmons at UCSC, treats AFN and AAFN as synonyms but opts for the shorter phrase alternative food network. Apparently the phrase alternative agro-food network (AAFN) was used to emphasise shortened distance between farmers and consumers. Here we use the phrase alternative food network and acronym AFN for brevity.

What is alternative about alternative food networks? AFNs are thought to inflict fewer negative externalities upon the environment and human health. Organic farming and supply systems are often conflated with alternative and sustainable food systems. Although Pretty, Ball, Lang & Morison (2005 see Table 3.1 below) write that organic farming is not the only sustainable method of farming, they recognise that methods certified by the UK Soil Association are more sustainable than conventional farming, and have calculated a scenario of gains to environmental and human health from a projected switch to organic farming in the UK. They conclude (Pretty *et al.* 2005: 16) ‘It is clear that actions to reduce farm and food mile externalities, and shift consumers’ decisions on specific shopping preferences and transport choices would have a substantial impact on environmental outcomes.’

Scale is also often thought of as a crucial parameter in AFNs, and farms or firms on the bottom generally consider small to be more acceptably alternative than larger scale farms or firms, even organic ones. Of course the converse is true; large operators have told me that small farmers are too marginal to affect the macro picture.

Table 3.1. Pretty *et al.* (2005) Sustainability gains from organics.

4 *J.N. Pretty et al. / Food Policy 30 (2005) 1–19*

Table 1
The negative externalities of UK agriculture (year 2000)

Source of adverse effects	Actual costs from current agriculture (£ M yr ⁻¹)	Scenario: costs as if whole of UK was organic (£ M yr ⁻¹)
Pesticides in water	143.2	0
Nitrate, phosphate, soil and <i>Cryptosporidium</i> in water	112.1	53.7
Eutrophication of surface water	79.1	19.8
Monitoring of water systems and advice	13.1	13.1
Methane, nitrous oxide, ammonia emissions to atmosphere	421.1	172.7
Direct and indirect carbon dioxide emissions to atmosphere	102.7	32.0
Off-site soils erosion and organic matter losses from soils	59.0	24.0
Losses of biodiversity and landscape values	150.3	19.3
Adverse effects to human health from pesticides	1.2	0
Adverse effects to human health from micro-organisms and BSE	432.6	50.4
Totals	£1514.4	£384.9

Sources. Adapted from Pretty *et al.* (2000), Hartridge and Pearce (2001) and EA (2002).

However, localisation of food systems, such as we point to here, would require changes in the behaviour of actors and businesses across the whole supply chain, with localised geographic areas needing different patterns of land use to supply local markets and consumers. Some of these changes may lead to trade-offs and losses in overall system sustainability, or job changes in freight, input supply and processing industries. In addition, proximity alone may be a problematic measure of sustainability, as a long journey on water has a lower impact than a shorter one by road. However, globalising trends in food systems are likely to continue, making localisation harder to achieve, despite the net economic benefits.

A 'conventionalisation thesis' has been described by Julie Guthman (2004) in the transformation of California's organic mesclun lettuce chains, from small plots employing crop rotation and fallow, to intensive monocultural production dependent on imported mulch and nutrients. Samuel Fromartz, in his (2006) book *Organic, INC.*, describes how organic

mesclun won immense popularity in trendy California restaurants in the 1990s, and became the *sine qua non* for any eatery with environmentally-conscious pretensions. But what began as specialist production from small organic plots to a few restaurants turned into a competitive farm niche where incomers with MBAs used big business tactics of mergers and cost-cutting to beat their competitors in a lucrative market. Michael Pollan, who incorporated some of Guthman's work into the *New York Times Magazine* (2001a) article that made him famous, describes how alternative organic production can be skewed by capital into large scale entities which he dubs organic-industrial. According to Pollan (2003), organic-industrial chains marginalise small and medium producers such as family farms, abandon crop rotation, neglect soil fertility, threaten social relations (in farmers' markets, etc.), and endanger animal welfare and biodiversity. His arguments will be accessed below and in succeeding chapters. While there is much to recommend Pollan's idealism, it is contested by Gene Kahn, founder of Cascadian Organic Farms; John Mackey, founder of Whole Foods Market Whole Foods, and Patrick Holden, director of the UK Soil Association (2006c) which controversially certified organic salmon farming, partly in response to over-fishing of ocean stocks. Despite variations in positions, such macroactors (see Murdoch 1995; 1997) reckon that large scale problems induced by decades of intensive production require large scale organic production to rectify them.

The picture is further clouded when we recognise that the largest supermarket chains such as Carrefour, Tesco and Wal-Mart are the biggest purveyors of organic food (Raynolds 2005; see also Willer & Youssefi 2005). This plays into Pollan's organic-industrial thesis, and infuriates organic pioneers who believe food should be locally sourced. Succeeding chapters will reckon with the preference for local over organic food by a large proportion of my test subjects (*aka* questionnaire respondents and focus group participants). Here it is enough to cite a report by the UK Soil Association (2004) which found that most of its members would rather buy local food than organic food imported from abroad.

In the case of supermarkets, UK chains such as Waitrose and tiny (four outlets) Out of this World, which feature Fair Trade, organic and other higher-than-conventional-quality foods are alternative to conventional low-price chains selling conventionally produced food such as Asda and Morrison (Tesco and Sainsbury mostly sell conventional food but feature organics). *Which?* (February 2007) magazine notes that in an October 2006 online survey of 1770 panel members, 'Almost nine out of 10 people in our survey buy organic food', and:



According to Waitrose, which has sold organic food since 1983, it's now possible to do your whole weekly shop organically in its stores if you choose to. And Tesco (which didn't start selling organics until 1992) tells us that one in three of its customers now puts an organic item in their trolley.

In the US, Trader Joe's and Whole Foods, featuring high quality, organic and ethically-sourced foods are alternative to conventional low-price chains such as Safeway. But the practice of such high-volume chains to source supplies globally usually entails an increase in food miles. The concept of food miles has diffused through the UK and US publics, to the point that in early 2007, the UK Soil Association (2007a) announced that:

There is a strong demand, from the public and many of our licensees, to reduce food miles. Although there is very little air freighting of organic produce, we believe there is an urgent and pressing need to make every contribution to curbing climate change that we can. This is a complex issue though: especially for producers in developing countries where it involves equity and ethical trading issues, and that's why we shall actively engage a wide-range of stakeholders to ensure we get it right.

Unfortunately, calculating the global sustainability of food miles is very complex. Nevertheless, in an article in the *Bulletin* magazine of the Food Ethics Council, James Macgregor & Bill Vorley (2006) attack this near-intractable problem by comparing the unit energy cost of air miles versus ship miles, and the pay-off in human development measured in OECD indicators such as education and health that may – or may not - result from supposedly unsustainable air freight of food and flowers from poor to rich countries. Worries about transport and carbon loading have driven some consumers away from globally-sourced food to alternative food networks of the type that Buck, Getz & Guthman (1997) describe as 'farm to table'. The phrase implies shorter food chains than those of conventional supermarkets. Indeed contemporary non-conventional food chains often bypass supermarkets, wholesalers and distributors in direct marketing, featuring farmers' markets, box schemes, community supported agriculture CSA, u-pick sales, and so on.

Non-conventional food chains generally involve social interaction, negotiation and face-to-face performance (see Judith Butler's (1990) work on such social performances) not found in conventional supermarkets. Farmers' markets and other forms of direct sales hearken to ancient, markets in which people trade conversation and gossip as they negotiate the price of food. Lucy Jarosz (2000) understands such agri-food networks in the Pacific Northwest of the US as social relations in which women actors frequently play leading roles (see also Bjorkhaug 2006; Trauger 2004). One of the questions that occurred to me in my Seattle fieldwork was whether or not this leading role of women actors is blocked by what I dubbed

a GRass Ceiling between the highest scale organic farms/firms and the medium- and small-scale farms/firms below them. The jury is still out on a definitive verdict, but evidence for and against the existence of such a mooted gender barrier will be discussed later in this chapter. Geographers Terry Marsden, Richard Munton & Neil Ward (1996: 363) note the failure of political economy to find complete “coherence within agricultural geography”. In other words, that discipline does not account for consumption shifts from conventional fare toward organic and other costlier food items. One of the explanations for the turn to alternative, organic and local consumption is social embeddedness, lost for decades to supermarkets, but regained in contemporary AFNs. Colin Sage (2003: 47) sees such face-to-face transactions in alternative ‘good food networks’ in Ireland as ‘evidence of strong interpersonal ties within transactions conducted by small food producers’ and ‘oppositional... to the mainstream food industry’. In Sage’s concept of alternative to mainstream fare:

the notion of relations of regard to illustrate the benefits to both parties arising from their interaction that go well beyond narrowly financial evaluations. The term ‘good food’ is deployed for its capacity to convey the multiple attributes of products as well as to capture a heterogeneous set of actors broadly sharing a common set of values around food.

The emergence of alternative, organic and local food networks has not been unproblematic for regulators. Hints that alternative products were superior to produce from the conventional food sector courted consumer distrust of the latter. In the UK, Sir John Krebs, the first head of the Food Standards Agency (FSA) challenged any supposed nutritional superiority of organic food over conventional food. In the US, Ann Veneman, Secretary of the US Department of Agriculture (following a stint at Monsanto) took pains to portray organics, the fastest growing food sector, as the logical development of product differentiation in a free market, i.e. offering consumers more choice (USDA 2002b). However, Veneman’s bland assertion - connoting standard political economic themes of innovation, novelty and marketing as if food were video games – fails to acknowledge other meanings and positive externalities which a growing number of consumers attribute to alternative agriculture. Even some farmers share Veneman’s opinion. Egon Noe (2006) finds that some late entrants to organic production in Denmark did not eat the organic food they grew, to avoid embarrassment in front of their colleagues in conventional production. Needless to say, such late entrants were the first to leave organics if prices fell. They claimed they grew organic for the price premium, denying it was more sustainable than conventional food.

Conventional agriculture

Conventional food is associated with the development of what Lowe *et al.* (1994) call the productivist food regime that dominated developed country food systems from WW II until what they dub the post-productivist transition (PPT) began in the late 20th century. In Europe this regime was fostered by a regime of production subsidies in the Common Agricultural Policy (CAP) promulgated by European Economic Community (EEC) farm commissioner Sicco Mansholt. The goal was self-sufficiency in food, and Mansholt stimulated production by subsidising farmgate prices. Higher farmer incomes enabled purchase of intensive chemical inputs such as ammonia, nitrate and phosphate fertilisers. That there was surplus industrial capacity and the technical knowledge to produce such artificial fertilisers is no accident, since idle factories which produced explosives for WW II military use were easily be turned to chemical inputs for conventional farming.

The Mansholt Plan was devised to regain European food security in the wake of WW II. It worked too well. By the end of the 1960s, that end was achieved. However, the means to the end of food security brought unforeseen consequences. As a pensioner, Mansholt admitted drops in water quality in Europe and losses to biodiversity. The CAP regime of intensive chemical inputs, and a shift from multicropping and crop rotation to monoculture, increased farm production, resulting in surpluses infamous as Butter Mountains and Milk Lakes. Ruses were devised to dispose of these dairy surpluses, for example as commodity food aid to India. It is my opinion that price reforms favouring indigenous Indian farmers were crucial in avoiding a new form of post-colonial dairy dependency (Scholten 1997; 1998).

The US, king of a grain seller's market after WW II, managed to avoid a farm subsidy regime as extensive as Europe's. In the 1950-60s it consumed most grain domestically and – when surpluses threatened prices – disposed of grain overseas through surplus disposal programmes such as PL-480. However, by the 1970s, French farmers who used about three-times the inputs of farmers in the US Midwest were eroding US world market share (Morgan 1979). This was a time when inflationary spending on the Vietnam war abroad, and Great Society social welfare programmes domestically, put great pressure on the administration of Pres. Richard Nixon, and in 1971 led to the breakdown of the Bretton Woods framework. One strategy Nixon and his Secretary of Agriculture Earl Butz deployed was the initiation of what they called a US Food Power programme to boost farm exports and support the dollar. This is the point when US farm subsidies began to rise toward the level of Europe's CAP. Ideologically, cereals farmers were urged by Butz to plant fence row to fence row to feed a

hungry world. Dairy supports were higher then than they were after passage of the FAIR Freedom to Farm Bill of 1996 (David R. Harvey 1998), and Darigold, the Pacific Northwest regional dairy cooperative associated in my home town of Lynden, Washington, sold the rights to its speciality cheese products (kuminost, cheddar, gouda) to fund the nation's largest drying plant to export millions of tonnes of milk powder in the Food Power strategy. Darigold's abandonment of speciality cheese left a market vacuum that Tillamook Dairy in Oregon State was happy to fill. By the end of the 20th century, Tillamook was nationally recognised as a quality brand, while Darigold had lost so much of its milk powder market abroad that in 2006 it invested in a smaller volume dryer with better energy efficiency. In the 1990-2000s, artisanal cheese makers in Washington State also began to fill the cheese vacuum left by Darigold, and some of them will be discussed in case studies below.

The US has never quite reached Europe's subsidy levels. But just as Europe scaled down export subsidies, and decoupled domestic subsidies from farmgate prices, in response to the demands of developing country exporters in the Doha round of WTO negotiations, the neoliberal administration of Pres. George W. Bush ratcheted up US farm subsidies to an alarming level. This ran against the historic free market policies, but may have been a tactic by Bush and his advisor Karl Rove to secure political support among the nation's farmers.

Farm subsidies have been the source of many ills. Mansholt (*Die Zeit* 1990) lived long enough to see how subsidised inputs led to pollution of Europe's water supply. Virtually all German homes that I have visited offer bottled water rather than water from the tap. Water quality and taste are superlative in Northeast England, fed by the Kielder reservoir on the England-Scottish borders, but such accolades cannot be paid to tap water in London. The USDA has admitted farm-sourced pollution of the North American water supply, and touts government funded efforts to clean it up. Guthman (2007 forthcoming) cites the 'hollowing out of the state' thesis of Jamie Peck & Adam Tickell when she traces a link between subsidised conventional agriculture and socio-environmental harm:

There is no mention of changing agricultural policy in general, even though many in the sustainable agriculture movement argue that the surest path to a more sustainable food system would be to remove the subsidies of big agriculture.... Doing so, it is argued, would put major commodity producers out of business and thus relieve a good deal of the downward pressure on prices, not to mention discourage unsustainable practices like mono-cropping that... make it hard for more ecologically-minded farmers...

It should be pointed out that in the US, alternative food networks have seldom if ever benefited from USDA production subsidies. Nor have many US farmers converting from conventional to organic farming received conversion assistance like those in the UK. USDA subsidies go mainly to commodity export crops such as wheat, corn and soybeans; dairy exports have been assisted by the Commodity Credit Commission (CCC) although that support is dwindling due to GATT/WTO 1994 restrictions (USDA 2006; Scholten 1997). At this writing (December 2006) growers of fruit and vegetables are citing a tsunami of such low-cost imports from China, in their first ever request for top-up subsidies from the USDA (CNBC December 2006). Irrespective of that, subsidies to conventional food have made life difficult for alternative farmers. Pretty *et al.* (2005) echo Guthman on the costs of subsidies to conventional agriculture in the UK, a scenario similar to that of the US picture:

Subsidies can be seen to be part of the full cost of food, as they are payments from taxpayers to farmers. They are not externalities, but can exacerbate them by increasing output beyond that which would be dictated by market conditions.

Pretty *et al.* (2005) say that in comparison to subsidies for UK conventional agriculture, support to organic (*aka* alternative) farming was a drop in the bucket. It seems clear that what Guthman (2007 forthcoming) calls 'major commodity producers' in conventional agriculture hold hegemony in the US. The same has been true in the UK, although I would argue that an Austro-Germano-Franco axis in favour of organics and multifunctional use of rural spaces has slightly weakened conventional hegemony in the UK. As evidence for a retreat of conventional dominion, the UK's largest agricultural machinery show was cancelled due to market saturation and lack of interest in 2006. Although US farm exports were up to \$50 billion in 2006 (partly due to weakness of the US dollar in the Iraq War), conventional agriculture is in retreat in the US. For example, the Walla Walla area of Washington State, once famous for exports of soft winter wheat suitable for breadmaking has recently had fire sales of combine harvesters, due to the weakness of cereals exports. Walla Walla is undergoing a sociocultural change as the agriculturalists who walk tallest in town are vintners rather than wheat ranchers. So-called yuppies land at the airport, rent Mercedes and drive out to vineyards to taste wines that have won honours in competition with wines from France and California. Such quality consumption is a far cry from the mass marketing of cereals commodities that typified American and European agriculture from WW II until recently. Now let us delve into the theory of the post-productivist transition in which alternative agriculture is part of the competing paradigms.

Food wars in Newcastle and Seattle

In this section we move from our thus far simple, almost binary, discussion of conventional and alternative food, to exploring Lang & Heasman's (2004) portrayal of food wars between competing paradigms. These entail the outgoing Productionist paradigm (the status quo) facing choices between a Life Sciences paradigm proposing Big Science solutions (nanotechnology, pharmacogenetics, GMOs) for individualised diet and health, and an Ecologically Integrated paradigm stressing the inter-relatedness of environmental sustainability and human health. The third, more holistic approach relates to AFNs privileging organic and local foods in short food chains, often culminating in farmers' markets and other direct sales.

In chapter 1 we discussed the sustainability crossroads at which cities like Seattle and Newcastle upon Tyne find themselves. This is a point at which cities try to evaluate their impact on the environment, locally, regionally and globally, sometimes using tools such as the Sustainability Compass developed in Seattle (Sustainable Seattle 2006). Despite the refusal of Pres. George W. Bush to ratify the Kyoto climate protocols, over 100 US cities led by Seattle Mayor Greg Nickles, have signed pledges to reduce pollution and adopt carbon-neutral policies to ease the apparent effects of global warming.

But in some respects rusty, old, post-industrial Newcastle is lengths ahead of Emerald City Seattle in environmental action. In concert with the EU's Sustainable Cities programme established after the 1992 Rio Earth Summit, Newcastle set an urban strategy of reducing carbon dioxide and other emissions associated with energy use by 30% by 2006 (Newcastle upon Tyne 1992a; 1992b; 1996; www.eaue.de/winuwd/58.htm).

At times cities engage in joined-up-thinking and address a panoply of environmental issues. Both Seattle and Newcastle have made efforts to encourage environmental sustainability in the NEWS mnemonic for the four sectors of the Sustainability Compass: Nature, Economy, Well-being and Society. AFNs fit easily into the Nature and Economy sectors, for instance when local farmers or allotmenters barter produce with each other or sell it at farmers markets.

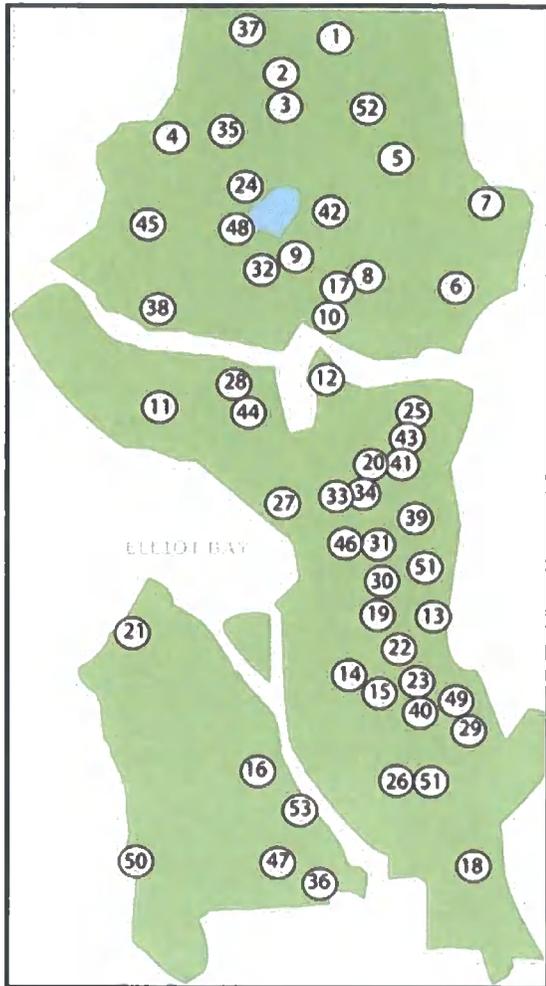
As we shall detail below, Seattle amplified on its urban garden allotments (*aka* P-Patches, see Map 3.1 below, on the P-Patch Community Gardens scheme www.seattle.gov/neighborhoods/ppatch/locations.htm) by providing start-up subsidies for

farmers' markets in neighbourhoods which hadn't hosted them in decades, if ever. According to Ron Sims, King County Commissioner in 2003, there were 17 farmers' markets in Seattle and King County. Markets numbered over two dozen by 2005 and 27 by 2006 (*Seattle Times* March 21, 2005) The 53 P-Patch allotment gardens are near most of Seattle's farmers' markets, even the historic Pike Place Public Market (Figure 3.3 below) in the central business district (walking distance from # 27 Belltown P-Patch, next to a community centre. In the brick building's previous incarnation I worked for Boyd Sign Company.)

The municipally-supported Broadway, Columbia City, Lake City, Magnolia, University District and West Seattle markets of the Neighbourhood Farmers' Market Alliance (NFMA) are almost entirely supplied by farmers from around Seattle. They are generally held in the parking lots of city institutions such as libraries or fire stations, and often near P-Patches. For instance the University District market is adjacent to P-Patch 10, and the Broadway market on multicultural Capitol Hill is not far from P-Patch 20.

Unfortunately, some markets in Newcastle, such as one at Walkergate, were located on brownfield sites needing soil remediation for arsenic and heavy metals from its industrial past (Pless-Mulloli, *et al.* 2004). Like other British cities Newcastle let its farmers' markets languish, but began directing more official support to its remaining market on the Quayside. In 2001, for instance, a National Farmers Union (NFU 2001) certified market was held on the first Friday of the month, featuring locally produced meat, eggs, cheeses and ice cream. It should be said that Newcastle also has an impressive covered market near Grainger Street, although it is difficult to find organics there.

That said, my travels found a wider range of speciality and organic foods at outlying farmers' markets in towns like Hexham or Durham. A Durham woman (Kay Sprigg *pseudonym* 17.Dec.2006 personal communication) who is keen on recycling systems as part of an overall approach to sustainability, told me that for decades, the UK Women's Institutes were among the few organisations committed to keeping direct food sales alive at the height of productivism.



Map 3.1. 2004 P-Patch Locations Map, www.seattle.gov/neighborhoods/ppatch/locations.htm, accessed 30.Dec.06. In the 1970s, allotments were seen - along with the Pike Place Farmers' Market - as anachronisms by some, but were taken to heart by many citizens as part of their natural heritage.



Figure 3.3. Pike Place Farmers' Market est. 1907 (Seattle Metblogs (2005)).

Similarly, Newcastle City Council, which like most British cities never abandoned allotments – and boasts herds of cows on its commons – claims about 3000 allotment plots on 62 sites (see Map 3.2. below).

It is possible that the tradition of industrial food in an industrial city with a strong Labour political orientation predisposes Newcastle consumers to be oblivious to alternative food qualities such as organic, but more sensitive to social justice. Newcastle has adopted Fair Trade as a municipal procurement policy in solidarity with labour abroad. Mayor John Marshall, said to be a key motivator, led a campaign to achieve Fairtrade City status in April 2002 (Newcastle 2006a). The upshot is that at most city functions, coffee, tea and food breaks are sourced from firms offering fairer pay and environmental conditions for developing country farmers than those offered by conventional MNCs. The popularity of Fair Trade products soared in the 1990s, much to the credit of activist Richard Adams who helped launch Traidcraft, Fair Trade and Out of this World (University of Newcastle 2005). This success brought pledges to ethical trading by MNCs such as Tesco and even Nestlé.



Map 3.2. Allotment gardens. Source: City of Newcastle upon Tyne:

www.newcastle.gov.uk/core.nsf/a/allotments?opendocument

In *Food Wars* (2004) Lang & Heasman favour the Ecologically-Integrated paradigm which, like best practice in hazard and risk management, extols sustainable food chains that stop pollution at its source, rather than clean up toxins after they are diffused in air, land, water and human and animal tissues. In the 1990s, stopping pollution at its source became the goal of utilities such as Northumbrian Water in northeast England, which began supporting payments to farmers to decrease their use of chemical fertilisers because it was cheaper than removing chemicals in water treatment plants (pers. com. with officials of Northumbria Water Ltd 2001). Lang & Heasman tout symbiotic links among humans, flora and fauna within organically sustainable environments. Although they agree that even organic agriculture (as a proxy for the Ecological approach) inevitably imposes some negative externalities on the environment. I accept their views and believe I am reflecting Lang & Heasman in my conclusions on *Food Wars*. The Life Sciences approach can be faulted on several grounds:

First that the environmental track record of capitalist pharmaceutical and chemical companies taking this Big Science approach portends more of the pollution associated with them in the past.

Second, that the Life Sciences approach (which depends upon cash returns to its investment) has little or no incentive to incorporate lessons from AFNs. It is not that Lang & Heasman reject the potential for all of the technologies of the Life Sciences paradigm, but would prefer them to be integrated into the Ecological paradigm.

Third, the Life Sciences are so immature that this approach has produced bad policies such as promoting margarine containing trans fats over dairy butter (Pollan 2006). If Life Sciences were subsumed in an Ecological approach, proper governance would likely entail rejection of the Risk/Benefit philosophy adopted in the Reagan-Bush era (Scholten 1990), and re-adoption of the Precautionary Principle subjecting *food* technologies such as GM, nanotechnology, nutrigenetics, pharmacogenetics, and so on to the same painstaking trials demanded by the USDA and FDA for new *drugs*. As Jeffrey M. Smith points out in his (2003) book *Seeds of Deception*, US regulation of GM drugs such as Monsanto's recombinant rBGH/rBST, marketed under the trade name Posilac, was judged ineffective by veterinary and drug committees in Canada and in Europe. Tom MacMillan (2002) also found anomalies in US regulation of GM dairy hormones suggesting high level insistence that GM become a technological champion in world trade.

Fourth, research and development should be greatly increased in the organic sector. At a 2002 Colloquium of Organic Researchers at the University of Aberystwyth, Willie Lockeretz (2002) discussed field trials which showed that careful husbandry can produce organic crop yields not much below conventional yields, but more sustainable in their impact on soil tilth, and organisms in the environment. Professor Lockeretz urged organicists to stop privileging participatory methods and said some field trials could better be done by non-ideologically-motivated research scientists in glass houses, rather than farmers' fields. While Lockeretz did not tell organicists to abandon their holistic approach, he challenged those who claim better nutrition, taste, texture and overall sustainability to test their claims via the same reductionist scientific methods used by conventional agriculture published in peer-reviewed journals.

Some have answered Lockeretz' challenge. One example is a study revealing higher amounts of Omega 3 fatty acids in milk from cows grazed on organic pasture than in conventional milk from cows fed hay, silage and mixed rations in feedlots (Ellis *et al.* 2006). Omega 3 fatty acids are essential to human health but since they cannot be metabolised in the body must be sourced in food. Presently, this is one of the more promising lines of research deployed by alternative agriculture (shorthand for Lang & Heasman's Ecological paradigm) in the Food Wars against the status quo Productionist paradigm, or the looming Life Sciences big science approach. Kathryn Ellis, lead researcher on the milk research project at University of Glasgow, sent a letter making the claims to the head of the Food Standards Agency (FSA) Dame Deidre Hutton. Like her predecessor as chair of the FSA, Sir John Krebs, Hutton downplayed any claimed superiority of organics to human nutrition (avoiding issues of significance such as environmental sustainability). Hutton agreed organic milk contains higher amounts of the short chain Omega 3 fatty acids in question but said oily fish was a better source of such nutrients because 'The available evidence indicates that organically produced milk can contain higher levels of α -linoleic acid (ALA) than conventionally produced milk, however the case made for nutritional significance is weak.'

Even if, in future, all claims of higher nutrition in organic milk are proven insignificant, there are more strings in the AFN bow, if one considers that psychological well-being - part of NEWS in the Sustainability Compass - is part of Lang & Heasman's (2004) Ecologically-Integrated approach to sustainability. In AAG 2006 and RGS-IBG 2006 conference presentations I have argued that rural pastoral landscapes including paddocks for cattle grazing have a positive impact on human mental and physical health. Whatever the verdict

on claims for Omega 3 fatty acids in organic milk, it can be shown empirically that many consumers who never even visit such environmental goods as rural pastures value them (Dwyer *et al.* 1996; McInerney 1986; Hodge 1988; Harvey 1998). We will revisit such farmscape arguments.

Alternative and organic advocates agree that lobbying by the pharmaceutical industry, agribusiness and other macroactors upon governments have skewed government policy. A revolving door between agribusiness and the US government means that executives of GM-giant Monsanto wind up as the Secretary of Agriculture, with responsibility for regulation of GM products. Similar conflicts-of-interest arise also in the UK. Lord Sainsbury, scion and former head of the eponymous top 4 supermarket chain, was until recently chief adviser to PM Tony Blair on science and technology. Sainsbury grocers were among the first to sell GM *FlavrSavr* tomato paste in the UK. As head of his company, Lord Sainsbury pushed GM and biotechnology. (for a pro-GM view see Harvey 1999). Consumer resistance to GM tomato paste caused Sainsbury to pull it from the shelves, but as an advisor to PM Tony Blair, Sainsbury continued to support GM as an economic champion.

That Sainsbury Plc in 2005 introduced a highly publicised line of 150 SO (So Organic) products displaying the firm's sensitivity to customer palates – if no definitive verdict on Lord Sainsbury's commitment to GM. The reality for organicists and AFNs is an imbalance between government support for the Life Sciences, and that of the Ecologically-Integrated paradigm. It was only recently that the first four-year Bachelor of Science programme was established at Washington State University (Henderson 2006). Food wars are not unfamiliar at WSU. Seattle-based food activist Goldie Caughlan (*pers. com.* 2004) claims many faculty chairs are supported by agribusiness, as is the case at most North American tertiary institutions. This is a significant factor in the knowledge production of conventional intensive agriculture and its embeddedness in the economies of the US and UK in particular, and other developed countries in general.

It is ironic that, while Marsden, Munton & Ward (1996: 363) note 'the failure of political economy' to explain aspects of agriculture such as turns to nature or quality (Murdoch & Miele 2001), or the exploitation of family labour (Drummond & Marsden 1999)), the past half-century's hegemony of conventional agriculture is evidence that pol-econ *can* explain equilibria, spikes and subsumption of trends in the trajectories of food systems. AFNs often reveal that, if we see politics as a proxy for 'power... as the "glue" that binds networks

together' (Lowe *et al.*, 1995: 101) and regulates wealth distribution in the economy, we can use the tools of political economy to understand such networks. As journalists say, *Follow the money trail*. Conventional agriculture and its emerging iterations such as farmaceuticals – have for decades made far greater financial contributions to political campaigns, research and teaching institutions than alternative or organic actants.

Of course political economy is a hybrid of two (supposedly) separate disciplines. My chronic reliance upon political economy to explain social science might be explained thus: *political* or *power* aspects in a Foucauldian sense (Elden 2001) of the discipline of political economy may be better suited to understand the hegemony of *conventional* agriculture since WW II. Meanwhile, the *economy* portion of the discipline of political economy - using the traditional interpretation of economy used by Adam Smith and David Ricardo who understood the economy to encompass *social relations* (within their concepts of division of labour and comparative advantage) in wealth creation – help us understand both the non-linear network arrangements of AFNs and their resistance to and contestation of highly capitalised, globalising, oligopolistic conventional food systems (Morgan 1979; Chomsky 1993).

But alternative food networks near Newcastle and Seattle bear witness to the idea that social movements occasionally trump capital and long established conventions in the food sector.

Labour: flexible specialisation in Newcastle and Seattle

In the 1990s, as the global movements of goods, people and – to an unexpected degree - capital gathered pace, a number of authors inflamed human geography with insights on national and regional competitiveness. One early light was Michael Porter (1990) whose diamond theory explained the long-term success of national champions in terms of national competition which kept them keen to fight foreign rivals. Examples include Czech makers of motorcycles and weapons, and Japanese makers of cameras, cars and motorcycles. One of Porter's key insights was that companies – not countries – were prime actors in global trade. This insight was key to a focus on flexible specialisation by Ash Amin (1990/2000), Charles F. Sabel (*ibid*), Storper & Salais (1997), and Jon Murdoch (1995). To some degree they share awareness of a geo-labour phenomenon in which regional networks retain global competitiveness through combinations of patronage and apprenticeship schemes, whether those were shoemaking or artisanal foods. One of the foci of flexible specialisation was Emilia-Romagna in the so-called Third Italy. This region is notable not only for punching

above its weight in world trade, but also for labour relations that are more flexible than those in the highly regulated labour environments of Rome. Ash Amin & Nigel Thrift (1994: 1-22) found that this flexible labour coincided with what they call institutional thickness, i.e. government and private institutions working toward long-term economic sustainability.

Here I am not claiming that practices in the Third Italy are identical to those around Newcastle and Seattle. But I argue that some important *attitudes* of workers in these farming areas, part of their shared social capital is something uncovered by Henri Lefebvre (1970/2003; 1974) in his mid-WW II studies of farming communities engaged in the production of certain types of space in the Pyrenees, and which may also be related to the phenomenology of Martin Heidegger situated in the Black Forest (Elden 2001). There is a *Weltanschauung* shared by farm workers going some way to explain their entrepreneurial attitudes – even when they are rivals from camps of conventional or alternative agriculture. Making this argument may seem to weaken my argument that AFNs are changing food systems, but let us press on.

Here is the point uncovered by studies of the Third Italy extending networks around Seattle and Newcastle: such regional networks hold the promise of long-term economic security and the possibility for humble workers to advance to positions of authority if they play by the rules of a regional game theory pitting the rural against the urban. Part of these rules (key to regional competitiveness via low labour costs) entail conscious acquiescence to years of low-wage work, and a willingness to jump from farm to firm and back again as market conditions change. This is what Storper & Salais (1997: 155) call a 'district labour market' and is key to the ability of firms to cut labour without untenable social costs since shed workers usually find alternative employment; even if it pays less than national minimum wage levels, their livelihoods may be maintained by family or employer supplements to housing, food and other expenses. Thus, not only can workers survive job losses, but maintain and build skills in a regional knowledge base. Critically, economists have shown that such behaviour is indeed rational, in that such persons' lifetime earnings typically gather as the years go by, and they emerge with opportunities to save or borrow capital, and enhance their retirement comfort with earnings from managerial and even entrepreneurial activities. Although rural to urban migration continues in all three areas, these areas retain significant numbers of young people determined to follow and maintain a rural lifestyle, often marked by an aura of antipathy to the city. Manuel Castells (1997/2001) would say these areas are marked by tradition and patriarchy, perhaps including the anti-junk food protests in France of Jose

Bove (Bove & Dufour 2001), and the Slow Food movement spread from Italy to other countries by Carlo Petrini (2006). But Castells might agree with Lucy Jarosz (2000) that the social relations of such regions can, particularly in small- and medium-scale AFNs, afford women opportunities for socio-economic advancement.

Parma epiphany

A visit to Parma over two days in June, 2004, brought an epiphany, walking among crop farms surrounding our hotel, 10 miles from Parma itself. The morning weather was hot and dry. I thought of the spare but superb meal of the evening before: fresh green salad with *al dente* pasta topped by local Parma ham and flakes of Parmesan cheese. The fields I walked among had varied, well-tended plots of fruit and vegetables. Although they were out of sight I knew there were large pig-rearing, processing and meat drying farms nearby. Busloads of German tourists passed, bound for farm visits where they would purchase cheese, ham and other high-value goods to pack home.

Suddenly I felt I was home in Whatcom County of the 1960s, amid medium-scale, profitable farms interspersed by workshops, petrol stations and schools. Was it epiphany or sunstroke? It matters little, because the insight was more important. The contemporary Parma district resembles Whatcom before mixed dairy, fruit, veg and cereals farms became intensively conventional. Stronger was a realisation that the labour supply of Whatcom County resembles that of Parma in Emilia-Romagna. These agricultural spaces are home to citizens engaged in flexible specialisation. Explaining the concept, Charles Sabel (Amin 1994: 102, 108, 111) cites Alfred Marshall's depiction of 'Sheffield and south-east Lancashire... as being "industrial districts" to emphasise that the matrix of production there was an area, not a firm'. These areas were known for metallurgy and textiles, but the principle being the basic machine of production can be applied to Parma, Whatcom and other counties around Seattle on Puget Sound – and even to the Counties of Durham and Tyne & Wear near Newcastle, England. Fieldwork in these areas reveals layered networks in the labour supplies that are transitioning from the old conventional productivist paradigms. In his discussion of northeast central (NEC) Italy, Michael Storper (1997) notes thousands of small firms with fewer than 10 employees that were influential and occasionally dominant in niches of fashion such as shoes, as well as the Parma specialities mentioned above. Such labour conventions are characterised by 'a fluid border between the category of the worker and employer' (Storper 1997: 155) and rapid dismantlement and reconfiguration of relationships among farms and

firms which may bifurcate along the lines of rival conventional and organic food camps, but nevertheless often see themselves as committed to economic sustainability in and autonomy in a rural milieu that is resistant to hegemony which Henri Lefebvre (1970; Elden 2004) claims was established by cities over the countryside in the late 19th and early 20th centuries. This drive for local autonomy should be recognised. It is implicated in Michael Winter's (2003) idea of 'defensive localism', in Yi-Fu Tuan's idea of local patriotism (Bell & Valentine 1997), and implicit in Jonathan Raban's observation that the 2004 presidential election did not demonstrate a divide between so-called red states and blue states but a country mouse and city mouse antipathy between rednecks in the hinterland who voted for Republican incumbent Pres. George W. Bush and elites in cities and universities who supported Democrat Sen. John Kerry (Appelo 2006).

There are those who doubt the existence of rurality, in light of Lefebvre's observation that cities have extended command and control to hinterlands, which anyway have undergone successive waves of technologies such as electrification, radio, TV, the internet, DVDs and satellite navigation (GPS). But few of my rural sources had any question that there were big differences between rural life and urban life. One source, a Skagit County dairy farmer turned fisherman who sometimes sells in a Skagit farmers' market but ships most of his wares to an MNC processor, said of metropolitan transport problems, 'Up here in Anacortes, we don't think our taxes should pay for Seattle's mistakes.'

Case studies of AFNs in Seattle and Newcastle

Case studies from a range of small, medium- or family farm, and large scale corporate farms and firms show how networks of individual actors are making organic and local food the fastest growing niches in contemporary agriculture. Anyone who walks, drives, takes transport or accesses media in Newcastle or Seattle encounters advertising for farmers' markets, farm shops and other signs of alternative food networks.

The case studies below illustrate many consumption options available to the 404 respondents to my food & risk surveys in both areas. Although not all consumers are aware of all the socio-economic contexts of their food, such knowledge is important in AFNs where consumers metaphorically *eat the view* (Natural England 2000). Tables 3.2 and 3.3 below list cases around Seattle and Newcastle which will be examined for the existence of a hypothetical GRass Ceiling, as well as the negative effects on small and medium-scale farms

and firms by corporate agribusiness identified by opponents of intensive agriculture such as Wendell Berry (1970/1972), and Michael Pollan. Not every entity on the charts is discussed in this chapter, but all are cited in this thesis.

Classifying farms and firms is not easy. USDA economists Doris J. Newton & Robert Hoppe (2001: 2) write, 'The great diversity among farms makes it problematic to talk about farms as if they were a homogeneous group.' On even the largest farms, two-fifths of spouses work off-farm to supplement income.

Please see Figure 3.4 for Newton & Hoppe's typology of farm scales. As this thesis takes a network approach, i.e. including firms along with farms as actants in AFNs, there is no need to adhere strictly to Newton & Hoppe's scale, but it helps to situate our working scale of AFNs within the conventional literature.

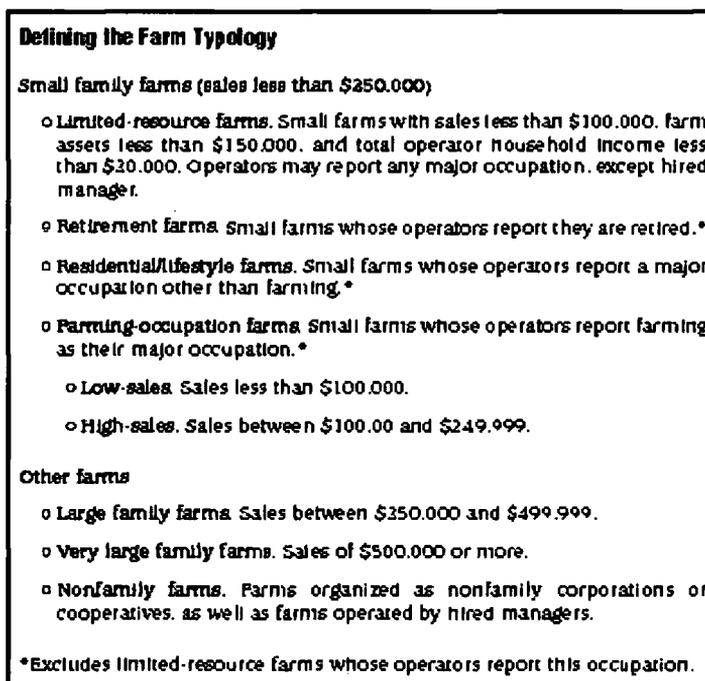


Figure 3.4. USDA Farm Typology (Newton & Hoppe 2001)

Table 3.2. Alternative farm & firm scale Seattle 2002-6 (*pseudonym)

<i>Scale & Products</i>	<i>Network</i>	<i>Actors/CEO gender</i>
Industrial-Organic (>\$250,000/£125,000 gross income annually)		
Cascadian Farm-Small Planet Foods-General Mills. Cascadian-SPF & Muir Glen: 160 frozen and canned fruit, veg, ready meal products. General Mills' Cheerios are GM in US, whole grain in UK. The organic version of Cheerios is called 'Purely O's' and sold under Cascadian Farm brand (est. 1972). Cascadian early supplier to PCC coop markets (<i>Seattle PI</i> 1999).	Skagit farm shop (FS), natl-supers. Links to USDA-NOSB.	♂♂♀ Male Cascadian-SPF founder Gene Kahn sold to male MNC General Mills Cascadian CEO Maria Morgan 2003 is female. See Figure 3.28.
Dean-Horizon-Rachel's Organic dairy: milk, yogurt, desserts (ca. \$250m sales 2005). Rachel's unknown in US. PCC Natural Markets boycott Horizon in 2006 re NOSB-USDA grazing rules (Fromartz 2006).	Wal-Mart-US; UK supers. Dean is active in Spain	♂ 2004-6 Dean-Horizon-Rachel's CEO is male. See Figure 3.28.
Organic Valley: est. 1988; co-op of 1010 family dairy farms from Minnesota to Whatcom Co, Washington, supplying supers (\$245m sales 2005). Lost Wal-Mart contract to Horizon. Skagit Land Trust (2004) assists some OV farms.	Family farms to supers & coops.	♂ 2004-6 CEO George Siemon is male.
Whole Foods: leads corporate natural & organic grocers e.g. Red Apple, Trader Joe's Seattle's Central Market supers.	US & new UK chains.	♂ CEO John Mackey.
PCC Natural Markets (Puget Consumers Cooperative, est. 1972): 36,000 members (US biggest). Nutrition Educ. Mgr. Goldie Caughlan (ex-National Organic Standards Board, USDA) boycotts Horizon milk re NOSB grazing rules – with global implications for farmscapes.	8 Seattle super-markets. Links to NOSB.	♂ Bob Cross Chair (2006) followed male chair in 2000.
Pioneer Organics: box scheme (est. 1997): supplies Full Circle Farm (Salmon Safe cert.) also vends with Seattle NFMA.	Puget Sound WA & Portland, OR.	♂ Male owner president Ronny Bell.
Badger Mountain Vineyard: organic wine.	USA, Japan.	♂♂ ♂♀ Father, son, couple.
//////////////////// Grass Ceiling? //////////////////////		
Family-Organic (<\$250k)		
[Seattle] Neighbourhood Farmers Market Alliance: Seattle area: 6+ city-supported FMs.	Statewide to Seattle.	♀♀ Women-led by Chris Curtis, Karen Kinney.
*Ken & Jenny's Farm (est. 1959): 90 acres, 40 types fruit, veg (e.g. beans, corn), compost, Whatcom Co. to region. Supplies herbs to global MNC. No FMs.	Supplies herbs to MNC.	♂♀ Male farmer. Wife keeps books, etc.
*Elm Hall Farm (est. 1972): 47 acre fruit, flower, and vegetable family farm – a typical AFN farm.	What-Sea FMs, Farm-to-School, Slow Food.	♀♂ Woman, male partner & family.
*Alpen Dairy: 1st Whatcom supplier to switch from Darigold coop to Organic Valley (CROPP) coop.	Regional - national.	♀♂ Man, wife & children.
*Artisan Farmstead Cheese: artisanal (non-organic) cheddar, curd, feta, fromage blanc, gouda, paneer, quark from 300 cow sustainable Dutch dairy.	Farm shop; What – Seat FMs, supers.	♂♀ ♂♀ 2 brothers & families.
*Sam & Wife Farm: Cheese & butter to Puget Sound FMs & supermarkets.	B'ham- Seat FMs, supers.	♂♀ ex-Cascadian man & wife.
Small-Organic (<\$50k)		
*Betty's Farm: flowers, fruit, herbs, veg. FMs & restaurants. Organic networker, baker & farmer since 1970s.	Skag – What FMs, etc.	♀ woman farmer, Betty.
*Dandelion CSA Farm: fruit, veg, eggs. Linked to PCC, NFMA & state apprentice programme.	King-Seattle FMs	♀♂ woman & partner.
*Hi-Skies Farm: plant starters.	Snoho. FMs	♀♀ women, PT.
*Fireman's Wife: flowers, veg.	Kitsap FMs.	♀♂ woman & husband.

Table 3.3. Alternative farm & firm scale Newcastle 2002-6 (*pseudonym)

<i>Scale & Products</i>	<i>Network</i>	<i>Actors/Gender</i>
Industrial-Organic (>\$250,000/£125,000 gross income annually)		
Dean-Horizon-Rachel's Organic: milk, yogurt, desserts. Rachel's was one of few farms to refuse chemical inputs in WW II; joined Soil Assoc. in 1947. See: www.deanfoods.com ; www.horizonorganic.com ; www.rachelsorganic.co.uk	UK Horizon-Rachel's distrib'd by Dairy Crest to Morrison's, Tesco, Sainsbury, Waitrose.	♀♂♂ Farmers Rachel & Gareth Rowlands sold to Horizon in 2003 (Figure 3.28). Then Horiz-Rach sold to Dean (male CEOs).
General Mills-Cascadian Farms/SPF: frozen fruit, veg & ready meals. General Mills' Cheerios, etc. whole grain in UK, but GM in US. Cascadian-SPF VP Sheldon Weinberg visited UK.	Skagit County farm shops, national-global supermarkets. Gen. Mills US-global; affiliates in UK.	♂♀US CEO is male. Cascadian-SPF Cascadian CEO Maria Morgan 2003 is female. See Figure 3.28.
Whole Foods: entered UK market 2004. The certified USDA organic grocer's niche is close to Waitrose, but larger Sainsbury and Tesco are cutting it off from UK organic suppliers.	US & UK chains.	♂ CEO John Mackey, vegan from Texas. Others mainly male.
Waitrose: follows Morrison's & Safeway in Durham 2005; also Hexham & Edinburgh 2005. Subsidiary of John Lewis (est.1904). Revenue £3bn; 184 branches (2006); 3.9% national share (7% south England; 16% share organics). 'Owned' by 64,000 co-op employee 'partners'.	UK supermarkets; Spain (Dean).	♂ Nat'l MD is Steven D. Esom. Durham boss Stacey Stump is male.
Out of this World: co-op supermarkets.	Newcastle, Notts, Leeds, York.	♂ Male dir. 3 men, 3 women in HQ.
//////////////////// Grass Ceiling? //////////////////////		
Family-Organic (< \$250k)		
Oldfield's Restaurants: sources organic & local food from Cuthbert's & others in 15 mile radius for special menu. Cookery demos. Hosted 40 Slow Fooders, Nov. 2006 (£10/\$20 plate = ca. £600 gross).	1 Newcastle, 1 Durham restaurant.	♂ CEO male with loyal team of chefs, waiters, office staff.
*Cuthbert's Boxes: home delivered organic & local fruit, veg, honey, juice, bread & local organic milk & butter. Meat discontinued 2006.	County Durham	♀ woman leads w/ husband + farmer-entrepreneur partner.
Honey Tree: Organic greengrocer and good food store began trading 1999. Local organic food, claim to sell widest range of organics in region. (Fruit & veg boxes to take away Thursdays), meat from Aberdeen Angus to free range chicken. Take away delicatessen: hot & cold food.	Newcastle, Tyne & Wear.	♀ woman leads, says Isa.
Northumbrian Organic Producers (NOP) fruit, veg, lamb, pork, beef, etc., see: www.nop.org.uk/	Berwick-Tees FMs, farmshops. Links: Soil As., Biodynamics, FARMA in FMs.	♀♂ ca. 40 farmers, 50% men, 50% women.
Small-Organic (<\$50k)		
Slow Food Durham (est. 2006) & Newcastle	Durham, Newcl.	♀ Mostly women led in Durham AFNs.
Durham Local Food Celebration 2005: www.durham.gov.uk/durhamcc/usp.nsf/pws/LA21+-+LA21+Latest+News+Archive	Co. Durham AFNs.	♀ woman-led, mostly female volunteers, council workers
*Mary's Organic Meats (MOM's) 2002-3. CSA-style home delivered local lamb, beef, cheese.	Co. Durham	♀ woman-led, husband helps.

US Small-Organic (<\$50k)

We begin on the lowest scale of AFN farms and firms around Seattle. At this time of writing, *The Economist* 2006 Christmas issue gives the currency rate between the US dollar and British pound as about two to one (\$1.97:£1.00). Although the exchange rate was lower in the preceding decade (reaching a dollar high ca. \$1.40: £1.00 in the early 1990s), it is convenient to think in terms of the present 2: 1 rate, as the US dollar, stretched by Treasury borrowing from China, seems on a slide relative to the pound and Euro. Thus, sales of the enterprises listed on Table 3.2 and Table 3.3 above are derived from USDA definitions of family farms (and firms) in the US as earning less than \$250,000 per annum. For simplicity, I extend this definition to UK farms and firms earning less than £125,000 per year.

* **Betty's Farm (Small- and family-farm names are pseudonyms unless noted.)** is an enterprise based on three acres of leased land near La Conner in Skagit County. Betty supplies Skagit and Whatcom County farmers' markets and restaurants with *beyond organic*, non-USDA certified fruit, veg and flowers (Figure 3.1). Three decades ago Betty was a highschool biology student near Seattle, accepted in one of the first classes at Evergreen State College in Olympia offering courses in ecology (Although neo-liberal Republicans are identified with anti-environmentalism, Republican Governor Dan Evans championed Evergreen.). A true pioneer, Betty worked as an organic baker in Seattle's Pioneer Square (where tourists visit the underground haunts of Doc Maynard, see chapter 1), and began an organic pizzeria in Bellingham's alternative Fairhaven District before marrying and bearing three children. Now she hires day labour at \$7.50 an hour and apprentices from the state organic apprenticeship programme. Betty is trusted by customers and vendors from Seattle to Bellingham. Like many vendors (and Guthman 2004) who rated organic certification by the Washington State Department of Agriculture (WSDA) highly, Betty resents the added expense and paperwork in the USDA 2002 National Organic Programme, muttering that small farmers should go *beyond organic* (De Graaf 2000). Her cohort fears the NOP will corrupt rules on 'fodder, seeds, pesticides, non-food products, antibiotics and hormones' (Scholten 2006b: 114; Ostrander 2004). She also is suspicious of the emphasis by large-scale agribusiness on *standards* rather than traditional Rodale Institute *processes*. (Rodale spread *Euro-biodynamisch* and British organics in America with *Organic Gardening* magazine from 1942.) Pollan famously excoriated Gene Kahn's local Cascadian Farm (Table 3.2 and 3.3) as organic-industrial in his 2001 *NYT* article. But it is significant that when Betty's old pickup meets Kahn's new Lexus on local roads, they still wave to each other.

* **Dandelion Farm is a pseudonym** for a King County farm run by a well-know woman actor we'll call Nicole (Figure 3.5 Scholten 2003) in cooperation with a male partner and AFN actants such as Seattle Neighbourhood Farmers Market Association (NFMA), PCC Natural Markets (*aka* Puget Consumers Cooperative) Consumer Supported Agriculture (CSA), and the Washington State Department of Agriculture (WSDA) organic apprenticeship scheme. She vends fruit, veg, eggs and meat.



Figure 3.5. Dandelion stand in West Seattle market.

* **Fireman's Wife is a fictitious name** for a small organic fruit, veg and flower business in Kitsap County supplying the Kingston FM, just a 30 minute ferry ride to the Edmonds FM in Snohomish County, near the county line with metropolitan Seattle in King County. The woman running the gardens and business sometimes is assisted by her firefighter husband, especially at harvest time and while selling in farmers' markets. Production relies on composting and crop rotation, but it is unknown whether she has USDA organic certification. Indeed, the Community Supported Agriculture Directory (2006: 1) directory to CSAs in King and Snohomish Counties notes that, 'Many of these farms are certified organic by the Washington State Department of Agriculture. Many that are not certified also meet organic standards.'

US Family-Organic (<\$250k)

* **Elm Hall Farm is an alias** for a wife and husband-led family farm of 47 acres, established 1972, near Everson in Whatcom County that has prospered with the growth of Seattle neighbourhood farmers' markets. The chronic problem of farm succession may be solved as the children and one or two of their multiethnic friends are involved with harvest and vending. As is the pattern in many small farms, the woman partner is the official contact for network and customer enquiries while the male partner takes the lead in fieldwork, and setting up and breaking down the marquees and stands.

However, both partners' duties overlap and both are often visible at the Bellingham and most Seattle FMs. In 2003, I asked the male partner at the West Seattle market whether he thought alternative agriculture was a Seattle fad or permanent trend. He answered affirmatively: 'I've been involved with organics since the 1970s and suddenly I'm making a good living!'



Figure 3.7. Organic pioneers in Whatcom County.

* **Artisan Farm Cheese is an alias** for a dairy farm started by Dutch immigrants who added value by developing sales in farmers' markets toward contracts with small supermarket chains such as Haggen's. Two brothers, after the premature death of their father, maintained their parents' decision to switch from being a price-taking commodity supplier of milk to the local Darigold cooperative plant, to becoming a price-making supplier of value-added cheeses to regional markets.

They market cheddar, curd, feta, fromage blanc, gouda, quark and Indian paneer from their 300 cow dairy. Their website carries a thoughtful discussion of the meanings of sustainability linked to government, academic and medical discourses (Oregon Physicians for Social Responsibility 2005), engaging customers in their own grappling with the practical limitations of conventional and organic methods. In Lynden's Holland Days Festival, youngsters wear traditional garb as they demonstrate cheese-making with 1950s-era equipment from the Benelux countries (Figure 3.8).



Figure 3.8. Dutch-American cheese makers in Lynden.

* **Ken & Jenny's Farm is a pseudonym** for a multigenerational farm on 90 acres, multi-cropping many varieties of fruit, veg, and compost regionally, and herbs such as Echinacea globally via an MNC health food company. There are no sales in FMs. The wife keeps books, and gives piano lessons. Like Artisan and other Dutch-American farms that originally prospered selling milk produced in the lush pastures of Whatcom County to PNW regional cooperative Darigold, Ken & Jenny's Farm was whipsawed by the push of rising input costs, and the pull to expansion by the fall in real farmgate prices in the 1990s (Table 3.4 below).

Table 3.4. Ken & Jenny's conversion

Pre-Conversion: conventional dairy farm

Year Products, Labour, Family Outlook 1996

- 'Family dairy tradition.' 90 acres pasture (100 rented).
- 130 cows, several ostriches (financial loss).
- Heavy debt. Prices poor. No room to expand.
- No off-farm work; little social life.
- Outlook: 'Poor due to environmental regulations.'

Post-Conversion: Ken & Jenny's organic herb farm

Year Products, Labour, Family Outlook 2001

- Certified Organic. Just a few boarded cows on 90 acres.
- Burdock, cloves, echinacea, oats, rhubarb, sage, etc.
- 'Organic income 20% higher. Less work!'
- Pluriactivity: Compost + wife's piano lessons = 10-25% income.
- Outlook: '1997-2001 good. Bring on 2002!'

Source: Family questionnaires & interviews Mar/Sep/Dec 2001 (Scholten 2002)

In a report for *Dairy News* (Scholten 1997b) I linked such economic pressures to a geographic shift of conventional dairying from western Washington to Idaho and the former eastern Washington desert where huge herds are fed on new irrigated plots of alfalfa. This was the beginning of my longitudinal study of Whatcom farmers' response to globalisation, new technologies and the public's turn to organics. I studied two conventional dairy farms (Scholten 2002a & b). Friesland Farm (pseudonym) bifurcated into conventional raspberry supply to MNC Smuckers, which lost growers in former Yugoslavia overrun by war in the

early 1990s. Although Balkan growers are again supplying world markets, the well-draining soils of Friesland Farm on the sandy banks of the Nooksack River provide competitive growing conditions. Meanwhile, Ken & Jenny's considered an opportunity to supply organic herbs to the Vancouver, BC node of Flora, a German-based phytopharmaceutical MNC. Contracts were signed and soon the MNC established a processing plant near Lynden. Such a partnership with a global MNC (linked to Asia, Europe, North and South America) raises the hackles of some idealists fearing MNCs and food miles. But this plurally active farm is an autonomous AFN actant rather than the captive of an MNC. Although the farm ignores farmers' markets, it supplies organic compost to small farmers locally and as far away as Salem, Oregon. Besides supplying its MNC partner with organics, it has supplied niches in San Francisco and Midwest cities with organic corn. Early experiments with organic pumpkins met 50% crop failures when autumn rains rotted them before harvest. So these were abandoned and acreage planted with organic beans for an out of state company. Tinkering by Ken's father, an 80-something farmer with a penchant for invention, improved on-farm machinery including harvesters, conveyors, dryers and packers. Pluriactivity was increased when the old milkhouse was converted to an organic poultry abattoir. (This was encouraged by deregulation, or reregulation as some claim, of sanitary regulations in Seattle and King County farmers' markets allowing small farmers to sell a limited amounts of wine, fish, cheese, meat, milk and even raw milk as of 2005/6.) Table 3.4 shows how, from status as a marginal dairy farm in 1995, the economic sustainability of the enterprise was much improved by 2001. In 2005 an official at the state raspberry commission told me it was probably the largest volume organics producer in Whatcom County.

In her anthropological study in Whatcom Country, Joyce LeCompte-Mastenbrook (2004) identified commonalities in Dutch-American dairy farming. Both Friesland and Ken & Jenny's farms bifurcated from conventional dairy farming; Friesland took a conventional raspberry trajectory, while the latter opted for organic crops. Yet their world views are not so far apart as some idealists assume. Both are driven by a religio-cultural trope of Dutch Calvinism balancing the Genesis imperative to 'go out and subdue the earth' with a duty to be good stewards of God's creation. In other words it's fine to make a profit, but not to ruin environmental sustainability. For instance, Ken explains that the reason he went into farming was because in school he was fascinated by plant biology and how chemicals interlaced with natural systems. (One of Ken's brothers went into farming on his grandfather's place but quit due to falling prices. A sister and her husband switched from dairy to conventional raspberries.) Like former USDA Secretary Ann Veneman, the farmers of conventional

Artisan or Friesland farms, and Ken & Jenny's largely see organics as a market niche appealing to certain consumers. They acknowledge the environmental and financial advantages of organic methods, but believe careful use of chemicals is neither immoral nor unsustainable. Such subtle distinctions between conventional and organic views are even more fascinating when locality enters discussion.



Figure 3.9. Ken & Jenny's farm grew potatoes in the 1950s, before turning to conventional dairying. When profits fell the family tried raising ostriches in these sheds. Fortunately, organic crops are more profitable, and this shed now houses planters.

* **Sam & Wife Farm** is a **pseudonym** for an alternative food entity notable for several reasons. It is located in Skagit County but affiliated with Whatcom Fresh, and sells in Bellingham FMs. Like Artisan Farm, sales in FMs helped it jump the marketing ladder to distribution in the Haggen's supermarket chain. Sam & Wife practice high levels of animal welfare for cows, calves and bulls. Tale-docking is not practiced and calves spend more time with mothers than on most intensive dairies. Sam & Wife is a USDA certified organic farm welcoming visitors. It shows the bifurcation in scale possible in the organic sector: Once



Sam was a partner in Cascadian Farm which climbed the food chain until some organicists asked whether the firm was what Pollan calls organic-industrial, while the former remains on the local-regional market scale.

Figure 3.10 Sam & Wife shop left.

US Industrial-Organic (>\$250,000 gross income annually)

Now we examine large-scale farms and firms. In some eyes they are nobly saving the planet one acre at a time. In others eyes they are slipping into the same socio-environmentally destructive habits of conventional capitalist globalising agribusiness. For background, a sketch of the pioneering movement is useful. Michael Pollan (2001a) ignited national debate on agribusiness appropriation of organics in an organic-industrial complex. Recently (2003) Pollan argues the choice for consumers is no longer organic or conventional but *local or organic*. He claims the original organic dream shunned paradoxes such as the organic factory farm and organic TV dinners because the movement rested on three sustainable legs: (1) Harmony with nature - a non-industrial way...treating animals humanely...and did not use chemical pesticides; (2) food co-ops, farmers' markets, and community supported agriculture could replace the national agricultural system; and (3) belief that people should be eating ten different kinds of apples because biodiversity in the apple tart means biodiversity in the orchard. Pollan admits organic TV dinners mean more organic hectares than conventional fare, but lauds a shorter food chain that brings the consumer and producer together.

Critical to Pollan's view is his claim, echoed by smallholders including Betty that when the USDA (2002b) published federal standards, small farmers lost control of organics. Not only is it a major loss of livelihood for organic smallholders to lose a \$10 billion (8.3bn Euros; see Sahota, 2004: 21) niche, but that loss is more wounding if the market they pioneered is captured by agribusiness, which, arguably, is an industrialized free rider on their organic dream. Pollan deplores a dichotomy between the social goals of pioneers and the profit goals of the organic industry that bodes ill for the sustainability of pioneers. On the other hand, Guthman (2004) observes that organic-industrialization in California was initiated from below by organic farmers, not from agribusiness above.

Cascadian Farm-Small Planet Foods-General Mills. Like many organic pioneers who changed the sector Gene Kahn was a well-educated incomer, not a local made good (Fromartz 2006; *Cascadian Farm News* 2003; Figure 3.12 below). The Midwesterner brought an MBA to an early partnership in an organic farm in Washington's Cascade Mountains in Skagit County, halfway between Seattle and the Canadian border, in 1972. Cascadian became an early supplier of organic fruit & veg to Puget Consumer Cooperative (PCC; see Figure 3.15). Kahn claims only big organic business and distribution can stop the agribusiness juggernaut. He has opposed the small is beautiful rhetoric of Pollan for

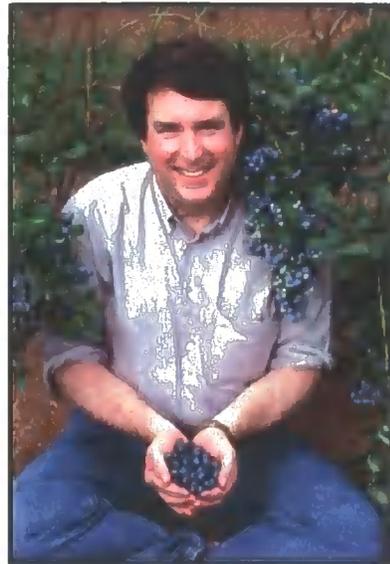


Figure 3.11. Tracy Miedema at Cascadian (Scholten 2002). Figure 3.12. Gene Kahn. (Casc/SPF). Kahn remains a vice-president with MNC General Mills. Miedema left Cascadian to head marketing at Stahlbusch, a large part-organic farm in Oregon, and joined the USDA's national organic standards board (NOSB) representing consumers in 2006.



Figure 3.13. Cascadian Farm, Small Planet, and Muir Glen offices in Sedro-Woolley.

what I call a *realeconomic* view, i.e. that the only practical way to improve global environmental sustainability is to reform global agriculture rather than replace it. If that means producing organic ready meals or sweets (epitomised by TV dinners and a confection known as the Twinkie) so be it. Kahn worked actively for years on the USDA's national organic standards board (NOSB) to further his views, alongside and sometimes in opposition to members such as Goldie Caughlan, who is the Education-Nutrition officer of PCC (from

which office in 2006 she led PCC's participation in a national consumer boycott of Dean-Horizon Organic Dairy products due to customer suspicions that Dean-Horizon was not in compliance with USDA rules that organic cows must have access to pasture (see Caughlan, Figure 3.14 below). In 1997 Kahn formed Small Planet organic foods and bought Glen Muir (GlMu) organic tomatoes, while negotiating a take-over by MNC Pillsbury. In 1999 Cascadian Farm-Small Planet Foods-Glen Muir became a subsidiary of global MNC Pillsbury-General Mills (Figures 3.28), offering about 160 frozen and canned fruit, veg products, ready meals, etc. During this process some of Kahn's pioneer partners left, including the man now running Sam & Wife's Cheese. But Kahn stayed as a vice-president. When he retired from Cascadian leadership, he was succeeded by Maria Morgan in 2003.

I have never had the opportunity to interview Kahn. According to Samuel Fromartz' (2006) book *Organic, INC.*, Kahn has wearied of attacks by organic fundamentalists such as Pollan, although he remains active in the policy realm. Over 2001-3, I secured a telephone interview with global marketing manager Sheldon Weinberg who travelled frequently to the UK. Valuable also were multiple contacts with Tracy Miedema (Figure 3.11 above), who lectured in marketing at Western Washington University (WWU) in Bellingham, and moonlighted as a market researcher examining the organic lines of global retailers such as Tesco. Miedema also headed 'Small Planet University' which informs consumers and educators on food systems. Those who disagree with Kahn resent the possibility that Cascadian's organic legacy is manipulated by General Mills to connote organic methods to its conventional brands. For example General Mills' popular breakfast cereal, Cheerio's, is reportedly processed from GM grain in the US (though from non-GM whole grain in UK). The organic version of Cheerios is called 'Purely O's' and sold under Cascadian Farm brand in the US. That might be fair enough. But to organic purists, it conveys guilt by association with General Mills. General Mills, like Kellogg's, is a brand that has risen and fallen in the eyes of health purists. There are signs that General Mills may turn against GM technology, but that expectation will be contingent on UK/US consumption trends.

Cascadian Farm's organic products are prominent in the US. In Seattle they are carried by (Table 3.2) Whole Foods, PCC Natural Markets, Central Markets, most of their rivals and downmarket competitors. Whatever one makes of the complex food miles arguments that can be made against Cascadian's freezing and canning technology, an argument can be made for Cascadian's contribution to economic sustainability in Skagit County and Washington State. Without Cascadian more local farms would probably be bankrupt. In the 1950-60s

facilities such as Kale Cannery in Everson provided jobs for Whatcom County citizens but it was closed by the 1980s. That was the decade when agribusiness firms fled the northwest for cheaper produce from intensive agribusiness farms booming on subsidised irrigation and waves of illegal immigrant labour viewed by the Reagan-Bush administrations with benign neglect. Conventional agribusiness corporations such as Del Monte and Dole showed less commitment to Skagit County, and part of the vacuum they left has been filled by Cascadian.

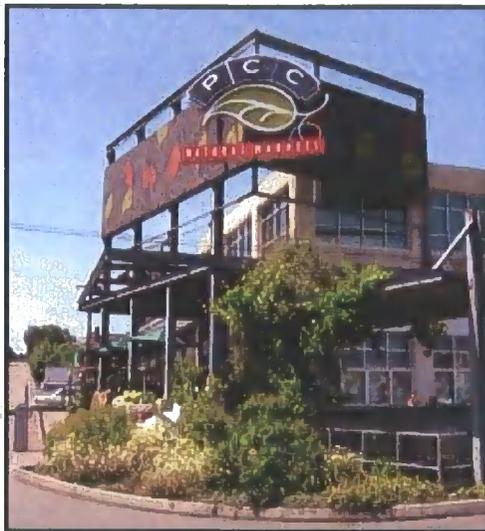


Figure 3.14. Goldie Caughlan (Scholten 2003). Figure 3.15. Greenlake PCC (2005).

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Dean-Horizon-Rachel's organic dairy products



Figure 3.16. Dean-Horizon's global happy cow logo.

Horizon Organic Dairy, based in Boulder, Colorado, has been subjected to organic idealist Pollan's charge that its methods are organic-industrial, a miscreant hybrid of agribusiness and organic niche marketing (see Figure 3.28). When I met the president of Horizon, Chuck Marcy, at a national dairy conference in Idaho in September 2001, he was questioned harshly by conventional dairy farmers and processors who resented any implication that conventional milk produced with routine use of GM hormones (rBGH/rBST), GM fodder, antibiotics, etc. was inferior to organic milk. Marcy, a personable, intelligent man, charmed his neo-liberal attackers with suasions that the organic boom was just another manifestation

of enlightened market capitalism in which the consumer is king. 'It's all about choice,' explained Marcy. I broached Pollan's (2001) article criticising Horizon's top-down funding (from elite eastern universities and Wall Street venture capital) and processing methods (critics claim hyper-filtration removes nutrients from organic milk). The Horizon boss agreed it was an uncomfortable attack, 'but we got off easy compared to Cascadian Farm'.

But just two years later, in 2003, Horizon acquired Rachel's Organic Yogurt, a Mom & Pop family farm that actually did start on Rachel's kitchen table, according to her husband Gareth whom I met at a University of Aberystwyth organic conference (subsidised by Waitrose) in 2002. Rachel's became a darling of the UK organic industry after Sainsbury began distributing it nationwide in the mid-1990s. After Horizon's trans-Atlantic acquisition of Rachel's, it seemed to idealists that it committed an even greater sin in 2004 by selling out to \$10 billion MNC Dean Foods, distrusted since it acquired White Wave, the leading line of organic soya-milk products and turned it non-organic to save costs (Fromartz 2006). Worse was to come for those resistant to agribusiness. Organic Valley (OV) milk cooperative was begun by seven Wisconsin farm families in 1988, as an organic coop, the Coulee Region Organic Produce Pool (CROPP). The grassroots members wished to reverse the fact that since 1960 large corporations had taken over 600,000 US farms. Soon it was supplying Wal-Mart USA with organic milk, but about 2003/4, OV lost its Wal-Mart contract to Horizon. In the *Economist* (March 5, 2005), OV CEO George Siemon claimed he was unworried because demand for organic milk is growing 15-20% annually. Indeed, OV membership rose from about 600 in 2004 (representing about 10% of the US organic milk supply) to nearly 900 farms in 2006, extending all the way from the upper Midwest through Portland, Oregon, in the Pacific Northwest up to Alpen Dairy (pseudonym), the first farm in Whatcom County to leave the regional, conventional Darigold coop for OV's 25% price premium.

But any thoughts that all boats rise on a tide of organic milk demand did not reckon with the increasingly nuanced reflections of Seattle consumers. In early 2006 PCC Natural Markets banned Dean-Horizon organic milk products from its eight Seattle area mid-size supermarkets. PCC is a formidable force, with its sales volume of \$93 million and 36,000 members making it the nation's largest, even bigger than the Park Slope cooperative in Brooklyn, New York (pictures available from my interviews there in 2004). PCC Education Nutrition officer Goldie Caughlan explained that the boycott was in response to complaints by customers that Horizon was in violation of USDA 2002 National Organic Programme (NOP) rules stipulating that cows should have access to pasture grazing. Many Washington

State consumers were irate that dairy cows, which had traditionally grazed in the state's green pastures, were being denied that right in Horizon's two mega-farms in Idaho and Maryland (with ca. 20,000 cattle) – or on Aurora Farm, a nominally organic, multi-thousand cow dairy in Colorado where the owner, an ex-partner in Horizon, stoutly defended his right to hold organic cows in what to critics amounted to a Confined Animal Feeding Operation (CAFO; Fromartz 2006). Meanwhile, Mark Kastel, co-founder of the Cornucopia Institute (Cornucopia News 2007) filed suit against Dean-Horizon in the USDA, and waged the organic pasture grazing debate versus Alex Avery, a defender of rBST and CAFOs in the Hudson Institute (*Hoards Dairyman* March 25, 2007).

Some consumers suspected Wal-Mart was pressuring Horizon to intensify production with 3-times (not traditional 2-x) daily milking, and keeping cows in feedlots to reduce the time and energy needed for a walk to pasture on farms or ranches big enough to accommodate several thousand of cows. USDA NOP grazing rules are vague seen from historic and regional perspectives and they are being considered by the National Organic Standards Board (NOSB) and USDA at this writing (January 2007). Horizon attempted to repair its public image, running advertisements in counterculture compendium *Utne Reader* (Dec. 2006), promising to add 2500 acres of organic pasture to its Idaho farm and try harder to honour its image of happy cows grazing in what veterinarians regard as their natural species behaviour.

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UK Small-Organic (<\$50k)

Now we will focus our attention on alternative farms, firms and people in the area of Newcastle upon Tyne in northeast England in the UK. Descriptions of these network actors, or actants will refer to their scale counterparts in the US, in order to illustrate similarities and differences between alternative food networks in and connecting the two countries. It would behoove us to consider the existence of a geographical imaginary, a virtual community of food activists venerating similar values of global sustainability. In chapter 2, our discussion of philosophy and theory fundamental to this thesis, we discussed the expression of the ideals of this imaginary in advocacy for organic food systems as a proxy for nature. Because I am based at Durham University in County Durham, about 20 motorway miles (or a 17 minute train ride) from Newcastle in the County of Tyne & Wear, my experience with small scale organic and local food networks began spontaneously in the 1990s, in my and my wife's personal food ways. Because I was engaged in academic and journalistic research in the food and ag sector, I passively followed developments in local food provisioning. At the

time it was surprising but in retrospect it is understandable that my initial forays into local food networks led to contacts on national and even global levels after beginning formal research on consumption turns to food safety, quality and nature in the UK – trends often sharing the vector of the risk of mad cow disease (see Whatmore 2004: 62-164).

* **Mary's Organic Meats (MOM's)** is a **pseudonym** for a small firm run by a woman we will call Mary, with the help of her husband, a university lecturer. Mary is university educated, has experience as a journalist, and takes freelance jobs as an editor and report writer for farming and business entities. MOM's lasted two years, 2002-3, when it closed to allow time to birth a boy and girl. Altogether, MOM's was not very lucrative, but as Mary is a natural networker (entrepreneurs like her are common as leaders in UK/US AFNs) she helped build capacity in northeast AFNs in a short time. When she organised a barn dance to encourage customers for organic lamb and beef from a Tees Valley farmer, the operation was so successful that it won a contract for the farmer with a supermarket chain, making his link with Mary superfluous. On the positive side, Mary's project spurred demand for local organic food in County Durham, and encouraged at least one farm to convert to organic. Her efforts also inspired a local woman's box scheme we will call Cuthbert's. Mary and her father are connected to actors and organisations on all scales of Newcastle area AFNs, and we can follow her entrepreneurial itinerary in the following case studies.



Figure 3.17. MOM's farmer later supplied supermarkets.

Durham Local Food Celebration (DLFC) 2005. By 2004, with one child in daycare, Mary decided to balance home responsibilities with another foray in quality food. In the autumn of 2003, a meeting at County Hall was held in cooperation with the Bishop of Durham, to improve the health of citizens and support local farmers by fostering short food chains advocated by the Curry Commission (2002; Lang & Rayner 2002). At the urging of friends Mary approached the Council and received a small grant to organise events September 24 – October 9, 2005 known as Durham Local Food Celebration (Durham CC 2005).

Events included bicycle rides, walks, crofting of berries, mushrooms and nuts, visits to a permaculture farm, and Houghall Farm at Durham Community College. The Celebration culminated in a hearty, cheap community breakfast in the Town Hall on the weekend of October 8-9, before moving to the new Millennium Plaza overlooking River Wear. Children received prizes for a food drawing competition in adjacent Clayport Library. Across the plaza in Gala Theatre, chefs from Oldfield's Restaurant gave demonstrations, and Newcastle restaurateurs gave advice to aspiring entrepreneurs, and Gala Cinema showed Morgan Spurlock's (2004) *Supersize Me*. The farmers' market on the plaza was described by several vendors as their most lucrative ever in Durham City. Fred, of Cuthbert's box scheme subscribed enough new customers to add £10,000 (\$20,000) to yearly receipts. This was music to the ears – and enhanced the CV – of Mary who coordinated volunteers from AFNs, aided by women and a few men from city and county councils – all concomitant with British Food Fortnight. The County Council gave Mary and her group an award for services to the community. However, her earnings were not commensurate to her effort, so she refocused attention on freelance writing for a business school and other clients to boost income.

Slow Food groups in Durham & Newcastle. As an ideologically motivated advocate of traditional food in opposition to conventional systems, Mary could not stop organizing and networking. In Carlo Petrini's Slow Food movement, which has spread from Italy through Europe to the UK and the US, standards exalt organic but always reflect sustainable, extensive production with an emphasis on simple, unprocessed fare. Mary and a dozen other networkers in local government, business and academia held their first Slow Food Durham meeting in a church hall. (Figure 3.18 below).

A sister group was already established in Newcastle, but Mary's cohort believed County Durham could support its own because, in the jargon of human geography, Durham had sufficient institutional thickness (Amin & Thrift 1994). The ethos of Slow Food is that networking is better done in long meals than on the phone. That seemed evident at the first official Slow Food Durham convivium meal at Oldfield's restaurant in November 2006, when 40 men and women were served local beef or chicken with a glass of wine for just £10 (\$20) each. Even the manager of Durham's new Waitrose supermarket joined the meal, and an Oldfield's chef spoke about local food. The crowd also enjoyed a talk on lessons learned by a partner in a box scheme (Figure 3.2. above; Chapter 8, Figure 8.2).



Figure 3.18. Durham activists toast Slow Food.

UK Family-Organic (<\$250k)

* **Cuthbert's** is a **pseudonym** for the focus of this section, but links to other family-organic entities are referenced from Table 3.3 such as real world Oldfield's restaurants and Northumbria Organic Producers (NOP). Cuthbert's Boxes is a County Durham business that since ca. 2003/4 grew from 40 boxes per week to nearly 300 at the seasonal peak. Cuthbert's home delivers organic and local fruit, veg, honey, juice, bread, Acorn Organic Dairy milk and butter from Darlington. Organic and local meat was delivered from Broom Farm at Witton Gilbert, but with the rising success of the Broom Farm shop, Cuthbert's decided to stop carrying meat and focus on their core fruit & veg business in 2005/6.

Let me go back in time to tell the Cuthbert's story. On the first day I woke in Durham City, I walked the icy streets along River Wear to Houghall Farm, where college librarians helped me reference an article on the threat of rabies via the Channel Tunnel (Scholten 1992). After hours in the library, I sought opinions from the farm manager. He turned out to be the man we will call Fred. He is well-regarded in both conventional and alternative farming communities, and as the years pass he shows that little in Northumbrian agriculture is beyond his ken. Finally, seeking a thesis topic, I visited Fred at the press launch of Northumbrian Organic Producers (NOP), a network of small farmers from Berwick-on-Tweed to Helmsley in North Yorkshire. The centrepiece was the introduction of an outdoor organic pig unit (Figure 2.2.) with typically high British standards of animal welfare. Although the NOP did not become my thesis focus, Fred functioned as secretary for group meetings and facilitated networking of its +/-40 members via his college farm computer. Even as my research interest was guided toward Seattle, I knew the NOP would be revelatory. It was an education in network development, with tendrils almost rhizomatic (Deleuze & Guattari 1988) in their growth. In fact, the aforementioned Mary edited the NOP newsletter until the Soil Association adopted the group and a new farm-based editor was appointed. It came to pass that as he concluded a decade as manager of Houghall Farm, Fred completed an MBA with Durham University Business School with a dissertation on local food chains. He was theoretically informed and financially motivated to try his hand as an entrepreneur. It happened that across River Wear from Houghall was an ancient estate dating to the establishment of Durham Cathedral, when pilgrims to the shrine of St. Cuthbert stopped by a monks' inn for food and shelter. The buildings and farm turned into a private estate of about 1000 acres, which has been held by the same family for about 300 years. Unfortunately, it is possible to be land rich but cash poor. Yet historic features of the estate, such as an 18th century heated brick walled garden (with glass houses to grow citrus in the cold northeast climate), and a lake almost forbade breaking up of the state.

The owners we'll give the pseudonyms of Harry and Harriet. Harry made his primary income in the northeast financial sector. Harriet, with children in school, had enough time to try her hand at free range eggs and marketing of organic and local food boxes. Harriet networked with Mary, as part of her market research. About 2004/5, Cuthbert's box scheme was launched by estate owners Harriet (and Harry) in partnership with Fred. Like US entrepreneurs Ken & Jenny, and indeed the successful Seattle-based Pioneer Organics box scheme, the people behind Cuthbert's have strong regard for *both* environmental sustainability *and* business sustainability. Cuthbert's has been successful in its first few

years. It was doubly appropriate that Fred attended the Slow Food dinner at top restaurant Oldfield's because he was one of its suppliers.

Fred revealed that the weight of labour of Cuthbert's Boxes on Harriet, Harry and himself was unremitting, even assisted by paid farm workers, packers and delivery people from the agricultural community including auctioneers and part-time farmers. As an unpaid researcher, I occasionally helped Fred with packing and delivering boxes, witnessing his punctilious account work and attention to customers.) Fred had learned that a high volume, approaching 300 boxes per week, at about £11 for a small box or £14 for a large one, did not always return good profits. In the quarter of March through May, boxes had to be filled by scarce leftovers from last year's organic crops, topped with nominally (but not always) fresher organic produce from fields and polytunnels in Spain, Israel and Argentina. This expensively-sourced produce drastically cut profits, said Fred. Much food was scrapped, but some customers complained about quality and a few begged off. So Cuthbert's decided to cease deliveries from March through May 2007; this would raise net profit and, in a virtuous financial circle, allow more investment in their own plant starts in polytunnels hidden from public view in the walled garden, along with more self-grown crops. Although the partners recognised that some subscriptions might be lost in the fallow of home deliveries, they kept customer contact via mailings. They also set goals of establishing pick-up points for boxes, and a farm shop if neighbours agree that their gravel road can sustain more traffic.

Fred (pseudonym): 'So what have I learned?' [Crowd laughs.] 'We started out delivering 3 boxes, then it moved to 50 ... We moved up to 300 boxes in 2006, and then we looked around and asked what we were doing. I've always been a farmer, all my life. I didn't plan to become a grocer. But that's what we were doing with all the deliveries. We lost about 50 customers in spring 2005, we were just buying it all in [from other farmers or abroad] and delivering it. But the quality was off, and we didn't like it. So we said, right, we won't deliver from March to June – and that's what it will be next year [2007]. Now it's getting harder, with River Wise or River Dene [box scheme] or whatever moving north. Always more competition.'

Figure 3.19. Fred on Cuthbert's box scheme.

UK Industrial-Organic (>£125,000/\$250,000 gross income annually)

* **Out of this World** is a small chain of co-operative supermarkets headquartered in Newcastle, with branches in Leeds, Nottingham and a fourth opened in York in late 2006 (www.ootw.co.uk/m1aboutus.shtml). OotW is so close to the Fair Trade movement that it is difficult to call it industrial-organic. It is miniscule next to the US chain Trader Joe's, but is far larger than, say, Cuthbert's, so for analysis' sake we shall treat it on the organic-industrial scale. It had a male director 2003-6, and a Newcastle staff comprised of three men and three women. Interviews in the Newcastle store were facilitated by Mary's relative who spent his life in the food industry and ran his own business for years.

OotW was founded in 1994 by Richard Adams who, mentioned above, established Traidcraft in the Newcastle-Gateshead conurbation in 1979, and set up the Fair Trade Foundation in 1989 to improve terms of trade for farmers and crafts people in developing countries. OotW is pitted against destructive consumerism, and its website claims the small chain is 'providing the country's widest range of ethically sourced goods'. It encourages organic conversion by farms within 50 miles of its shops, and earns kudos from alternative groups including the North East Organic Growers Limited (NEOG), Soil Association, Vegan Society, Pesticide Action Network (PAN UK) and other groups concerned about links between conventional chemical inputs and diseases such as allergies. With its small but durable network, the status of OotW seems similar to that of Seattle's PCC coop several years ago – poised for growth and becoming a macroactor in national food systems as well as grocery sales if it can weather competition from more conventional supermarkets.



Figure 3.20. Out of this World (OotW 2005).



Figure 3.21. Jon Walker (BAS 2004).

Waitrose is a UK multiple perhaps situated above Sainsbury as a purveyor of quality foods, placing more priority on traceability than low price. In Durham City, Waitrose occupies former premises of downmarket Morrison's, originally Safeway's. Safeway lost the supermarket wars to Asda (allied since the 1990s to Wal-Mart), Sainsbury and – chiefly – Tesco which built a hypermarket across town a decade ago. One of my colleagues who shops Waitrose, Sainsbury and Tesco around Durham says Waitrose prices are higher than some locals want to pay, but its quality and place-linked products are attractive.

Waitrose was well established in the prosperous south of England before establishing northern beachheads in Hexham and Durham, England, and in Edinburgh, Scotland. At a Slow Food Durham dinner in 2006, a year after opening Waitrose Durham, branch manager Stacey Stump (Figure 3.22.) told me it was a big challenge to supply northern stores from their distribution centre in the British Midlands, but progress was being made.

According to its websites, Waitrose revenue was estimated at £3 billion from 184 branches in 2006, representing a 3.9% national share (7% south England; 16% share organics). It is a subsidiary of John Lewis (est.1904), the UK's largest employee cooperative. Staff morale and friendliness seems buoyed by the fact that 64,000 Waitrose employee 'partners' effectively own it (www.waitrose.com). This structure promotes the company culture and, usefully protects Waitrose from hostile takeover bids. Waitrose' national managing director is male, Steven D. Esom (not pictured).



Figure 3.22. Slow Food dinner at Oldfield's. Waitrose manager, right.

Whole Foods (WF) is the Texas-based firm owned by vegan John Mackey, which claims to be the first USDA organic certified supermarket chain in America. It is known for aggressive business tactics and, while Mackey insists that it has good labour relations with its employees, the chain has been charged with anti-union tactics by some critics. WF entered the UK in 2004 with plans to open about 80 supermarkets which seem positioned near Waitrose in organic and natural food lines (*Observer* 2006; *Mail on Sunday* (2006)).

However, WF has not had altogether easy going in the UK. Its spectacular London flagship has 80,000 square feet but no underground car park. It may improve profitability by home delivery services like those already pushed by Sainsbury and Tesco. Mackey did not anticipate a surprising business move by Tesco which cleverly patented its own 'Whole Foods line' of healthy products along with guidance for healthier lifestyles. This ploy makes it costlier for Whole Foods to mass-label products from its US lines, and increases chances that consumers will perceive WF products as representing more food miles than its UK rivals.

Sainsbury and Tesco are reportedly putting pressure on their suppliers not to supply WF. Other US retailers including Toys 'R' Us have had difficulty adjusting to the UK market.

Prospects are that this innovative company will eventually achieve significant UK market penetration, but that it will be some time before Whole Foods is a big player in the Newcastle and Durham area.



Figure 3.23. Whole Foods US & UK.



Figure 3.24. WF showcases food.

* **General Mills-Cascadian Farm-Small Planet Foods.** General Mills (2006) is an MNC based in the US, parent firm to Cascadian Farms and Small Planet Foods subsidiaries acquired in the last decade, and marketing frozen fruit, veg, and ready meals. Dozens of Cascadian Farm non-perishable products including Glen Muir organic tomatoes are available worldwide via Amazon.com/grocery.

General Mills' breakfast cereals such as Cheerios are made from whole grain in the UK due to consumer resistance to genetically-modified (GM) grains, but critics claim there is evidence of an obsession with profits by its use of GM grains in the US. As discussed above, General Mills bought Cascadian Organic Farms half a decade ago to market its health-focused products. Since then, VP Sheldon Weinberg reportedly visited the UK frequently.

There is Cascadian Farm market penetration in the UK, via Amazon.com/grocery. This will probably increase significantly, because on March 29, 2007 (BBC News), Amazon announced investment of a huge facility in the UK representing 1500 jobs. Since about 2001, Cascadian has assisted the marketing of General Foods' health-focused products in the UK. As for gender issues, the president of Cascadian since ca. 2003 is Maria Morgan, but most other executives in this company are male as one routinely expects in any other MNC from aviation to steel – with the possible exception of IT in which Hewlett-Packard had a female CEO until mid-2006.



Figure 3.25. Cheerios (General Mills 2006).

Dean-Horizon-Rachel's Organic is my composite name for Texas-based \$10billion MNC Dean Foods, Horizon Organic Dairy acquired by Dean about 2004, and Rachel's Organic Dairy, a small but impressive Welsh family business that Sainsbury helped grow to national UK renown in the mid-1990s. As detailed above, Horizon bought Rachel's in 2003 (Fromartz 2006; Scholten 2003 RGS-IBG; see Figures 3.26, 3.27 & 3.28). Soon thereafter Dairy Crest began distributing Dean-Horizon-Rachel's products in the UK, and sales grew. Perhaps resistance to the US brand was detected, because the packaging of Horizon organic milk sporting the Happy Cow logo was changed to that of Rachel's black-labelled milk. A label campaign to send cows to Africa was begun, perhaps to engender consumer goodwill. Figure 3.26 shows a 2004 UK carton of Horizon Organic milk with the Rachel's Organic Yogurt logo on left.



Figure 3.26. Black-labelled Rachel's Organic Yogurt pictured on Horizon milk brick.

The global status sought by Horizon can be a two-edged sword. A global brand can penetrate new markets, but scandal on one continent can spread to another. There are hints that actors at the Rachel's sites in Wales, and marketers at Horizon and Dean Foods are aware of the danger that allegations of poor quality or animal welfare standards in the US could besmirch its UK brand. Until the Horizon milk boycott and organic pasture grazing debate is resolved in the US, it is possible that UK consumers, sensitive to animal welfare (Scholten 1995a&b), will blame Rachel's along with Dean-Horizon. There has been little on this topic in UK media, but Rachel's website links to a video clip titled *Born to Graze - Dancing Cows* (2005), portraying cows ecstatic on release from barns to spring pasture.



Figure 3.27. Rachel's Organic Yogurt expanding in 2002.

Conclusions

The political-economic ramifications of the pending USDA decision on the organic pasture grazing debate entail physical effects to material landscapes regarding the presence or absence of animals. Some AFN actors advocate organic agriculture because it is more labour-intensive than conventional agriculture, and tends to valorise human knowledge of the natural environment that was devalorised by conventional methods. Crucial to the shape of future farmscapes is the tendency of organic agriculture to preserve extensive landscapes. This is certainly the case if cattle are required to graze outdoors. In everyday terms of land value, taxation and zoning, this equates to greater incentive for those who govern land use to preserve more natural farmscapes, by halting the spread of what some call Wal-Mart sprawl (Scholten AAG 2006; RGS-IBG 2006).

But more than animal welfare standards and farmscape aesthetics are at stake in the competition between conventional agribusiness and alternative food networks. The following chapter on risk assesses to what extent the former was responsible for the spread of prion diseases from livestock to humans.

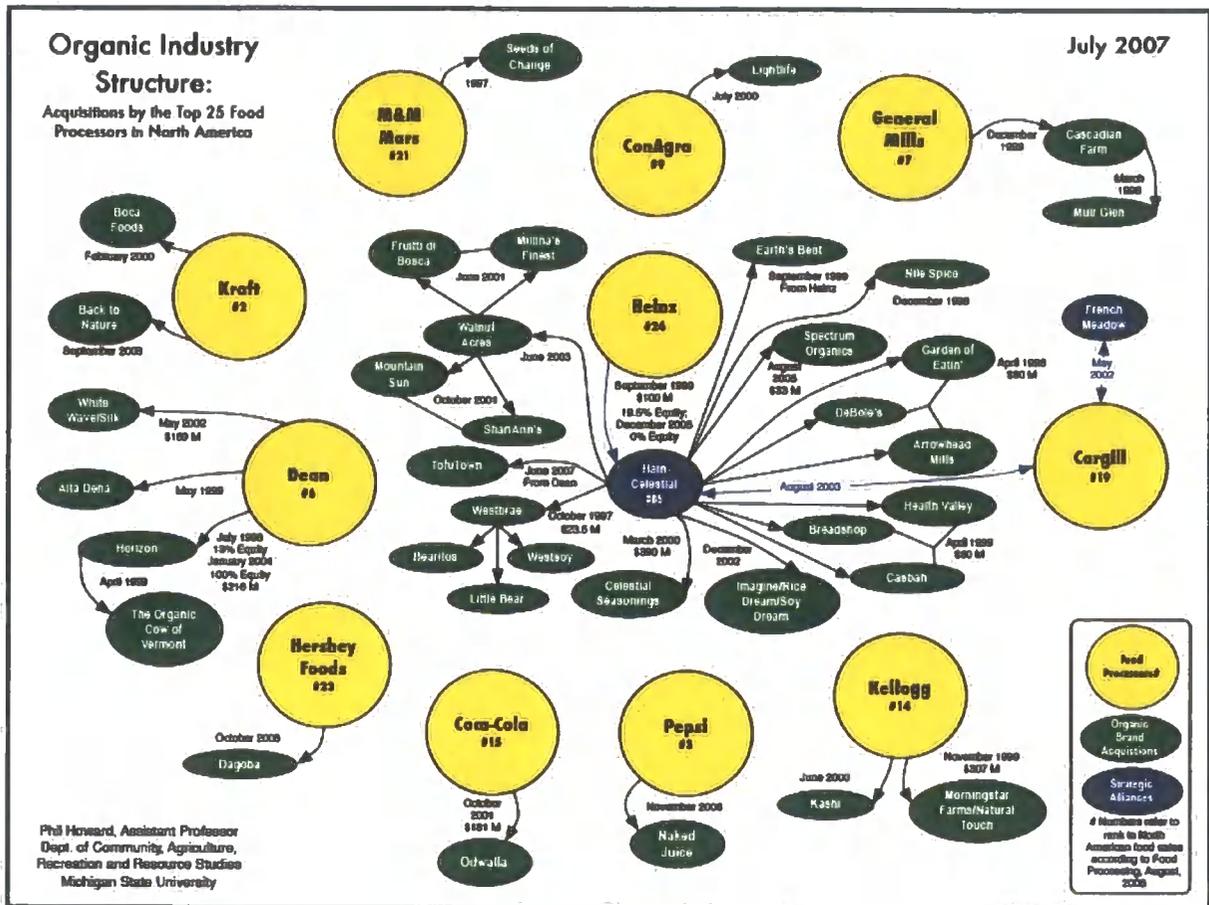


Figure 3.28. Top 25 processor acquisitions in North America (Howard 2007; last of several updates).



Figure 4.1. A spectre haunts America: consumers fear obesity more than BSE.



Figure 4.2. UK beef cattle on grass were virtually BSE-free.

CHAPTER 4 DIRTY COWS:

BSE/vCJD as a lens on risk & uncertainty



This chapter offers initial examples of consumer attitudes and behaviour on BSE revealed in fieldwork in Seattle and Newcastle upon Tyne (Scholten 2006a&b; 2007d), interpreted in light of the views of anthropologist Mary Douglas who believes hygiene, health, contagion, purity and dirt are key to forming our worldviews and ordering the chaos of the universe. Others are credited with saying that dirt is matter out of place, but Douglas is most often associated with it. In *Purity and Danger* (1966: 2) she writes:

As we know it, dirt is essentially disorder. There is no such thing as absolute dirt: it exists in the eye of the beholder. If we shun dirt it is not because of craven fear, still less dread of holy terror. Nor do our ideas of disease account for the range of our behaviour in cleaning or avoiding dirt. Dirt offends against order. Eliminating it is not a negative movement, but a positive effort to organise the environment.

Here, BSE/vCJD (*aka* BSE or mad cow disease) is a form of infectious dirt. I use the claim of Douglas and others - that perceptions of risk and danger, as well as perceptions of dirt and purity are socially constructed - to understand responses to BSE. My data show that fear of BSE varies among countries and within sub-groups, but there is no simple link between imagining meat as 'dirty' and avoiding meat. For some people risky food can be just another thrill, like eating the worm at the bottom of a bottle of tequila. In perhaps more noble light, Fukuyama (1991) points out that aristocrats traditionally won honour by risking their lives in battle or sport – an idea that persists in many realms of human life.

Here are reprised the risk ideas of Ulrich Beck and others, using prion diseases in animals and humans as a lens on risks. Related to – but somewhat opposed to quantifiable risk – is the idea of *uncertainty*, and input from Hugh Pennington characterises the incubation period of mad cow disease, which is unquantifiable because is still unknown. The social construction of risks framed by Mary Douglas, and elaborated by Deborah Lupton and others, is key to our discussion. It almost goes without saying that risks must be apparent before consumers can reflect on them. Likewise, even if people are aware of risks, they must have viable options before their risk reflections and attitudes can be translated into behaviour

such as dietary changes. Furthermore, people's attitudes toward risk are dynamic and sometimes contradictory. In this chapter Lupton, drawing on Douglas, guides us into the grey areas of life in which relations with risk may seem ambiguous or irrational. These involve primal fight-or-flight instincts, begging the question as to whether our best strategy is to bolster our immune systems by engaging risks head on – or fleeing risks like British beef, à la T.S. Eliot's (1917) *Prufrock*, a character so paralysed by fear, he was afraid to eat a peach:

Shall I part my hair behind? Do I dare to eat a peach?
I shall wear white flannel trousers, and walk upon the beach.
I have heard the mermaids singing, each to each.
I do not think that they will sing to me.

Now, let us examine phenomena that inspired this thesis, focusing on BSE/vCJD as matter out of place, i.e. anthropogenically-created dirt with potential to infect the biosphere to an uncertain magnitude. When the UK government lifted the veil of secrecy from the dairy industry in 1996, admitting a link between mad cow disease and a fatal neural disease in humans, it opened intensive, globalising food systems to unprecedented scrutiny. Mad cow disease, or bovine spongiform encephalopathy (BSE) in cows, appears as a variant of Creutzfeldt-Jakob disease (CJD) in people. They are examples of transmissible spongiform encephalopathies (TSEs) which many scientists believe are related to scrapie in sheep, chronic wasting disease (CWD) in North American deer and elk, and kuru and Alzheimer's in people (*New Scientist* 2006). Here, the acronyms BSE, vCJD and TSE are usually shortened to BSE for brevity. *All informant names are pseudonyms.*

Mary Douglas, risk, dirt and BSE

Doubts that Douglas' analysis of pollution and taboo illuminates BSE is answered in the preface to the 2002 edition. She recounts how the book went from sleeper to classic as 1960s' emphasis on 'unsatisfied claims to [human] freedom' (1966/2002: xvii) shifted to 1970s' angst on pollution in air, water, oceans and food, made possible only in the last century by 'monstrous technological developments'(xviii-xix). Douglas (xix) writes that in response to these threats 'A new academic discipline emerged – risk analysis – to which *Purity and Danger* seemed to be relevant in a more general way than I had ever imagined.'

In symmetrical fashion, my study theorises organic and sustainable foods as proxies for nature, and alternative food networks (AFNs) as consonant with Douglas' ideas of cleansing

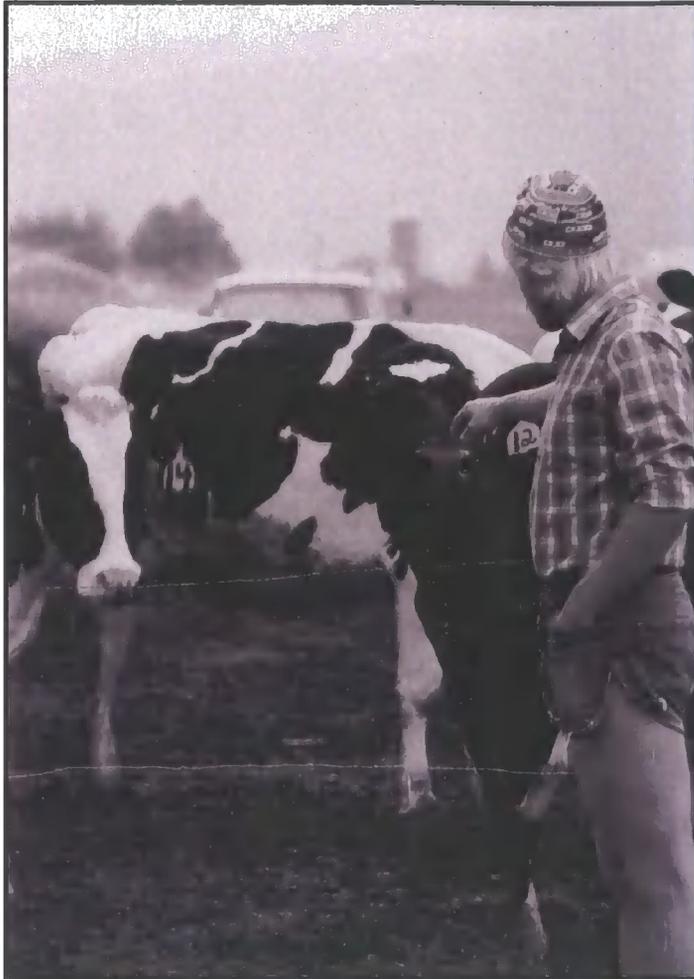


Figure 4.3. BSE-clean dairy cows in a farm yard north of Seattle.

and purification of the environment. However, my data show that perceptions of BSE as a dangerous risk vary, not just among sub-groups in a given city, but also between counterparts in different countries.

Douglas (1966: xix) remarks that, 'Dangers are manifold and omnipresent. Action would be paralysed if individuals attended to them all; anxiety has to be selective.' How do social sub-groups construct or discard perceptions of dangers such as BSE? To understand this process involving consumers, food chains, producers, experts, and media, we will discuss mad cow scares in the UK, the US and other countries (Figure 4.4 below). BSE corresponds easily to her (x-xi) lexicon of cleanliness and contamination in the new preface, where she explicitly states that 'dirt is dangerous'. The inference is that, since the dirty pathogens which spread BSE are risks, processes such as organic agriculture which preclude or mitigate the dangerous risk of BSE contamination lie in the realm of cleanliness, purification, and purity.

Douglas (xi) calls her book a 'treatise on the idea of dirt and contagion' inspired by her bout with measles in the 1950s, whilst writing a monograph on the food rules of the Lele in Africa; she develops themes on how taboos condition 'local consensus on how their world is organised' in kinship relations and so on.

Closer to our interest in BSE are the Old Testament dietary laws allowing the Israelites to eat cows, goats and sheep, but making pigs taboo. Taboos may seem arbitrary to outsiders, but are explained in terms of their practical effect in relieving 'cognitive discomfort caused by ambiguity' in daily life, and Douglas (xi) explains that 'dirt makes a bridge between our own contemporary culture and those other cultures where behaviour that blurs the great classifications of the universe is taboo. We denounce it by calling it dirty and dangerous; they taboo it.' This describes a historic shift in seeing the pathologies of diseases such as measles or BSE in terms of medical and hygiene practises, rather than religion and taboo. Germane to this chapter is Douglas' (xiii) further observation that 'when the controllers of opinion want a different way of life, the taboos will lose credibility and their selected view of the universe will be revised'. Certainly the winners in war, politics and business influence societal frames of reference. Yet I argue the shift to hygiene from taboo is neither complete nor irreversible. Just as Samuel Huntington (1996) shows that religion remains a force in global relations, it is premature to say that secularist hygiene has completely trumped myth or religion in ideas of purity and danger. Evidence for my claim on bio-ethics includes a request by UK scientists for government permission to test hybrid animal/human embryos (BBC Radio 4 News, 6.15pm January 11, 2007). Such issues get as much attention from religionists as scientists, and help explain Douglas' (xix) observation that 'political affiliation is the best indicator of attitudes to risk'.

Food scares and debates can be understood in terms of disputes over the changing boundaries of what is considered pure enough to eat. On the agribusiness side, researchers seek progress and profit by flouting traditional distinctions between biological species, and even kingdoms, via genetic modification (GM). One example is the FlavrSavr tomato in which scientists mixed fish and plant genes (Harvey 1999; Tester 2001). In the case of BSE, government regulators were lobbied by agribusiness to approve a cheaper, faster method of purifying meat-and-bone-meal (MBM) from cattle for recycling in dairy supplements. It was these contaminated, dirty cows which first manifested BSE in the UK. Some cows and other livestock were ground into feed for livestock in other countries, spreading 'dirt' world-wide. Resisting agribusiness, AFN actors call such practises dirty, promiscuous mixing bound to

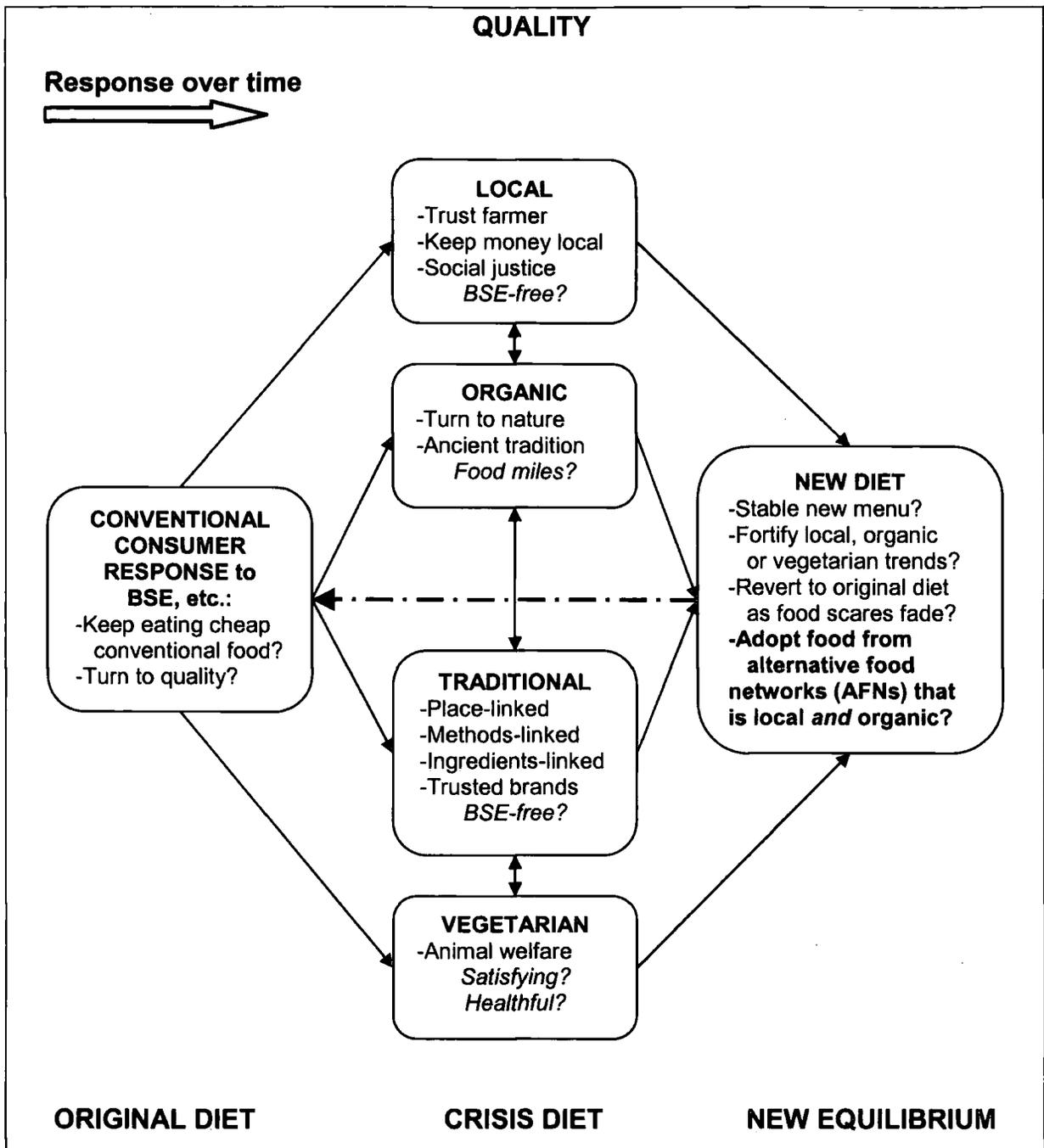


Figure 4.4. Response to expert and media reports of BSE risks (Scholten: 2006a).

spread contagion. They seldom reject scientific method, but criticise what they see as blinkered scientific reductionism by agribusiness. There is a parallel between the belief of Havik Brahmins (Douglas 1966: 40-41) that cooked food more often carries pollution than raw food, with the beliefs of AFN activists who venerate raw organic food as purifying but spurn the processing, *aka* cooking, of multiple species' bodies into the inputs that spread BSE. They echo Leviticus in which, Douglas (1966: 66-67) writes, 'hybrids and other contaminations are abominated', and the Israelites are warned, 'You shall not let your cattle

breed with a different kind'; this warning wherein holiness and purity require that 'different classes of things should not be confused' clearly forbids feeding animals to ruminant herbivores as dirty hybridisation.

Hugh Pennington & uncertainty of BSE/vCJD

Cartoons often depict BSE victims with brains like Swiss cheese. The metaphor is visually apposite, but the symptoms of this fatal disease are not amusing. Once animal or human victims exhibit mobility impairment, restlessness and paranoia, they usually die in a year. Reviewing the UK government's 5112 page *BSE Inquiry*, Hugh Pennington (2000; 2006), relates the case of a young woman who showed symptoms of depression, anorexia and agoraphobia in 1996, although she had been vegetarian since 1985 when she was 13. Her father said that before she lost her struggle with vCJD, 'the most harrowing thing was sometimes in bed at night . . . she howled like a sick injured animal'.

Although some scientists conjecture that BSE may be the result of spontaneous mutation, most believe that evidence points to deregulation of carcass rendering and purification rules before recycling in cattle feed, during the deregulatory zeal of the early Thatcher administration, 1979-84. Bovine anatomy precludes attacking and eating other animals, so meat was absent from cows' diets until humans began rendering carcasses into cattle feed about 200 years ago. Because the practice reduced waste and boosted yield, it was considered prudently efficient, and became routine in countries including Germany, the US and UK until 1996. Unfortunately, it seems that TSEs leapt species just a few years after the UK introduced a cheaper but unsafe method of flash heating carcasses. This understanding of the links among scrapie, BSE and vCJD is the consensus of all knowledgeable observers I have asked, including Kenneth Calman, former secretary of the World Health Organisation (Scholten 1999). Pennington writes:

There is no doubt at all that BSE is an English disease: it started in England and has claimed most of its cattle victims there. But it is not a parochial matter: its scientific, medical and political repercussions are global and general.

At the nadir of the BSE epizootic in 1997, Newcastle saw rates as high as 2-to-4 per hundred cattle (Figure 4.5 below). In the decade after 1996, the UK lost overseas beef markets worth £4 billion annually (then about US\$7bn).

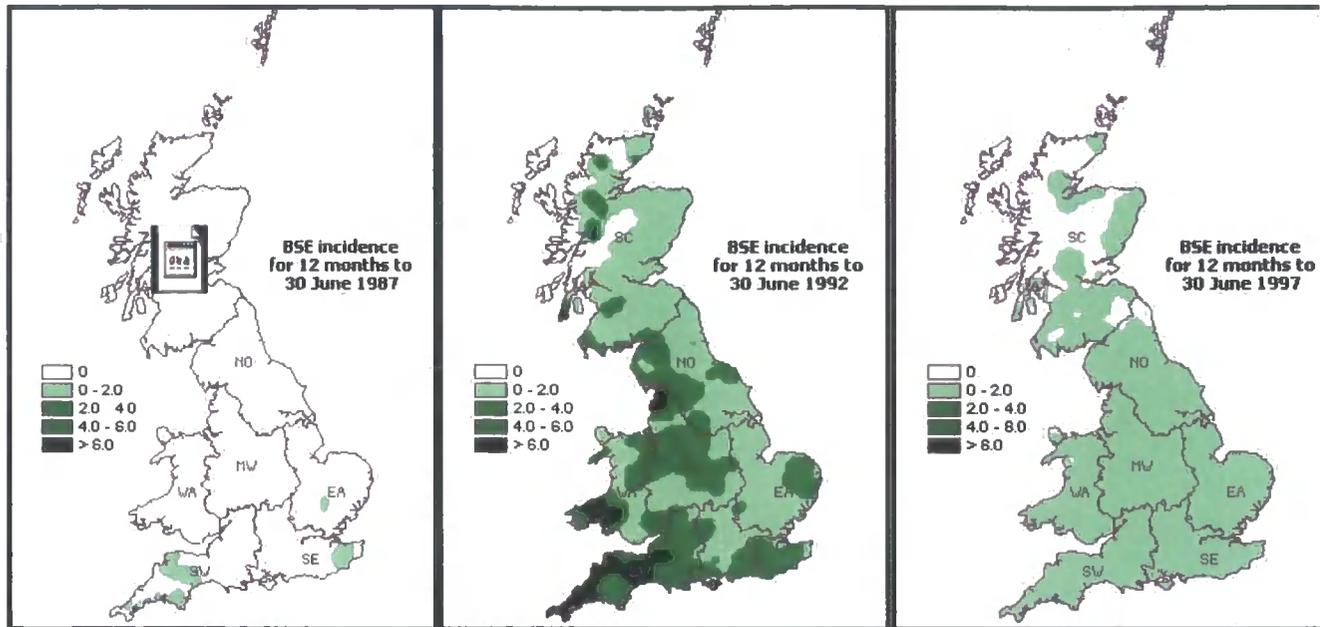


Figure 4.5. BSE cases 100 adult cattle/sq. km. on the UK map (2001 < 1988 (Stevenson, *et al.* 2001 DEFRA).

In the US, BSE was found east of the Cascades about 150 miles from Seattle, December 23, 2003 (Figure 4.6). Since the Christmas discovery of one mad, debilitated cow in an abattoir in rural Mabton, Washington State has lost over \$4.4 billion in costs (*Hoard's Dairyman* Nov. 10, 2006) Although fewer than 160 people had died of the disease in Britain by February 2006, and only 28 in other countries (France (16 cases), Ireland (3), the US (2), Canada, Italy, Japan, the Netherlands, Portugal, Saudi Arabia and in Spain (1 each)), uncertainty remains on the ultimate impact of the disease (Collee *et al.* 2006; OIE 2007).

Most ominous are signs that its incubation period could be triple the 11 years of the woman recorded above. John Collinge and colleagues who studied kuru in New Guinea found cases of that TSE with incubation periods over 50 years. If kuru is linked to BSE/vCJD the portents bode ill for future outbreaks. Unlike foot and mouth disease, it cannot be passed in the air. But, the fact that ingestion of infected tissue can pass contagion pinpoints blame on humans who masterminded carnivorous behaviour by herbivores in intensive agriculture.

Being neither bacterium nor virus, prions cannot easily be killed by chemicals, heat or radiation because they lack DNA. Stanley Prusiner won the 1997 Nobel Prize for identifying these protein molecules, which in pathogenic form cause adjacent protein molecules to loop in a Swiss cheese pattern, hampering brain function and mobility until death.

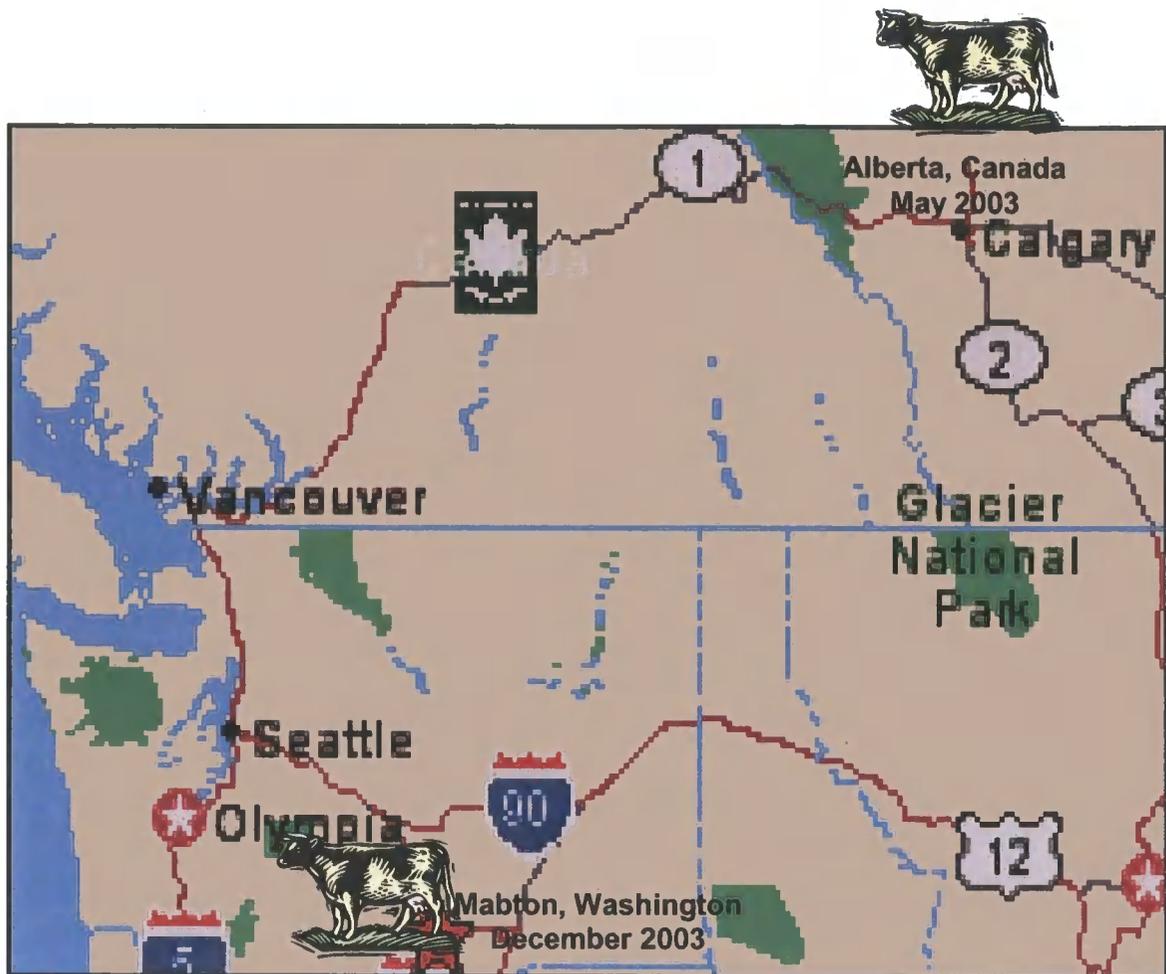


Figure 4.6. BSE on the PNW map in 2003 (USDA 2005).

There is no cure for BSE, and because it can be passed from mother to calf, hundreds of thousands of cows have been destroyed in the UK and other countries. Prions' mysterious resistance, to what in Mary Douglas' lexicon is purification, indicates that the surest path to purity in animals and humans is in promoting foodways unbesmirched by BSE, i.e. via AFNs promoting sustainable food. Organic beef is trusted by many consumers who believe it is free of BSE prions, because organic agriculture has no place for unnatural chemical inputs – not to mention meat in cows' diets.

Blood transfusions from BSE hosts have led to deaths among haemophiliacs in France and US tennis player Arthur Ash. Although meat-and-bone-meal were banned from cattle feed in most countries after 1996, *USA Today* (June 9, 2003) reported that the US continued to recycle cows' blood in feed for cows and other animals.

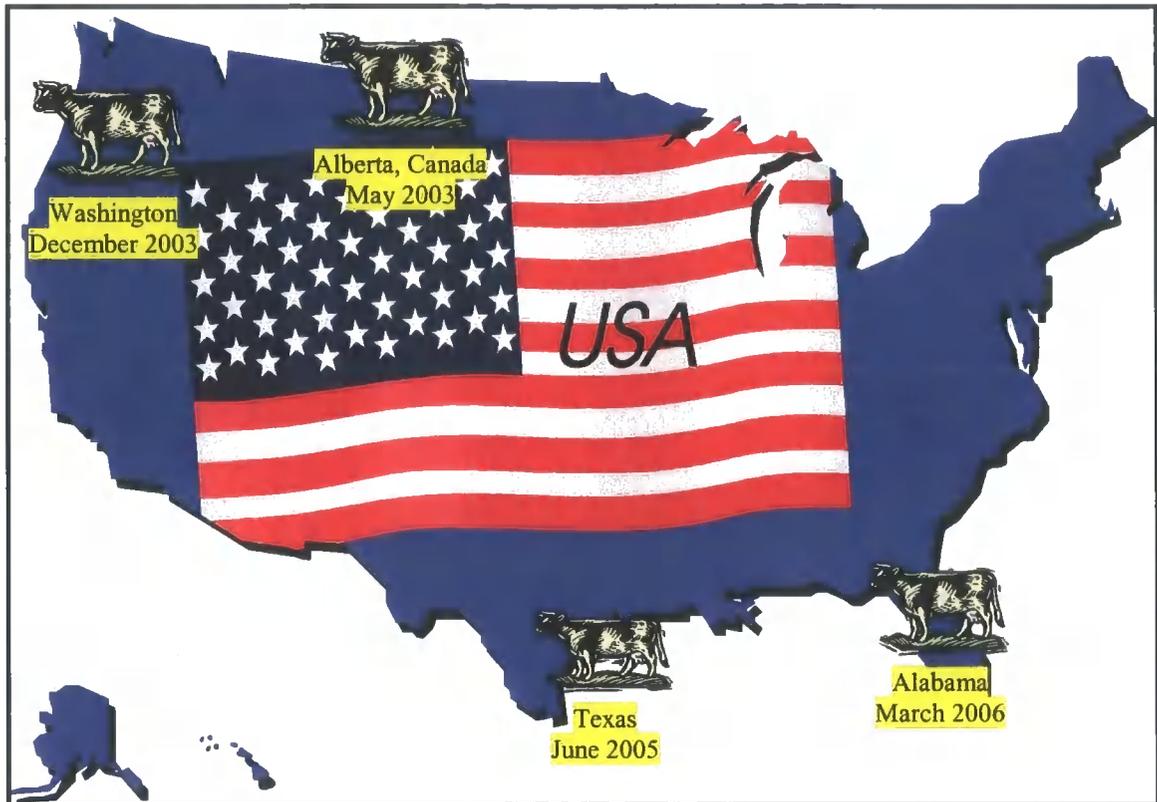


Figure 4.7. BSE on the North American map 2003-2005 (CBC 2006; OCA 2006).

Table 4.1. BSE safeguards in US & Canada (CSPI March 2005).

Table 1: Timeline of BSE Safeguards in the U.S. and Canada
Italics indicate proposed safeguards

BSE Safeguards	U.S.	Canada
Import ban imposed on U.K. cattle	1989	1990
Import ban imposed on cattle from all countries where BSE has been detected in native cattle	1989	1994
Feed ban Ruminant protein banned from ruminant feed	1997	1997
Mandatory animal ID and tracking system	–	2001
Specified Risk Materials (SRM) removal		
From cattle at slaughter	2004	2003
From human food	2004	2003
From animal food (<i>strengthening of feed ban</i>)	–	2004
Enhanced BSE surveillance	2004	2004
"Downer" cattle banned from human food chain	2004	–

Table 4.1 above shows that the US did not ban downers, or cows with mobility impairment until the 2003 discovery. Nor has the US yet been successful in ordering its 97 million cattle into a national identification scheme, to ensure traceability of disease vectors when a mad cow is found. For such reasons Sarah Whatmore (2002) calls mad cow disease perhaps the most archetypal food scare of recent times due to the 'intensive feeding regime of the industrial cow' and that:

The rationalities both exposed and overshadowed by the spectre of the disease were those of cost-cutting and profit-margins in a corporate animal feed industry careless of the offensive detail of how their products were derived.... At once "man-made" and "pathogenous", the hybrid potency of the disease resonated with gut apprehensions of the corporeal kinship and fleshy currency between cows and people.

BSE represents the boundaries of risk and uncertainty. Jack Stilgoe (2007) of Demos writes:

BSE, the disease that changed the way the UK thinks about its experts, has its 21st birthday this year.. After mad cow disease ravaged the country, the Government could no longer pretend that experts had all the answers. They had to take seriously uncertainties such as those that John Gummer, then Agriculture Minister, famously swept aside with the help of his daughter and a burger. But "evidence-based" language mutes the voice of the expert. It accentuates the positive - what we know - and it often becomes a way of justifying decisions rather than making them. The temptation for civil servants and politicians is to look past the uncertain expert to the comfortable certainties. But experience tells us that it is uncertainty - the absence of incontrovertible evidence - that comes to define our problems. With BSE, Gummer was not the only one to claim false certainty. In 1990, the Meat and Livestock Commission declared "Eating British beef is completely safe." In private, the message was very different. Eric Millstone, professor of science and technology policy at Sussex University, described BSE as "the most serious failure of UK public policy since the Suez invasion of 1956." Yet Tony Blair's speech on science in November... talked about the "brilliant light of science" as though it was an unproblematic source of authority.

MAFF lost legitimacy when the public found it had more loyalty to agribusiness than food safety. One nail in its coffin was when the consumers learned MAFF had refused to allow Harvard University scientists to examine tissue from TSE victims. Soon MAFF was replaced by the Department for the Environment, Fisheries and Rural Affairs (DEFRA) and the Food Standards Agency (FSA). Neither of these new agencies had farming in its title - a slap at the rendering industry which endangered consumer safety for profit. Government lost legitimacy as the guardian of safety, the mantle for which fell to the supermarkets. Asda, Safeway, Sainsbury and Tesco brought supply chain discipline to unprecedented levels under the mantra of food safety, but to the consternation of many farmers (Marsden *et al.* 2000).

Table 4.2. Chronology of BSE in the UK, US and other countries

2007	<p>* No live BSE test yet, but faster tests for carcasses. Japan tests 100% of beef for human consumption. US tests small sample, but follows other countries to cattle ID system.</p> <p>* BBC (29.Jan.) reports UK application to burn meat-and-bone-meal and tallow in biofuel plant.</p>
2006	<p>* 128 BSE/vCJD human deaths in the UK, and 164 countries world-wide. USDA reports US beef consumption above pre-2003 levels.</p> <p>* August 2006, the Canadian Food Inspection Agency confirms BSE in an older cow in Alberta - 5th case in 2006 and 8th since 2003.</p> <p>* 3rd mad cow found in Alabama (OGCA 2006; OMSCO 2006). USDA Sec'y Mike Johanns met in London with Japanese Minister of Agriculture Shoichi Nakagawa. Japan had partially reopened its market to U.S. beef products, but decided to reinstate its import ban in January because of the first shipment of U.S. veal which contained intact vertebral column and veal offal - materials classed as of "high risk" for transmission of BSE.</p> <p>The USDA enhanced surveillance program begun June 2004 is coming to an end; USDA Veterinary Officer John Clifford said: 'Since June 2004, all sectors of the cattle industry have cooperated... submitting samples from more than 650,000 animals from the highest risk populations and more than 20,000 from clinically normal, older animals, as part our enhanced BSE surveillance program.' Clifford also said, 'Only two of these highest risk animals have tested positive for the disease as part of the enhanced surveillance program.' The program cost about \$1 million a week, and on average, nearly 1,000 high risk cattle a day are tested for BSE.</p> <p>Bill Bullard, Ranchers-Cattlemen Action Legal Fund (R-CALF) told ENS, 'The USDA needs to strengthen the feed ban to ensure this disease cannot recycle within our feed system... The government should allow private packers to test for BSE.'</p> <p>Scientists speculate that prion plaque, e.g. on brains of older BSE cows in Alabama and Texas rises spontaneously, but USDA maintains all BSE cases are linked to UK cattle feed (Alabama cow may have eaten tainted feed before 1997 ban).</p>
2005	2 nd US BSE cow detected November 2004 - animal born and raised in Texas.
2004	USDA begins testing beef carcasses for BSE.
2003	1 st US BSE cow detected Dec. 23, 2003 southeast of Seattle, Washington - imported from Canada. Earlier in 2003, BSE cow found in Alberta.
2001	* Human deaths total 100+ in the UK. Mad bovine cases (504) are below the 1988 level. No live test yet. Over 30 Months (OTH) cattle not allowed in human food. A dam-calf BSE link is found. Disgraced Ministry for Agriculture, Forests & Fisheries (MAFF) is divided into the Food Safety Agency (FSA) and Department for Environment, Fisheries, and Rural Affairs (DEFRA).
2000	<p>* In Germany before Christmas, BSE found near Munich, and beef sales plunge. The Green-SPD coalition announces stringent beef measures, and plan to increase organic farming.</p> <p>* UK beef consumption has resumed pre-1996 levels.</p>
1997	UK, European countries and US ban meat-and-bone-meal (MBM) in cattle feed - but UK sales continue at least 18 months longer to France and other countries.
1996	MAFF admit BSE-CJD link.
1986	UK scientists identify BSE in cattle & many countries ban British beef. Thereafter, MAFF deny BSE material to researchers at Harvard, while assuring the public that British beef is safe.

Source: Scholten 2001-2007; Organic Consumers Association - ENS 2006; BBC 2007; OIE 2007.

Stilgoe and his colleagues at Demos know that, while governments naturally have long-term concern for food safety, the longevity of their tenure rests on short-term economic indicators such as technology stocks. Thus, the US and UK governments, under Blair and Clinton as well as Thatcher, Major, Reagan and both Bushes, have promoted biotechnologies such as genetically modified (GM) food for job creation, and economic *rents* in patents and trade related intellectual property (TRIPs; see Hoekman & Kostecki 1995). GM critics claim that while new drugs and cosmetics undergo lengthy testing under FDA and USDA rules, GM

products are exempted under the policy of functional, or substantial equivalence (Nestle 2002/3; Smith 2003; Lang & Heasman 2004). *The Economist*, a newspaper founded to promote free trade by the repeal of the Corn Laws in the 1840s, has campaigned to exempt new foods from what it depicts as Luddite invocation of sanitary and phytosanitary measures (SPMs in Codex Alimentarius and WTO rules). The director of the FDA Office of Biotechnology, 1989-1993, Henry I. Miller (2004) argues likewise in *The Frankenfood Myth*, a book he co-authored with Gregory Conko.

But in a doctoral thesis on governance and regulation of rBST, Tom MacMillan (2002: 5) pinpoints the missing discourses between advocates and detractors of biotechnologies. Citing Hajer (1995) Macmillan claims 'story-lines' of 'neo-liberal scientism' are spontaneously developed by pharmaceutical or agribusiness companies, which combine:

the market triumphalism of neo-liberal economics with outdated and inaccurate notions of scientific rationality. Whilst neither half of this odd couple has a home [in] contemporary social theory, I assert that they do hold sway in biotechnology regulation.

I concur with MacMillan's views on the regulation (or lack of it; see Smith 2003) of rBST in the misgovernance of unsafe beef rendering rules in the Thatcher administration. GM advocates such as Conko stress short-term economic boons of the risk-benefit approach, while ignoring environmental or animal harm which the precautionary principle would identify as posing long-term harm to humans. This non-joined-up neo-liberal scientism is a danger in so-called evidence-based policy in the Blair regime (*THES* 2007).

Consumers, BSE and responses to risk

In her theorisation on purity and danger Douglas (1966) notes not just the ubiquity of risks, but also the human process of distinguishing and prioritising them. Ulrich Beck included the anthropogenic bio-genetics of food in his *Risk Society* thesis in 1986, concomitant with the identification of BSE in cows, a decade before the UK government implicated human agency in BSE/vCJD (Table 4.2. BSE chronology above). Later, Anthony Giddens and Scott Lash joined Beck (1994), expanding his theories of reflexive modernisation in which citizens are expected to reflect on risk and make choices on food and health - decisions formerly made by fordism governments.

How is it that social groups construct or discard perceptions of dangers? Examples of mad cow scares help us understand the process. News media spread the BSE saga from Germany to Ghana (Marsden *et al.* 2000: 180-201; Morgan *et al.* 2006). But, just as at the time of this writing, January 2007, avian flu in Indonesia does not induce widespread panic in Europe, 1990s' reports of BSE in the UK did not induce panic in the US. As Figure 4.4 above suggests, disease must strike locally and repeatedly before many consumers recognise it as a clear and present risk. But once a disease victimises one's social circle, it is on one's radar, and a possible goad to altering consumption behaviour.

But even before a contagion reaches a place, there may be people in the population who routinely reflect on reports of distant food and health risks, and the vectors that diseases could travel toward them. The simple fact that the US and dozens of other countries banned British beef after BSE was identified in 1986, was known to some Seattle consumers, and this knowledge led to conjecture that British BSE-tainted beef entered the US human or animal food supply before 1986. My ethnographic fieldwork in Seattle did reveal longstanding fear of BSE among participants in AFNs. Some were alerted to the disease by colleagues, publications such as *Organic Gardener*, BBC News reports on National Public Radio, or local newspapers. Yet, even though consumers whom we might call alternative foodies might have been aware, long before the general populace, that BSE was a threat, my impression is that even they were surprised when mad cow actually appeared on the horizon.

As mentioned previously, Patricia Caplan (2000: 114-125) describes how, as beef sales plunged after the 1996 scare, consumers in rural Wales sought beef from trusted farms, while Londoners, bereft of trusted contacts, turned to lamb, pork, poultry and fish – or attempted vegetarianism. Some consumers knew bone-meal was recycled in cattle feed. But few knew that meat was recycled too, including specified risk material (SRM) from brains, offal and cattle pancreas, and mechanically recovered meat (MRM, used in cheap sausage) from the crevices of spinal cords, etc. As Whatmore notes, the scale was shocking. Consternation prompted bans on most animal renderings in bovine feed in the UK, US and other countries.

However, it must be noted that, even in this moral, ethical domain, prohibitions against animals eating animals may be challenged on zoological, historic, economic, environmental and health grounds. Even Fromartz (2006: 150, 164), a food system critic in the line of Upton Sinclair, hints backhandedly that the displacement of beef upon cropland is ameliorated by recycling MBM in fodder. To some this is a virtuous circle of efficiency. But

others deem animal matter out of place in a cow's manger, in a corollary to Douglas' remark that dirt is matter out of place.

Of the 1980-1990s' litany of scares including salmonella, listeria, E.coli 0157:H7, and BSE, many consumers considered the last the worst, as they turned to diets perceived as more natural and organic, according to Jonathan Murdoch & Mara Miele (1999). Peter Atkins & Ian Bowler (2001) found high rates of vegetarianism among young UK consumers, especially women eschewing beef in the same way their US counterparts rejected milk produced with rBGH/rBST made by Monsanto and sold under the Posilac brand. Many US consumers believed rBGH/rBST led to mastitis, belly muscle weakness, hoof problems and lower longevity in cows, and feared the effects upon children and adults of higher levels of immuno-growth-factor-1 (IGF-1) in milk produced with the dairy hormone (see Smith 2003; Scholten 1989b; Scholten 1993; Scholten 1994; Nestle 2002: 100). When I interviewed Monsanto spokespersons from Brussels, 1988-89, for a report in *Hoard's Dairyman* (1989b), they assured me that while milk produced with rBGH/rBST bore higher than natural levels of IGF-1, it was a moot point because such hormones were destroyed in the human stomach.

That is disputed by Jeffrey Smith (2003) who claims significant amounts of IGF-1 survive the human stomach to be absorbed in the intestines, implying that the US epidemic of child obesity is partly due to GM-produced milk since 1994. Tom MacMillan (2002) and Nestle (2003: 101) found 'revolving door' issues among Monsanto, the USDA and FDA, although the famous case of Michael Taylor (who went from a position as counsel for the FDS, to working for an Iowa firm representing Monsanto, to a return to FDA) was, implausibly, judged by the General Accounting Office not to be a conflict of interest. But vindication by the GAO did not reassure all consumers about GM hormones. David Goodman and Melanie (2002) claim US certification of rBGH/rBST in 1994 'spurred the establishment of an organic milk industry' and that 'organic milk consumption challenges rBGH from a "Not-in-my-Body" or "NIMB" politics of refusal, similar to political refusal of neighborhood residents in "Not-in-My-Backyard" or "NIMBY" environmental movements' (DuPuis 2000). For a decade most scientists contended that humans can contract vCJD from bovine meat but not milk. But new prion identification techniques (PLoS ONE/ Franscini *et al.* 2006) are weakening that canon, and more consumers are applying the NIMB thesis to anthropogenically produced BSE prions as well as to hybrid hormones like rBGH/rBST.

Food panics in the UK and European countries generally spur initial disruption of attitudes and behaviour, eventually followed by a gradual return to the previous consumption equilibrium (Figure 4.4 above). People return to their original menu, as local incidents of a disease and media reports dwindle, and panic subsides. It is my claim that food scares must be severe, lengthy, and probably repeated before they permanently alter consumption practices. In Newcastle, two decades of familiarity with mad cow disease put BSE on the risk maps of large swathes of consumers. Whenever Geordies get complacent about BSE, the news media broadcast another tragic case of someone, vegetarian or not, succumbing to vCJD. Some consumers are fatalistic about BSE, but that should not blind us to the norm, i.e. that others take advantage of safer food if it is available and affordable.

Seattle reflects observations of Douglas, Beck, and Deborah Lupton (1999) that risks are socially constructed, and that we are unaware of risks until experts alert us, or symptoms appear locally. Until a mad cow was reported in Alberta in January 2003, the Seattle area had low BSE awareness. At a firefighters' focus group near Seattle the next May, Darrell, who helps his wife grow organic vegetables for farmers' markets, said the Canadian case was:

important because it does raise awareness of BSE and food-borne type ailments with regard to chemicals, hormones and illnesses.

Yet the spectre of mad cow was less frightening in America than Britain which had lengthy exposure to BSE, and Germany where laws supported high expectations of food purity. At Christmas 2003, a few months after completion of my fieldwork, the first US case of BSE was identified at a slaughterhouse in Mabton, a rural town southeast of Seattle – making my study a time capsule of attitudes and behaviour. The animal's origin was determined to be Canada, a factor encouraging consumers to downgrade the biosecurity threat. When I made telephone, email and in-person call-backs, 2004-5, Howard, a pro-organic motorcyclist, discounted mass conversion to organics, saying:

as long as BSE is still contained to one cow and blamed on Canada, people won't change.

The disparity, in UK and US awareness of BSE as a danger in meat contaminated by rogue prions, is apparent in answers to one question. After vetting, 404 UK/US Food & Risk Survey respondents answered this prompt: 'Please number Top 5 risks in the food system.' They chose from a list including BSE, CJD, E.coli, gluten intolerance, lactose intolerance, heart disease, listeria, obesity, and salmonella. Red herrings, such as plague, were added to respondents' knowledge of food risks. Respondents were asked to write comments on survey

margins (Chapter 5 methods) to note unlisted food risks or vent any other remarks. A few, mostly academics, mentioned pesticides and antibiotics. Kornie, a family man with a masters degree in history who sold his dairy farm to become a fisherman, understood the link between BSE and vCJD, implying that some diseases show indirect risks:

BSE and foot and mouth disease are risks to the system in the sense that animals are at risk.

Figure 4.8 shows the proportion of respondents listing BSE or vCJD as top risks is lower in the US than in the UK. Of all 178 Seattle respondents, just 19% expressed fear of BSE. Merely 9.52% of Seattle academics listed it. Fear of BSE in Newcastle respondents persists at a much higher rate than in Seattle, at least before BSE was found near Seattle *after* these data were compiled. Of all 226 Newcastle respondents, 44% listed BSE as a top risk and the rate was *highest* with academics at 52%. Yet most who forsook beef in the 1990s and remain wary of BSE have eventually resumed its consumption, perhaps lowering fear of BSE vis-à-vis immediate worries. Bridget, a PhD student in physical geography said:

I stopped eating it [beef] for a while, but don't think of it now. Guess I'm more aware of 'dirty' meat, chopped and reformed, mechanically separated, etc. and try not to eat it but invariably end up eating it every now and then.

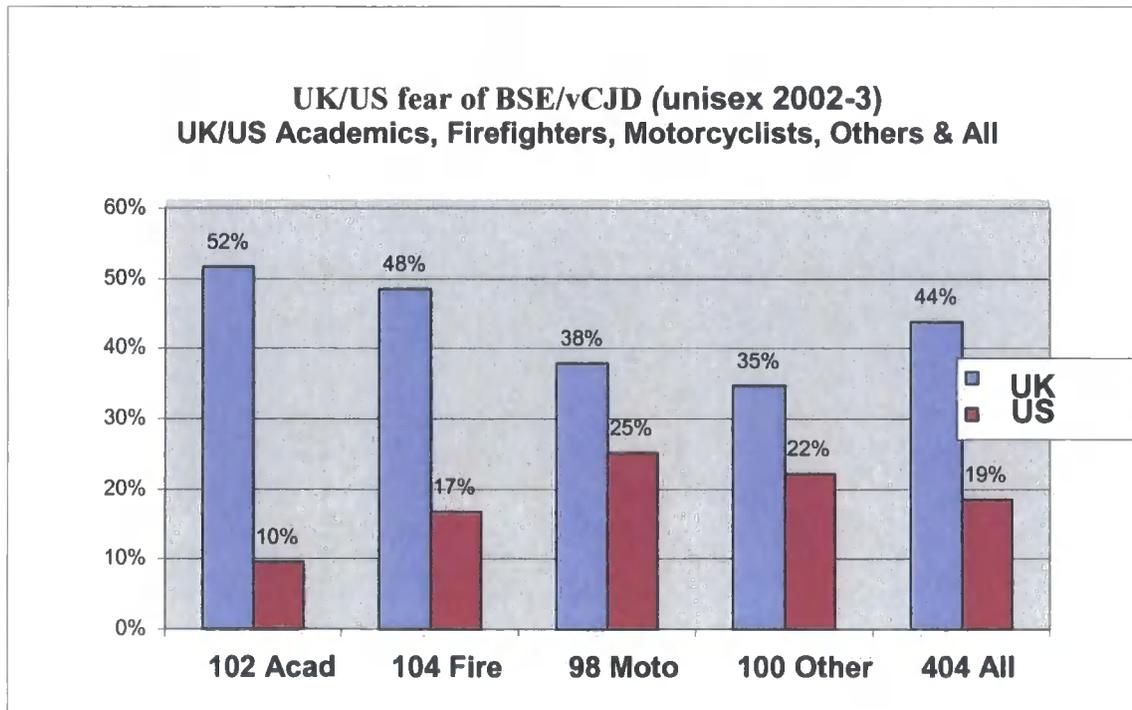


Figure 4.8. UK/US fear of BSE/vCJD (Scholten: 2006b).

In one Seattle academic focus group none listed BSE, although most listed E.coli, heart disease and salmonella as top 5 risks. Generally pro-organic, they shopped in neighbourhood farmers' markets when time permitted. Asked if it made sense to discuss food and risk together, Faron, a vegetarian, commented on the study's comparison groups:

...there's a possible confound, and that is that your motorcyclists and your firefighters are likely to be from a different class, and of a different education level than your academics. And it might not be because they're interested in risk, but because of their education or something that they feel differently about organic food and things like that. [Note: This remark & a few more are repeated in chapter 7.]

Faron hit on an interesting perception of Douglas, who in her 2002 preface to *Purity and Danger* notes that when she published the book in 1962, taboos were generally linked to class, income and status. Douglas' later observation, that political affiliation (*conservative* tending to follow government advice, or *oppositional* to government and big business) is apt to determine attitudes to food risks, remains open to question. Both Newcastle and Seattle tend to vote anti-conservative (i.e. Labour and Democrat, respectively) in national elections, yet fear of BSE seems far higher in Newcastle. In the same Seattle academics focus group Nora claimed academics reflect more on risks:

...the vast majority of consumers go to the grocery store, get their stuff and either don't have an interest, or don't have the time to really think about it.... But when you look at the incidence of obesity in this country, you know, it's pretty clear to me that people aren't really thinking too carefully about what they eat. And academia... it's kind of an elite class, in a way, and people there *do, do think more* about those things. And they usually have more money to deal with it.

Risk and health are not the sole concerns of people considering BSE and organics. Seattle writer Roger Downey (2002) finds organic consumption linked to fine, if not petty, social distinctions which I think are those analysed by Bourdieu (1984). Such social rivalry can be intra-urban, or inter-urban. Klaus, an academic in a Seattle focus group laughed that:

It's a cliché but I guess that we in Seattle think we're way more progressive than other people. Often, you know, Midwesterners are supposed to be kind of backward as far as the environment. I think, you know, probably... there's more interest in this part of the country ...

When the participants were asked if counterpart groups had different attitudes and behaviour to food, risk and the environment, Nora said:

...firefighters have a reputation for being really good eaters... one guy in the company becomes the cook and does all this fancy cooking for people – because they have so much time to do it. So...whether they do organic, or...what? You know, I think they're probably more like academics than we think. And I think I agree that, I mean, there's the Hell's Angel type of motorcyclist, but that's a small

percentage. Their attitudes to food are probably different, but... the rest of motorcyclists are a small section of society, so it's hard to generalize.

Focus groups with UK firefighters revealed the long-term pall of BSE. Newcastle and Durham area fire brigade training officer, Brandon, was succinct in his assessment that BSE had dramatically changed his attitude to food safety: 'The BSE scare *has happened*.' When a focus group of firefighters was asked if it makes sense to discuss food and risk together, Dick, who moonlights as an organic butcher but does not feed it to his family, because he and his wife do not want to risk exposing their children to BSE, said:

Particularly on the lines of mad cow disease and foot and mouth, I think it's come more into the forefront for media attention. And with genetically modified foods, you know, we've heard a lot about companies like Monsanto, you know, global international companies. You know – do we really want to go down that line... or is it just a way of maximising profits of you know, global companies?

Motorcyclists are hard to generalise in this study because they were selected from hobbyists (coming from all socio-economic strata in the UK and US) and from the motorcycling industry (typified by lower middle class incomes). But bikers, like other consumers, are apt to alter diets when children are born. Nick and Kate both pursued motorcycle racing around Seattle till their children were born. Then they abandoned vegetarianism, adding organic meat to lower risk of BSE and hormones while providing protein for the kids' development.

Conventional views of BSE

It is important to revisit conventional modernist and Fordist views when assessing contemporary consumer constructions of dirt and purity. These were articulated by Claas, an 80-something conventional farmer who had donated decades of spare time in work for soil and water conservation groups in the US. Born in the Dust Bowl era of the 1920s, he had witnessed numerous cases of poor stewardship in agriculture, including soil erosion and farm runoff into rivers. But he defended careful use of pesticides and fertilisers in the Green Revolution, judging quibbles on food safety as the carping of urbanites out of touch with the land. He knew BSE was a concern in Europe but that more people die falling downstairs. Claas said longevity data are empirical proof of the safety of the food system:

People complain about food risks, but every year statistics show they live longer than in the past.

A similar position is taken by Edward Morse (2006) at a Midwest law school who minimises the impact of BSE, saying that domestic beef sales have *risen* since 2003 because the USDA:

has required extensive changes in the manner in which beef is processed and its byproducts are used, which are designed to provide further protections against BSE risks. BSE may still occur, but it appears that the marketplace is becoming informed.

For Claas and Morse, BSE is just one of many bio-security risks being mitigated by training, science and technology. Their risk construction of educated acceptance is like that of workers and citizens at the BASF chemical works at Ludwigshafen, Germany, in a study by Peter Phillimore & Patricia Bell (2001). But there are signs that rising longevity noted by Claas is being reversed by unintended consequences of processing in prepared and fast foods. Marion Nestle (2002: 32, 78) cites anthropogenically created transfats, approved by the government, as fostering heart disease and obesity which threaten longevity in rich and developing countries alike. Nestle's view found corroboration by New York City which banned transfats in 2006. In the UK *The Telegraph* (Feb. 1, 2007) reported trans-fats would be phased out of most supermarket own-brand food in weeks. The British Retail Consortium said cutting transfats from 5000 own-brand products would lessen heart disease and obesity. Meanwhile *Hoard's Dairyman* (Hibma 2007: 51) was relieved that:

After decades of being looked down on for their fat content, dairy products are gaining new respect as functional foods' with 'anticarcinogenic and antiatherogenic' [properties].

Regarding BSE, Claas and Morse may be minimising biosecurity lapses by the USDA and FDA. These government entities authorised recycling of bovine blood in feed, long after meat and bone-meal were banned. *Before* BSE appeared in the US in 2003, 88% of my Seattle academic respondents consumed some organic food. After all, there were plenty of food risks in modern food systems to encourage flight to organic food. Readers of Eric Schlosser's (2001) *Fast Food Nation* might think US slaughterhouses were as dire as when muckraking journalist Upton Sinclair's novel *The Jungle* (1906) influenced Pres. Teddy Roosevelt to lead Congress in passing the Meat Inspection Act of 1906. Here we are focusing on BSE/vCJD because encephalopathies constitute such an archetypal food threat with ramifications of uncertain magnitude. The gap between the 88% of Seattle academics who ate organic food and the 78% of their Newcastle counterparts is negligible. But if UK/US consumption rates are similar, the motivations were slightly different. As noted above, less than 10% of Seattle academics listed BSE as a top food risk, compared to 52% in Newcastle. Although the numbers may be too low for statistical significance (24 men and 36 women in Newcastle; 16 men and 26 women in Seattle), it is worth mentioning that not one (0%) male Seattle academic mentioned BSE. Indifference to mad cow in Seattle's ivory tower contrasted with wariness to it in Newcastle. Fear of BSE was not limited to Newcastle

academics or firefighters. Tamara ran a Newcastle moto parts shop after her partner died racing. She said the 1996 BSE scare affected people variably:

I stopped buying red meat...for the children 'cause they're most important. I did stop eating beef for about two months and about a year longer for the children. We made a long-term change away from beef. But I absolutely adore steak... It's like everything else in the world - you minimise your risks but you can't let it change your life. [BSE did not change] many people I knew. Don't know anyone who actually changed, maybe they cut down on beef, not too many. And the vegetarians I know, they were already away from beef.

Assumptions of cleanliness in the US food system run deep. Two bikers who avidly consume organics were asked if they expected BSE/vCJD to hit the US. Nick (see above) raced bikes with his wife until they had children. Now he owns a software business and she teaches art in schools; both are long-time members of PCC. When asked if he thought BSE would hit the US, Nick answered simply, 'Um, no.' Everett, a younger convert to organics and biking said:

No... I wouldn't be surprised... given enough time. [Laughs.] But it's not something I worry about.

Most remarkable *after* the appearance of BSE on the US horizon was a hardening of attitudes among consumers seemingly fed up with food scares. This trend is hard to quantify, but was ethnographically conveyed in comments hinting American exceptionalism, in this case an assumption that scientific safeguards grant immunity from contagion. Edward E. Morse (2006) notes that a few mad cows born in the US have not cut domestic consumption to the extent seen elsewhere, and USDA estimates that beef consumption rose in the US 2003-2006, compared to falls in Australia, the EU, South Korea, and Japan.

Lupton applied to mad cow BBQs

A socially constructed attitude of BSE immunity was palpable in follow-up contacts with US respondents in 2004-5. Flirtation with risk was exemplified by Ernie, a well educated manager at a Seattle motorcycle dealership who 'offered to lead a ride to a barbeque' in the eastern Washington town where BSE arose. Lupton (1999: 171) says:

transgression is a potent source of pleasure as well as fear and anxiety. It is a risky activity because it calls into question accepted conceptual boundaries, threatening self-integrity by allowing the Other into the self.

A look at Figure 4.8. above hints that local academics, firefighters and others would be tempted to ride along to the BBQ. Lupton takes up Douglas' ideas on the social construction

of risk, danger, and dirt describing the ways motor racers, mountain climbers, sky divers, surfers, and disco goers who voluntarily risk casual sex, construct risk differently from outsiders. Lupton observes how a sense of health and liberation can follow confrontations with such dangers, risk and even dirt. Lupton (1999: 164) also notes that in the final chapter of *Purity and Danger*, Douglas comments on the paradoxical nature of our desire for purity and our repudiation of dirt. Extending this argument, John Tulloch & Lupton (2003) describe the transgressive allure of impurity and risk in dangerous activities, and the 'pleasures of voluntary risk-taking' - factors apparent when people celebrated cheap beef at barbeques after BSE was found in the US (HistoryLink Feb. 4, 2004).

Conclusion

Douglas (1966: 196) writes, 'We must, therefore, ask how dirt, which is normally destructive, sometimes becomes creative.' Is a little of what we fancy good for us – even a steak that might contain dirty prions? Or a dirty weekend of discos and sex? There is not space for full analysis here, but the fact that many people - for convenience, social pressure or thrills – occasionally cross the line from purity to dirt suggests an exercise of the will recognising two possibilities: First that we fundamentally believe there is no absolute safety from danger; second, that what does not kill us makes us strong – or at least thrills us! Considering that some BBQs in the BSE scare were sponsored by the beef industry, but more than a few consumers joined in the frivolities (CBC 2006). Provocative as they may seem, such contemporary experiences represent ad hoc rites of communion akin to examples given by Douglas (1966: 11) such as the use of cow dung in Brahmin purification rituals, cults of the Lele which 'allow their initiates to eat what is normally dangerous', and even 'St Francis of Assisi rolling naked in the filth and welcoming his Sister Death'.

This is not to say that contaminated food often has conscious place in many people's diets. Occasional dietary irrationalities vis-à-vis dirt and contamination, such as a few well-publicised BSE barbeques, should not obscure greater truths, such as that most people avoid demonstrable risks, most of the time. At Washington State University Jill McCluskey *et al.* (2007 forthcoming) find that soon after the 2003 BSE outbreak, about 75% of consumers in one Seattle study expressed more willingness-to-pay (WTP) for beef tested for BSE. This study reveals what we might call rational attitudes to food and hygiene. However, when one realises the WSU fieldwork was conducted at the only two venues permitting such research on their premises (Seattle's Pike Place Farmers' Market and a Whole Foods supermarket -

bastions of organic produce) at the height of Washington’s BSE scare, one realises, as the WSU researchers willingly admit, this might not be the whole story. We can imagine that shoppers’ attitudes were different in venues inside and outside Seattle. To people struggling with rent, BSE is a low priority. Pensioners rang talk radio KVI welcoming cheap beef because they doubted BSE/vCJD would harm them in their lifetimes. Some consumers were aware of studies suggesting that 33% of the population is immune to BSE, according to blood type. These variegated consumer knowledges and demographics scrambled their assessments on the risks and uncertainties of BSE. As this chapter shows, we do need to understand the context bound ways in which people respond to polluted matter, *aka* dirt.

<p>B. Nature capricious. Food is fuel, not a lifestyle. Ignore nature, which is uncontrollable. Ignore business, government & experts, who don’t really know risk. Carpe diem: Host BBQs celebrating cheap post-BSE beef.</p>	<p>C. Nature perverse/tolerant. Organic-industrial is best for most people. Trust govt & scientific expert knowledge as best-placed to give us advice on food risks such as BSE. Eat beef when govt says it’s safe.</p>
<p>A. Nature robust. Conventional agribusiness is fine. Business entrepreneurs should be unregulated in managing nature for human progress. <i>BSE crisis? What crisis?</i> BSE is minor. Risk/benefit analysis is privileged.</p>	<p>D. Nature ephemeral. Alternative food networks purify nature. Govt must make business adopt sustainable methods to protect fragile nature from dirty hybrids & mixing meat. BSE dirties nature. Adopt organics, farmers’ markets, traceability. Use precautionary principle.</p>

Figure 4.9. Scholten’s nature & food paradigms in group/grid *after* Douglas (1978) *inter alios*.

Figure 4.9 shows my attempt to pattern paradigms of food & risk worldviews *after* the group/grid theories of Mary Douglas and others. This chapter has given examples of how people treat matters of food hygiene and dirt as part of their personal and social world orders. Subsequent chapters will develop those themes, exploring how sub-groups in Seattle and Newcastle juggle hunger, fear of disease, and aspiration for social distinction while – among all the other aspects of consumption – trying to order their worldviews.

It may be decades before we can quantify BSE/vCJD prion risks in the biosphere, but each additional case discovered sets more consumers against practises enabling proliferation of such anthropogenically-fostered diseases. Rising consumption of organic and local food are counter-trends toward cleanliness and purification via AFNs. That is because increasing numbers of people believe intensive technologies such as GMOs, cloning, routine antibiotics and confined animal feeding operations (CAFOs; see IFOAM 2006) in globalised systems expose them to dirty practices and dirty cows.



Figure 5.1. Chris Curtis of Seattle Neighbourhood Farmers' Market Alliance (left).



Figure 5.2. Academic focus group near Newcastle.

CHAPTER 5: METHODOLOGY IN THIS STUDY

of consumer perception of organic and local food and risk



The path to discovery is not always linear. My research was refined in a *quality circle* in which recurring *evaluations* were made of *methods* (QEM; Groves 2001). This inexact process began with the search for a thesis topic, presentation of methodology and discussion papers to my colleagues, on to pilot studies and fieldwork in Newcastle and Seattle, determination of consumer sub-groups to be studied, returning from the field to data analysis, writing up the text and defending it in the *viva*. Although legendary geographers Burton and Speke became rivals in their race to discover the source of the Nile, my work was, fortunately, marked by cooperation in networks of informants and gatekeepers. Another difference was that, while Burton and Speke sought sights unseen by European eyes, I sought to see Seattle – with which I'd been intimate for decades before 1988 – with new eyes.

Before launching fieldwork in May 2002, my PhD committee agreed a research title: *Consumption of organic products in the risk society: the case study of Seattle.* Apocryphally, a painter finds it easier to begin after knowing the size of the canvas. My thesis title was a medium size canvas on which to paint organic-related activity around Seattle. It denoted consumption, rather than production as the political-economic sphere of interest. But this is jumping ahead. Let us return to a time two years before my topic and title were approved. My narrative will be reflexive, positioning myself in a dialectic between theory and practice, refining practical ways to present myself to subjects and elicit reliable data on questions of food and risk.

My previous decade of freelance journalism was a foundation in research methodologies congruent with most quantitative, qualitative and ethnographic methods in human geography. One example was the epistemological tool that Cook & Crang (1995) call triangulation. For instance, over 1986-87, I researched articles for *The Daily of the University of Washington* on the constitutionality of compulsory drug testing of NCAA athletes at public institutions such as the UW, and of applicants for employment at Boeing.

To get an accurate sense of how Boeing's programme was accepted by staff and line personnel, I interviewed Boeing's press spokesperson, officials of the machinists' union, and several employees. Superimposing comments from all three sides established fundamental issues. Where there was disagreement, triangulation helped explain it, usually relating to actors' positionality in power and income networks at Boeing. Likewise, Joyce LeCompte-Mastenbrook (2004) who used ethnography to understand Dutch farmers' commitment to stewardship in Whatcom County; paraphrases Clifford Geertz as saying that anthropologists interpret the stories people tell themselves – and that was my task too.

Background

Explanation of my search for a thesis topic and title illuminates my adoption of mixed methodologies. Shifting from production to consumption was an important change in focus. My undergraduate work and journalism in Germany and the UK dealt with production, investigating the European Economic Community's (EEC) Single Market, *aka* 1992 Project, and the effects of Common Agricultural Policy (CAP) reform on farm families. This was part of my search for lessons applicable to the economic sustainability of North American family farms challenged by globalisation. My MA work also concentrated on production, in a study of how EEC dairy commodity aid impacted cooperative dairying in India, attempting to determine which macroeconomic policies could benefit *both* donors and recipients. Perhaps loyalty to my Dutch-American immigrant dairying heritage predisposed me to research linked to sustainability of family farming. Yet, the new title emphasising organic *consumption* shifted my gaze from worlds of production (Storper & Salais 1997) and reliance on quantitative methods, toward the amorphous realm of consumption and use of qualitative and ethnographic methods.

Globalisation was my impetus. So rapid has been its pace that Peter Atkins (1987) suggested renaming the hoary subject of agricultural geography as geographies of food. After 1947, much research on manufactured products such as cars was driven by negotiations in the General Agreement on Tariffs and Trade (GATT). But in the decade before the GATT 1994 Uruguay Round Agricultural Agreement (URAA) which established the World Trade Organisation (WTO) in 1995, it was apparent that food would be treated like other goods, i.e. cows treated like cars (Hoekman & Kostecki 1995/6). I shared optimism that the URAA would *tariffy*, i.e. clarify, tariffs, non-tariff barriers (NTBs), sanitary and phytosanitary measures (SPMs), and unfair export subsidies protecting rich country farmers at the expense

of poor country farmers. Optimism was dashed by persistent rich country protectionism, but some progress was evident in the establishment of WTO legal mechanisms to settle disputes (*Economist* 1999; Davey 2005). With or without the WTO, farm trade boomed via satellite communications, containerised transport, and consensus that freer trade (if not laissez-faire neo-liberalism) created wealth. Meanwhile, aspirational consumer demand for foods with qualities signifying social distinction, by representing environmental sustainability or safety from food scares, made organics the most dynamic farm sector in many countries. Yet there was a dearth of information on consumption according to Reynolds (2004).

What Featherstone (1987) calls heroic consumers forsake class-based habits of Fordism for freedom in the consumption sphere. In this subjective world Warde (1997: 15, 20) notes consumers are encouraged to live more than one style. This breaks with a past in which consumers felt confined to styles of distinction according to their social stratum, in the habitus of Bourdieu (1984). In post-Fordism consumers have more freedom to express individualized choices, according to Bauman (1988, 2000). Bauman and Bourdieu can be reconciled in the *Risikogesellschaft* of Beck (1986) who describes modern societies obsessed with safety in a world of environmental risks (Holt & Reed 2006). Exploring consumer attitudes and behaviours in contemporary society required adoption of ethnographic and qualitative methods in addition to quantitative methodologies utilised in my previous work.

My path was altered by frightening new food scares, and a *Chicken-or-egg?* consumer turn to quality and nature. As a born-again free marketer, I was no stranger to quality studies such as Womack *et al.* (1990) and understood that attention to *quality* as defined by consumers was the antidote to industrial failure in automotive and motorcycle manufacture rather than, say, government subsidisation of Chrysler or Triumph. Yet I had not fully determined how public policy should treat agriculture. In mid-1990s discussions of *cars & cows* with a professor in Newcastle, his pol-econ arguments nearly persuaded me cows were like cars - equally undeserving of subsidy. I was au fait with CAP Butter Mountains, Milk Lakes, pollution, budget overruns, and de-skilling of farmers' ability to market production, so his neoclassical economics seemed the best frame for food systems. I agreed cows are like cars *with the proviso that cows be protected by minimum welfare standards*. Since 1989, I had told others globalisation was unstoppable, and the only way family farms could survive integration of food chains was to carve niches based on empirically proven standards of animal welfare and environmental sustainability, perhaps using organics. But an obstacle to organics was the Reagan administration decision to forsake the doctrine of minimal risk

(Scholten 1989, 1990) for risk/benefit analysis in safety regulation, and to champion biotechnology and GMOs – rather than find ways for small farmers to add value.

While I saw neo-classical pol-econ as an Occam's razor neatly slicing policy conundra, I never saw neo-liberalisation, such as the Project for the New American Century by proponents such as Grover Norquist, as a just philosophy to safeguard cows or frame food systems. Since signing of the URAA and establishing the WTO in 1995, there had been too much foot-dragging by rich countries on unfair export subsidies, not to fear that neo-liberalism was the glove around predatory practices that poor countries call neo-imperialism (Stiglitz 2003; Harvey 2005). So why did my research shift from production to consumption? The answer is, primarily, disease. First, as Whatmore (2004) says, BSE is an archetypal, hybrid risk produced by human intervention in bovine diets. Mad cows hastened trends to safer, more natural food (Murdoch & Miele 1999). Fair enough, one may say, but why did I not study farmers instead of consumers? Two answers:

- Academic fashion: ERSC and other research entities were highlighting consumption. Consumption was trendy, and work by others in my research cohort was, synergistically, likely to add important knowledge to findings on AFNs.
- Foot and Mouth Disease: Five years after the UK government admitted a BSE/vCJD link, FMD put a pall on rural UK in early 2001. I was loath to interview farmers saddened by culling of their herds, so I left this research to others (see Bennett *et al.* 2001).

In the interim between acceptance on the PhD programme and selection of a topic, assumptions on study sites changed. Initially, my work was to be in the UK. As FMD spread, my advisors and I began favouring a shift to consumption in the UK, and then to the US. For months we considered a three-way study comparing the UK, US and Germany. This would be fascinating considering the philosophical divide between Germany's Reinheits-Gebot and Anglo-American propensities to industrial foods (Morgan *et al.* 2006). However, I decided a three-site project was too ambitious and chose a Trans-Atlantic study. Although I entertained CASE studentships such as a study in UK national parks, I resisted moving from my food specialism. This appeared counter-productive, since major funding was not secured despite interviews with ONE Northeast, the Countryside Agency, etc. Fortunately, I carried on with small awards and self-funding. This thesis is the logical if not linear result of previous work.

Topic & case study selection

Freedom to select a thesis topic does not make it easy; I consulted with many others before finding a suitable topic. I am grateful to sociologist Lydia Martens (Keele) who invited me to a workshop on Theoretical Approaches to Food Quality at the Centre for Research on Innovation and Competition (CRIC) at University of Manchester/UMIST, January 10-11, 2002, co-organised by Alan Warde. Their work (2000) helped inspire my UK/US Food & Risk Survey, and CRIC introduced me to leading researchers. Another outcome was determination to weave sustainability into thesis questions, after participants said my predisposition to sustainability and dairy were evident in discussion. Pivotal was a chat with Terry Marsden, who kindly heard a précis of my work before suggesting that if I were committed to studying organic consumption, milk and dairy must be included.

Prospects of studying organic milk in England alone were sparse. One topic appeared too late: Acorn Organic Dairy, a family farm near Darlington which began delivering bottled milk to homes about 2003. Eventually, Acorn and other dairies appeared in my conference presentations, and milk is represented in UK/US surveys. The search continued till spring 2002, interspersed by deadlines for methodology and discussion papers. The furore over genetically-modified (GM) crop trials in the UK suggested a survey of farmer's attitudes, but the unavailability of certified GM seed made it moot. Not that GM was forgotten, for it surfaced in surveys, presentations and papers. Indeed, the Durham Geography website listed my topic as 'farmers and GM foods' long after I switched from production to organic consumption; this disconnect between portrayal of my study and its actual state was disconcerting. It seems a small thing, but it should not be underestimated how useful a concise thesis title is. A UK-US comparison began to seem appropriate. This was an outcome of research begun about 1999 in Whatcom County, the family home area north of Seattle on the Canadian border. I studied two families whose economic trajectories bifurcated from the declining conventional milk industry toward conventional and organic crops, and presented this data in 'roads to conversion' (2001) for the Restless Ruralities conference hosted by Moya Kneafsey and Lewis Holloway at Coventry, July 6, 2001. Two things are apparent in the PowerPoint. First, I describe myself studying 'farmers & food networks' - a sign that actor network theory (ANT) interested me in vertical, horizontal and integrated food systems. Second, although I was attached to production, I had an eye for the next big things - alternative farm enterprises, pluriactivity, organics - if they aided family farm survival. This presaged a switch to alternative food networks (AFNs) bringing producers and consumers together. Meanwhile, presentation of US data in Coventry brought

an invitation from a postgraduate student linked to the UK Soil Association to present at the RGS-IBG meeting in Belfast, January 3, 2002. This interest in Washington State increased my willingness to shift PhD study from Northumbria to the Pacific Northwest.

Finally, I proposed a UK-US comparison in my discussion paper and subsequent meeting with my PhD committee on May 2002. By this time I had begun pilot studies, e.g. straw polls on organic or local food preference in Newcastle and Seattle. The PhD committee saw Seattle as a promising *consumption* site, and recommended against a full dual-site comparison with Newcastle because it would be too time-consuming. I acknowledged their guidance and resolved to focus on Seattle, while maintaining and further developing Newcastle as a corpus of benchmark data. I used Newcastle as a metric to study Seattle. This decision was partly because I had already collected much data in Newcastle, in fact 40% more surveys from Newcastle than Seattle (see research plan, Table 5.1).

Another reason to collect data in Newcastle *and* Seattle is that my psychological makeup makes it easier to understand one subject in reference to another. Had I been Margaret Mead, I would have compared Samoa to another island. In other words, similarities and differences of Newcastle and Seattle put them in relief to each other. Statistical comparisons are useful in comparing quantitative data, and the logic of this approach is strong in my consumption study, where face-to-face interviews and focus groups bring qualitative texture to sterile numbers. There is precedent for UK-US comparisons. At the Newcastle University, Helen Jarvis turns ESRC funded international comparative research into books and articles (Jarvis 2001, 2006). Her themes of voluntary simplicity, sufficiency and post-consumerism in dual income households in Edinburgh, London, San Francisco, Seattle and Portland link to environmental sustainability, diet and lifestyles in my thesis.

Site selection

The study here of consumer reflections on organic and local food explores Seattle's role as an organic growth pole in the same league as northern California and the San Francisco Bay Area (Buck *et al.* 1997) The tally of Seattle city and surrounding King County farmers' markets grew from one or two handfuls in 2000 to a dozen in 2005, specializing in farm-to-table short food supply chains that unite urban shoppers with country farmers. Statewide, Washington farmers' markets grew from 50 to 100 in the same period. This Seattle focus benefits from data collected around Newcastle with a slightly cooler climate. Newcastle,

once a hotbed of the industrial revolution, is transitioning to a service and information economy. Like Seattle, where Microsoft co-founder Paul Allen promotes biotech parks, Newcastle boasts a Life Sciences centre. Seattle is larger than Newcastle, but upper, middle and increasingly lower classes of both cities are served by stores offering organic produce. Please see Maps 5.1 and 5.2 at chapter end.

It is not claimed that Newcastle and Seattle are identical in demographics but similarities abound. Morgan *et al.* (2006) point out that the UK and US have the same 'processed food cultures' which is supported by Newcastle firefighters who say: 'you don't have to walk or drive as far for fast food as you did 10 years ago'. Both Newcastle and Seattle are ports. Seattle's legacy as a coal-extraction, lumber, shipbuilding and steel town was superseded by Boeing's manufacturing of civilian and military aircraft (Berner 1999). Newcastle has not found a champion like Boeing to replace coal, ships and steel, but it is remarkable how its history resonates with Seattle's. Just as Newcastle manufacturers Rolls Royce (marine) and Siemens (IT) have dropped output, in Seattle Boeing production has been cut and the firm moved headquarters to Chicago. Both cities host major universities and planners hope to grow tourism, culture, etc. Despite these aspirations, both cities lie off major national, cultural and sporting circuits. In addition, both enjoy proliferating AFNs. In important respects they are eminently comparable. Both cities have many supporters of Fairtrade, Greenpeace, etc. Uncertainty besets shoppers who are unsure of definitions of organic food, and unfamiliar with certifying bodies such as the UK Soil Association, and the US Department of Agriculture. In interviews, some UK firefighters mistook the red tractor food logo of the National Farmers Union for organic certification. These observations underscore commonalities of shoppers in Newcastle and Seattle, and the mission of researchers to understand what consumers seek, and the meanings behind their demands.

In the conclusion of *Sociological Perspectives of Organic Agriculture*, editors Georgina Holt & Matt Reed (2006: 288) explain how the mixed-methods of my UK/US motorcyclist survey of organic/local food preferences fit into their book:

Multi-methodologies are employed to bridge the epistemological gap between qualitative and quantitative data, for example by Holt, Sirieix and Scholten who blend market research with interpretation to deconstruct purchase behaviours and group rationales.

Holt & Reed (2006: 301) cite Terry Marsden and Jonathan Murdoch who demonstrated that, while globalisation drives food systems, local cultural embeddedness impacts consumption:

One of the most important contributions of the Cardiff team has been an emphasis on space and the contingent activities carried out around the narrower space of food production and consumption. In this volume, Bruce Scholten picks up on the spatial approach by applying geodemographic criteria to purchase behaviour. Scholten's study broadens our perspective of organic food consumers by examining the farmers' marketplace within a geographically located culture, in the same way that agricultural policy has been forced to address the role of agricultural practices, and the rural community, within the landscape in which they are played out. In this way Scholten demonstrates the role of food within the concept of life quality. Life quality and behaviours are the subject also of Melissa Schafer who, along with other authors shows that research on organic food is moving beyond the product or even production methods to the role of food in the lives of consumers, or members of a population.

For these reasons Schafer and I convened a session in the urban geography specialties group (UGSG) at the April 2007 meeting of the American Association of Geographers in San Francisco titled comparing organic urban places (COUP). Planning was advised by Ray Jussaume at Washington State University (WSU), Lucy Jarosz at University of Washington (UW, Seattle), and Julie Guthman at UC Santa Cruz. Our international approach also got support from the AAG rural geography specialty group (RGSG), UK rural geography research group (RGRG), and Durham centre for study of cities and regions (CSCR). The COUP session compared organic consumption in Brazil, China, Egypt, France, Germany, UK, and US. The consensus of COUP presenters was that it can be misleading to ask that cities be *alike* in international comparative research. It is better to ask: 'Why do cities which may be unlike, or alike, have such similar alternative food networks?' The answer is they have actors sharing a global imaginary community based on sustainable values that they hope to further via AFNs (Guthman pers. com. 2006; Scholten 2006a).

Familiarity with BSE/vCJD made Newcastle an appropriate comparator in my Seattle study and use of Beck's (1986; 1992) concern with anthropogenic risks. By the 2004, when conversations with Matt Reed helped me strengthen the rationale for benchmarking my Seattle study with data from Newcastle, site selection was irretrievably set because the fieldwork was completed in 2003. Further, my intimate knowledge of both cities and their respective farming and food networks convinced me that a comparison had merit. Still, site selection continued to provide grist for thought. In a personal conversation at AAG Chicago 2006, I (BAS) discussed site selection with a California researcher (CR):

CR: The international comparative method is tricky...

BAS: I've sometimes felt vulnerable comparing Seattle, my hometown and research focus with Newcastle. Maybe it's comparing apples and oranges.

CR: Yes, some say in comparative research you have to find two very similar cities, so then any differences will be squeezed out. But maybe you can stand that on its head... You can ask how such different places have such similar alternative food networks.

BAS: The answer is because they have similar actors, values & goals in an imagined global community.

Site selection can be argued two ways. A study of very similar cities may squeeze out essential differences. However, by comparing only cities of similar scale, important aspects of scale differences might be missed. In other words, there are cases for comparing apples to oranges as well as apples to apples.

Quantitative methods

In fieldwork the prime quantitative instruments were questionnaires I constructed and dubbed the North East Food & Risk Survey (NEFRS-UK) and Seattle Food & Risk Survey (SFRS-US). Introduced in the pilot stage in the year 2002 as 50-question two-sided forms in A4 (UK) or 8-1/2'x11' (US) letter size formats (US), these trans-Atlantic questionnaires were quickly but carefully developed to 60 questions in a recognisably similar format that was designed to be uploaded quickly into Excel databases. It was found in 2002-3 fieldwork in Newcastle and Seattle that few vocabulary differences were needed to make them comprehensible. It may help the reader to refer to Figures 1a, 1b and 2a, 2b below. Note: Dimensions are slightly changed due to margin differences.

Over 1000 questionnaires were distributed and about 450 returned before 404 were selected for analysis (Rejections were usually because the subject lived outside the study areas.). Completion rates were higher when facilitated by a gatekeeper in snowball distribution, detailed below. Response rate dove when, after a brief telephone contact I left cover letters and 20-30 questionnaires in envelopes at administrative offices of Calvinist, Catholic and Methodist churches without benefit of a welcoming facilitator. About 150 surveys distributed this way returned just a few responses – an indication that churches were preoccupied with other social and spiritual projects. I quickly decided that ministers could not substitute for academics, and resolved to increase personal time spent with gatekeepers, realising they must be fully supportive, if they were to recruit others for surveys and focus groups.

Although a suite of methods was adopted, I wanted as many quantifiable surveys returned as possible. My initial plan called for two dozen surveys in three target main groups, totalling

72 in the UK/US. Happily, the final tally is six-times that. Andrew Sayer (1992: 245) notes:

The rationale behind large-scale, formal standardized questionnaires and interview surveys in extensive research is that by asking each respondent the same questions under controlled (quasi-experimental) conditions, comparisons are possible and 'observer-induced' bias is at a minimum.

Quantitative surveys derived from positivist methodologies are often deemed the most reliable instruments for gathering data in social science. But for reasons of cost, time and the atomistic nature of data sought (in the individualistic realm of consumer agency), surveys alone were epistemologically inadequate without triangulation with the qualitative methods elaborated below. A postal survey was considered, but while the costs of postage and time committed to administration were tolerable, it seemed such an impersonal method was unlikely to attract survey respondents to later focus groups. Fortunately, pilot studies showed how effective snowball sampling is for accessing and recruiting individuals.

As Reynolds (2004) observes, a start has been made in identifying global organic production trends, but little is known about consumption. Furthermore, consumers are notoriously unpredictable actors, following a personal logic illogical to others. My study was sparked by the behaviours of two people who represent a consumption/risk binary. The first was a leading academic who, despite the fact that a parent died of lung cancer, continues to smoke and resist exercise. The second was a successful motorcycle racer and professional insurance broker who, despite the fact that he routinely rode at 180kph/290mph with just 3mm of leather and helmet protecting himself from tarmac, eschewed cigarettes and took regular exercise. These dissimilar people inspired me to seek and compare sub-populations of academics, firefighters, motorcyclists with others in order to understand their attitudes and behaviour vis-à-vis organic, local and other food qualities. Before we detail how individuals and groups were accessed, let us discuss the project's original questions.

Research questions

As research questions are intrinsic to any long-term academic study, some repetition from chapter 1 is found here. Early on my thesis asked what can be revealed about how consumers treat risk, in their prioritisations on quality, safety, sustainability and trust in food choices? In the example above, a world-class academic manifests cognitive dissonance by excessive smoking, while spurning British bovine milk for fear of BSE/vCJD. This, despite a parent's death, statistically related to smoking, and lack of a scientifically proven link between drinking bovine milk and vCJD.

Conversely, world-class motorcycle racers compete at triple-digit speeds on racetracks, but sometimes spurn everyday commuting on motorways and city-streets for fear of unpredictable drivers, dogs, pedestrians and oil patches. Champion racers and fans often reject tobacco and consciously seek healthy foods to optimise competitiveness. The permutations of this pattern are many: substitute barrister, firefighter, salesperson or other activity (for academic or motorcyclist) and variations ensue. Likewise, fatty *pâté de foie gras* may be valued by some consumers and eschewed by others. It was my task to develop questions on food behaviours to evoke answers on these themes:

- How significant are age, class, gender, income, life course, ethnicity in consumption?
- How much do media, friends, and government advice inform decisions?
- How universal are consumption attitudes and behaviours among people of similar class, profession and status across national lines? What about cognitive dissonance?
- Why do UK/US choices on *corporeality* (Bell & Valentine 1997), human health, animal welfare or environment seem to vary? Do such *dispositions* cross class lines?
- Are firms clever to switch organic marketing from *true naturals* fixed on socio-environmental externalities (25% of US market; see Pollan 2001; Hartman 1997) to a larger group of *health seekers* willing to eat organic TV dinners to stay slim?
- How similar are British and American organic consumer profiles similar?
- As Alan Warde (1997) notes 4 antinomies of choice (1. Novelty & Tradition; 2. Health & Indulgence; 3. Economy & Extravagance; 4. Convenience & Care), how explanatory is my hypothesis of *merit-badging*, a consumption strategy in which time-and-income-constrained consumers buy a market basket best satisfying a set of the highest priority needs of themselves and/or their families?
- Might there exist *bundles of consumer risk-compartmentalisations systematically linked to their class, profession, social networks or imaginary food geography*?
- To what extent do consumer choices differ in geographically disparate localities, say, comparing Jesmond to Wallsend; Newcastle to Seattle; or Durham to Edmonds?
- How much do risk-compartmentalisations rise with professional or sporting success?

Cognitive dissonance in attitudes & behaviour

Some of these questions proved too ambitious for time and funding constraints. For instance, my literature review and fieldwork uncovered some conceptual and empirical evidence, of anthropological or sociological nature, supporting my conception of ‘merit-badging’ partly inspired by Warde & Martens (2000). But this theme was largely put aside as project focus narrowed onto risk perceptions and preference for organic or local food, inferred from empirical data on recent meals as well as statements. Questions as #59 and #60 were critical in identifying the gap between attitudes and everyday behaviour. Not only had cognitive dissonance, i.e. an academic who feared milk more than tobacco, sparked my research, but pilot studies showed it runs both ways.

For instance, it was not unusual for an academic claiming to garden organically to eventually reveal use of weed killer on crab grass. A motorcyclist claiming to eat ‘no tree-hugging organic crap’ (in a comic spate of performativity for employees filling out surveys in a motorhome at the racetrack) later revealed in quiet group chat that their family shopped at a certain supermarket, so some organic food was inevitably consumed. That the same motorcycle racer can speak more pro-organically when asked about baby food is an unsurprising example of being torn between identifications. Trevor Barnes (2000 *TDoHG*: 724) might suggest that as a parent s/he may use *rational choice* theory to optimise infant health – but *bounded rationality* as a plucky boss to evoke employee productivity.

With luck and perspiration, I hoped to test the validity of stereotypes of sub-populations in the UK and US, and to demonstrate that my conclusions on organic/local consumption were related to forces in a political-economy framework – a conclusion largely supported in the following chapters.

Gatekeepers & recruitment

Questionnaires and one-to-one mini-interviews at farmers’ markets, farm shops, etc. were planned to gain a holistic overview of the alternative food economy. The renaissance of AFNs in the UK and the US over the last decade means that information on participants, times and venues for such activities is easily obtainable, often from newspapers.

Newcastle: Background as a freelance journalist with actors in food networks lent access to gatekeepers in or linked to the National Farmers Union (Robin Cradock); Soil Association (James Cleeton, Mick Marston); Trading Standards (Duncan Castling); organic meat chains

(organised by Lucy Smout, Peter Raines); a box scheme (Edward Richardson, Georgina and Gerard Salvin); Out-of-this-World supermarket (Jon Thorne), etc., guided me in northeast England. Restaurateur Bill Oldfield has been a source since 1997 on sourcing from local farms for restaurants in Barnard Castle, Darlington (both since closed), Durham and Jesmond, as well as chefs and staff in cooking demonstrations. Academic resources include Houghall College Farm (whose manager Edward Richardson introduced an organic pig unit, and acted as secretary for Northumbria Organic producers from their launch in October 2000, before leaving to run a box scheme); Centre for Rural Economy (CRE) at Newcastle University (Philip Lowe, Elizabeth Oughton, and Angela Tregear who moved to Edinburgh in 2005), and Nafferton Organic Farm (Philip Cain, Eileen Curry, Nicola Thompson, Neil Ward *et al.*). Individuals such as Cain and Cradock I met at Great North Meets organised by Alan Spedding of the Royal Agricultural Society at Gosforth, Scotch Corner and Bedale, 1993-2004 – opportunities to interview and photograph NFU officers such as Sir David Naish and Ben Gill; academics Philip Cain, David R. Harvey and Martin Whitby; writer Matt Ridley who in 1993 proposed an alliance between farmers and Greens; Michael Meacher, UK environment minister 1997-June 2003; Sir Donald Curry; Conservative politician William Hague; and environmentalist David Bellamy.

As an example of how networks are initiated and sustained, I met Richardson when researching an article on rabies *Farm Journal* (Scholten 1992). In the PhD project, I was a participant-observer in the Durham Local Food Celebration (DLFC) group that won a County Council environment award for Local Food Days, October 8-9, 2005 on Millennium Place, Durham City. This helped inspire the box scheme co-organised by Richardson, with whom I occasionally rode ‘shotgun’ on deliveries from an ancient estate to households and restaurants (e.g. Oldfield’s) around Durham. Also important were contacts with an owner, and subsequently staffers, of Rachel’s Organic Yogurt made at the Colloquium of Organic Researchers convened by Nic Lampkin and Susanne Padel at University of Aberystwyth, March 23-25, 2002 (Scholten 2002).

Seattle: Counterpart organisations in the Pacific Northwest aided fieldwork, including Seattle’s Neighborhood Farmers Market Association (SNFMA, Chris Curtis, Karen Kinney); Sno-Valley Tilth and chapters of Washington Tilth (Michael Blakely/Joe Adams); PCC Natural Markets (Goldie Caughlan); Carnation Farmers’ Market (Kate/Bill Halstead); and a network in Whatcom County including the State Red Raspberry Commission (Henry Bierlink); Conservation District (Bastian Scholten); Nooksack Valley Centre for Sustainable

Agriculture (Nancy Vandehey); Whatcom Fresh, Whatcom County Ag Preservation Committee, and Farm Friends. Leading actors included Vandehey, Joy Monjure, Kim Vias, Cheryl DeHaan, Mary Dumas, and Farm Map designer Rowan Moore (1999-2006).

Important in the US were contacts with Horizon Organic Dairy (MNC Dean Foods), Cascadian Organic Farms/Small Planet (MNC General Mills), and Organic Valley/CROPP dairy cooperative. At the National Dairy Leaders Conference (NDLC) in Sun Valley, Idaho, September 9-11, 2001, I gave a plenary on BSE and FMD for the biosecurity session which acquainted me with experts on risk. These included the attorney who became a 'very rich man' after winning a judgement against Jack in the Box restaurants whose E.coli-tainted burgers inflicted neural damage on a teenage girl (once I patronised the *same* outlets in Edmonds and Seattle). Another was Darigold officer Doug Marshall, whom I'd known since MA work on India (Scholten 1997). The NDLC speaker closest to this thesis was Chuck Marcy, president of Horizon, who sidestepped ideology in replies to accusations by conventional producers, that his organic company weakened them with implications of inferiority, by echoing USDA Secretary Veneman saying organics had room for actors on many scales and that, 'Horizon is all about consumer choice.' I interviewed Marcy about the portrayal of Horizon as part of the 'organic industrial complex' in the *NYT* article by Michael Pollan (2001). Marcy acknowledged the attack: 'but we got off easy compared to Gene Kahn and Cascadian Farm!' (pers. comms. Sept. 10-11, 2001; Scholten 2003).

It is remarkable how effectively such gatekeepers interact in networks and with observers such as myself. Deleuze & Guattari's (1988) metaphor of rhizomes, rather than patrilineal lineage, as network models applies to my networks, particularly in the frequency that new contacts have already encountered my other contacts. For instance, when Smout was between entrepreneurial projects, she edited the newsletter of the NOP - which nearly was my thesis topic. Nor was Seattle foreign to rhizomes; actors such as Kate Halstead (2005) appear in different roles, e.g. advisor to farmers' markets, facilitator at tilth meetings, writer on the raw milk movement. Many AFN actors believe that exchanging knowledge with like-minded people is mutually beneficial. This helps explain how Green communities withstand setbacks in sustainable food networks smaller but comparable to those around Parma in the Third Italy renowned for flexible specialisation (Amin 1994) Typically, such actors know many others in regional networks. Once trust was established, gatekeepers kindly distributed my questionnaires in a snowball. The strong roles played in AFNs by part-time journalists, skilled with non-human objects such as email, scanners and IT, support claims that actor

network theory (Hudson 2001; Murdoch 1997) correctly emphasises electronics in the expansion of current networks. Like ANT developers Michel Callon, Bruno Latour and John Law, I agree ANT is more tool than theory (Law 2004 pers. com.). Latour (1997) writes:

ANT is a theory of action no more than cartography is a theory on the shape of coastlines...

While email seems a perfect example of ANT's non-human actants – I question its essential difference from telephones or carrier pigeons. Yet, ANT gives us insights on Green relationships which Conventions Theory might have missed, e.g. that particular technologies *structure* networks: one cannot email another without the relevant technology. Such technical disparities can reinforce income inequality, a concern of human geographers. Thus, ANT reminds us to pay attention to technology, along with vibrant human actors in AFNs.

Questionnaire pilots & response

Food & Risk Surveys for Newcastle and Seattle are in Figures 1a, 1b and 2a, 2b below. When constructing these questionnaires I recalled admonitions to word questions carefully by Dixon & Leach (1978a), but quickly learned it is impossible to word questions that are perfectly understood by everyone. Pilot questionnaires were distributed mainly to academics, i.e. undergraduates to professors, school teachers and other educators. On page 1 of the survey respondents were encouraged to '*Write ? over anything unfamiliar – or comments in margin!*' Page 2 asked, 'How can this survey be improved?' Comments revealed a few ambiguities that were corrected as much as possible.

Several respondents queried what was meant by *quality* in part 13: *Do you ever buy quality, local or organic food...?* This was expected, and I was glad to infer that people reflect on the subjective term quality, overused in advertising. I decided it was unfeasible to explain academic discourses on quality (Murdoch *et al.* 2000) in the confines of the questionnaire, so I retained original wording, partly to provoke comments. Some comments were startling. A woman protested that part 1 asking to select from titles *Mr*, *Mrs* and *Ms*, did not include *Miss*. This was unexpected because she is as a professional woman from what in the US is called a liberal family, and whose baby boom cohort lobbied for official adoption of the title *Ms*. Another academic complained that no check box was marked *Dr*, but her discomfit may have been attenuated in part 7 *Education* with a box marked *PhD*.

Avoiding test bias

A lecturer in education at a new university in northeast England suggested prefacing the questionnaire with a mission statement explaining the survey's objectives. I finally rejected the tip fearing that, not only would it sacrifice space, but it could skew answers toward, or against, what respondents perceived as the tester's bias, in a variation of Hawthorne effect (Draper 2006). Further, I considered the title, Food & Risk Survey, self-explanatory – certainly after reading a few questions. In retrospect, it appears few were irritated by lack of an introduction. More important, several of respondents later asked my opinions on, for example, conventional, organic and GM foods. This suggested they were sufficiently hidden.

Risks in the food system?

A few academics – and respondents among firefighters, motorcyclists and others – scribbled remarks near part 27 *Please number top 3 to 5 risks in the [UK/US] food system.* Camilla (pseudonym) wrote, 'Number 27 - Risks listed not directly related to the food system.' This was a serious objection worth serious consideration. It emerged that neither Camilla nor other objectors were privy to contemporary food discourses. More to the point, Camilla was correct that West Nile Virus (inserted as a red herring to screen respondents who consider everything a risk) has little relation to food systems, unless we blame global warming on carbon loading of the atmosphere by agriculture for the spread of WNV. However, if Camilla meant that risks such as anorexia, asthma, bulimia, BSE, CJD, obesity are not related to modern food systems, critics such as Fine *et al.* (1996), Lang & Heasman (2004), Nestle (2002), Whatmore (2002) and others might well disagree saying that governance of food systems by governments and regulatory bodies structures the production, processing, distribution and marketing of food - which affects consumer agency in shopping decisions. In this case Camilla listed salmonella as the only risk in the UK food system, ignoring BSE.

Closed or open questions

A couple respondents suggested open-ended questions. They may have been unaware that focus groups were planned which, although prompted by a formal question schedule, would unleash conversation in any direction groups wished. It may be that the suggestion was based on worry that the Food & Risk Surveys were rigged to deliver preordained results – this would understandably be resented by respondents. I had already increased scope for expression by using a Likert scale (i.e. AGREE ①②③④⑤ DISAGREE) for judgements on statements or questions 29-58 to allow shades of meaning. The forms told respondents: 'If

you have no opinion, just leave it blank.’ When they marked a middling 3 on the 1-5 Likert scale, it was taken to mean they lacked sufficient evidence for a concrete opinion on the statement or knew of reasons for and against it.

As aforementioned, respondents were invited to write margin comments, and thousands of their words were recorded in Excel, a very time consuming process. Pseudonymous extracts and quotes have already appeared in academic publications. As a gesture of transparency and invitation to dialogue, I posted my Durham University-based website on both sides of the questionnaire. A few informants contacted me through the website, and knowledge that they could do so seemed to increase trust that they were participating in a useful project.

Media questions

Writers such as Danny Miller have vaunted the role of media in food systems, which is one reason I included parts *21 Music faves?*, *22 Radio heard?*, *23 TV?*, *24 Magazines seen?*, *25 Newspapers seen?*, and *26 Hosts?* One need not be a lawyer to perceive ambiguities in these questions. Many periodicals are ‘seen’ in shops without being read or even flipped through. However, my tactic was to leave questions 21-26 worded as such. This seems to have served at least three purposes: (1) It helped build a mental construct of respondents as media consumers (as a freelance journalist and news junkie, this assisted me greatly); (2) It built a corpus of media-related data which might be analysed if needed; (3) Crucially, questions 22-26 were relatively *easy* questions which could be answered quickly and allow respondents to exercise personal knowledge and agency between other difficult questions on food systems which many later said they had never considered before. Thus questions 22-26 on media acted as distracter questions, allowing respondents’ short- or intermediate-term memories to forget decisions made before on food and risk (This tactic is similar to mathematics problems posed between linguistics grammaticality judgements, which clear respondents’ minds between tasks – somewhat like rinsing the mouth with water between wine tastings.)

Redundant & distracter questions

Distracters such as the media questions were important because I reasoned that respondents would give more honest answers to core questions, given a chance to relax during the long, 60-question schedule. Letting up the pressure would, I thought, allow insertion of redundant questions to test consistency of opinions. Coincidentally, Prof. John Agnew (UCLA) visited

Durham during my spring 2002 pilot studies and agreed to critique my Food & Risk Surveys. Agnew spontaneously detected the redundancies, commenting favourably that side 1 and side 2 'ask questions in different ways' (pers. com.). He also detailed his impressions of the very different organic markets in Los Angeles (health-oriented) and San Francisco (eco-oriented). Others who offered advice on my questionnaire design included my supervisor Peter J. Atkins, and sociologists Sue Scott and Lydia Martens (all three then at Durham), and Martens' co-author Alan Warde (Manchester/U-Mist) whose book *Eating Out* (2000) suggested the last two questions:

Q59 What did you and/or your family/household dine on yesterday?

Q60 What did you serve last time you invited guests to a home meal?

Coding GM, Bt, Org, Loc & Risk: Camilla's case

There were five principal themes on which a respondent's food & risk profile was based: GMOs, Biotechnology, Organics, Localness, and Risk. I scored each of the 404 final respondents on a Likert scale for each theme. While there is arguably as much art as science in this qualitative evaluative aspect of the surveys, profiles developed in this way generally withstood later direct questioning on topics including preference for organic or local food. Camilla's score was: GM2: Bt3, Org1, Loc2, R2, and can be interpreted by relationships among her Northeast Food & Risk Survey's (NEFRS) answers.

- **GM2: indicates she is optimistic about GMOs but not an unequivocal fan.**

Camilla's mark of 2 on the Likert scale of 5 possible ratings for *Question/statement 53* (hence *Q53/2*) on whether GM food is needed to feed the world, was compared to doubts about the use put to UK science *Q33/2*, and also to uncertainty that biotech is reducing risk in food systems *Q49/3*. This generated a calculation that her attitude of support for genetically modified organisms is restrained by uncertainties, making her score GM2.

- **Bt3: hints ambivalent attitudes to biotechnology based on current knowledge.**

Fieldwork in Newcastle and Seattle in 2002 suggested many consumers vaguely define GMOs as a subset of biotechnology, but that this could differ culturally and socially in the UK and US. So in December of that year I decided to monitor the separate themes of GM and Bt. In Camilla's case her ambivalence to biotechnology *Q49/3*, compared to reservations on science *Q33/2*, and to doubts that conventional food is as healthy as organic *Q44/4*, led to a judgement that she was of two minds about biotechnology Bt3.

- **Org1: reflects positive attitudes and/or behaviour re organic.**

Camilla's confirmation that she eats organic food from supermarkets and farmers' markets Q13, and that organics represented up to one-third of the cost of her weekly diet Q17 in which she listed her favourite organic foods as bread, dairy, eggs, meat and vegetables. This poised her to receive a top score for attitudes and behaviour regarding organics of Org1, despite her uncertainty whether most families can afford organic food Q35/3. In the end I inferred that Camilla's disagreement that conventional food is as healthy as organic food Q44/4, in spite of her ambivalence on whether organics are better than conventional farming for the environment' Q54/3, placed her in the top echelon of pro-organicists Org1. Further supporting her Org1 status were revelations in *Q59 What did you and/or your family/household dine on yesterday?* that they consumed organic meat along with vegetables and rice that might have been conventional. Answers to *Q 60 What did you serve last time you invited guests to a home meal?* also demonstrated her pro-organic behavior with organic meat comprising about 30% organic content of a meal that also included pasta which could have been conventional. Later conversation with Camilla suggested she was representative of consumers who prioritise organic dairy and meat products to avoid artificial hormones such as rBGH/rBST and steroids. Note: If it were still difficult to determine a respondent's organic score after referencing Q13, 17, 35, 44, 54, 59 and 60, then I would refer to Q33 on the use put to science, Q49 on whether Bt is reducing risk in food systems, and Q53 on whether GM is needed to feed the world – the reason for this being that mistrust of science, biotechnology and GMOs frequently connotes (if not denotes) a propensity to support traditionally reliable and safe organic food systems.

- **Loc2: hints she is slightly less keen on food labelled local than organic.**

Early on in my pilots I noticed strong underlying local preference by consumers in Seattle and even more so in Newcastle, so I began trying to determine consumers' preference for *either* local *or* organic foods. Chapters below detail how difficult that preference is to reveal! Here, Camilla's Loc2 score is based mostly on *Q55/2: Government should encourage local food*. Though this question is ambiguous (i.e. consumers who favour local food could consider Government support another question), a positive (Q55/1 or 2) score connotes pro-Local attitudes and probably support for government to promote pro-Local regulation and governance as well. Camilla did not mark local in Q13, but her consumption of foods from farmers' markets, CSA and farm shops shows strong local support. If Q14 had indicated that

Figure 5.3a&b.

NORTHEAST UK 2002-3 FOOD & RISK SURVEYEmail: B.A.Scholten@durham.ac.uk bruce.scholten@bopenworld.com

Post to: Bruce Scholten c/o Durham University

Geography Dept, Sci. Labs, Durham DH1 3LE

*Please help our research. Skip parts you wish. Names & privacy will be protected!*

- (1) **NAME** Mr Mrs Ms _____ . (2) **DATE** / /200 .
- (3) **RACE / ETHNICITY** (optional) Asian Black White Other _____ .
- (4) **AGE** (5) **I often support** Conserv Labour Lib-Dem Green Other _____ .
- (6) **EMPLOYMENT** Academia/Education Clergy Dance/Entertainment Firefighting
 Motorcycle Industry/Sport Student/Other _____ *Job description* _____ .
- (7) **EDUCATION** GCSE A levels BA BSc GNVQ MA MSc PhD Certif
 Diplom Training _____ .
- (8) **ADDRESS** _____ *How'd you get this Survey?*
- (9) **EMAIL** _____ **PHONE** _____

*Please check ✓ - circle O - number (1-2-3...) - or write in blanks.**Write ? over anything unfamiliar - or comments in margin!*

- (11) Number of people in your household _____? (12) Children _____?
- (13) Do you ever eat quality local or organic food from Supermarkets? ASDA Iceland
 Safeway Sainsbury Tesco Other _____ Other _____?
 Or Farmers Markets? Barnard Castle Darlington Durham Hexham Newcastle Other _____?
Are you more attracted to food labelled Local or Organic ?
- (14) Or from Box Schemes Community Supported Agriculture Farm Shops?
- (15) Have you regularly done *risky* activities? hang-gliding motorcycling rock-climbing scuba-diving
 ski-racing sky-diving snow-boarding other _____? Yes No
Type of motorcycles or equipment, etc.:
- (16) If you were younger *and/or* not responsible for children or dependants
and/or had proper training & equipment, would you try such activities? Yes No
- (17) Do you eat organic food? Yes No Weekly Daily
 up to 1/3 cost of diet up to 2/3 cost of diet over 2/3 cost of diet
 up to 1/3 calories up to 2/3 calories over 2/3 calories
- Please number (1-2-3...) favourite organic foods:
 Bread Dairy Eggs Fruit/Juice Meat Vegetables Other _____
- (18) Do you consume low-fat food & diet drinks? Yes No *Do you smoke?* Yes No
- (19) Are you vegetarian? Yes No *Comments/Details:*
- (20) Are you vegan? Yes No
- (21) Music faves (1-2-3...) Classical Country Dance/Electronica Folk Jazz Latin Hip-Hop/Rap
 International New Age Rock/Pop Other _____
- (22) Radio heard weekly? BBC Radio 1 Radio 2 Radio 3 Radio 4 5 Live Radio 6 Local BBC
 Clevel/Newcl/ _____ Century Galaxy Metro Virgin Other _____
- (23) TV weekly? BBC-1 BBC-2 ITV Chan 4 Chan 5 Eurosport SKY Other _____
- (24) Magazines seen? Economist Good Housekeeping Granta Living Earth MCN Nature New Scientist
 New Society Newsweek New Yorker Organic Gardening Spectator Time Vanity Fair
 Which Others _____? *Comments/Details:*

(25) Newspapers seen weekly? Advertiser Ev.Chronicle Daily Star Echo FT Journal

LeMonde Guardian Indep't Int'l Her. Trib. Mirror Sun Telegraph Times

Other _____

(26) Hosts? George Alagiah Melvyn Bragg Derek Cooper Jonathan Dimbleby Sheila Dillon Fred. Forsyth Andrew Marr Trevor McDonald Jenny Murray James Naughtie Jeremy Paxman Will Self Jerry Springer Rich Littlejohn Dan Rather Jeremy Vine Kirsty Wark Jo Whaley

Comments/Details/Others _____

(27) Please number (1-2-3...) Top 5 risks in UK food system:

anorexia asthma BSE (Bovine Spongiform Encephalopathy) bulimia CWD

(Chronic Wasting Disease) campylobacter CJD (Creutzfeldt-Jakob Disease) E. coli 0157 FMD

(Foot & Mouth) gluten intolerance heart disease listeria lactose intolerance obesity

plague salmonella staphylococcus West Nile Virus Other _____

Comments/Details: _____

(28) Please number (1-2-3...) your most important sources of food information:

Church Food Coops Family/Friends Print Radio TV Stores Web Other _____

YOUR OPINIONS: Please ✓ (If no opinion, leave blank.)

- | | |
|---|----------------------|
| (29) Food is safer than 30 years ago. | AGREE ①②③④⑤ DISAGREE |
| (30) Most people are healthier than 30 years ago. | AGREE ①②③④⑤ DISAGREE |
| (31) Risky activities are important to me. | AGREE ①②③④⑤ DISAGREE |
| (32) Humans are a main cause of Global Warming. | AGREE ①②③④⑤ DISAGREE |
| (33) The UK food system puts science to good use. | AGREE ①②③④⑤ DISAGREE |
| (34) Free trade puts UK food safety at risk. | AGREE ①②③④⑤ DISAGREE |
| (35) Organic food is too expensive for most families. | AGREE ①②③④⑤ DISAGREE |
| (36) I have plenty of food choices. | AGREE ①②③④⑤ DISAGREE |
| (37) UK gov't organic standards are good. | AGREE ①②③④⑤ DISAGREE |
| (38) Irradiation would make food safer. | AGREE ①②③④⑤ DISAGREE |
| (39) Consumers can affect food quality standards. | AGREE ①②③④⑤ DISAGREE |
| (40) Food labelling is adequate. | AGREE ①②③④⑤ DISAGREE |
| (41) Risky activities help keep people mentally healthy. | AGREE ①②③④⑤ DISAGREE |
| (42) Multinational corporations dominate the food system. | AGREE ①②③④⑤ DISAGREE |
| (43) A little dirt in food immunizes kids against disease. | AGREE ①②③④⑤ DISAGREE |
| (44) Conventional food is as healthy as organic food. | AGREE ①②③④⑤ DISAGREE |
| (45) I like to garden. | AGREE ①②③④⑤ DISAGREE |
| (46) I believe in life after death. | AGREE ①②③④⑤ DISAGREE |
| (47) Farm animals are often treated better than 30 years ago. | AGREE ①②③④⑤ DISAGREE |
| (48) More organic farming would help the economy. | AGREE ①②③④⑤ DISAGREE |
| (49) Biotechnology is reducing risk in food systems. | AGREE ①②③④⑤ DISAGREE |
| (50) I exercise regularly to keep fit. | AGREE ①②③④⑤ DISAGREE |
| (51) Consumers have political power in food co-ops. | AGREE ①②③④⑤ DISAGREE |
| (52) Animals and/or pets are important to me. | AGREE ①②③④⑤ DISAGREE |
| (53) Genetically-Modified (GM) food is needed to feed the world. | AGREE ①②③④⑤ DISAGREE |
| (54) Organic farming is good for the environment. | AGREE ①②③④⑤ DISAGREE |
| (55) Government should encourage local food. | AGREE ①②③④⑤ DISAGREE |
| (56) A smaller percentage of the world is poor than 30 years ago. | AGREE ①②③④⑤ DISAGREE |
| (57) Current farming practices endanger the environment. | AGREE ①②③④⑤ DISAGREE |
| (58) Consumers know more about food than 30 years ago. | AGREE ①②③④⑤ DISAGREE |
| (59) What did you and/or your family/household dine on yesterday?
(Veg, rice, pasta, meat, drinks, dessert, fast-food, other _____?) | |
| Any organic? <input type="checkbox"/> Yes <input type="checkbox"/> No <u>Organic</u> _____% ? Comments: | |

(60) What did you serve last time you invited guests to a home meal?

(Veg, rice, pasta, meat, drinks, dessert, fast-food, other _____?)

Any organic? Yes No Organic _____% ? Comments:

Figure 5.4a&b.


SEATTLE FOOD & RISK SURVEY 2002-3


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Post to: University of Durham Geography Dept.

Sci. Labs, Durham DH1 3LE England, UK


Please help our research. Skip parts you wish. Names & privacy will be protected!

- (1) **NAME** Mr Mrs Ms _____ . (2) **DATE** / /200 .
- (3) **RACE** (optional) Asian Black Hispanic Native American White Other _____ .
- (4) **AGE** _____ (5) **In 2000 I voted** Bush Gore Nader Green Other _____ .
- (6) **EMPLOYMENT** Academia/Education Clergy Dance/Entertainment Firefighting
Motorcycle Industry/Sport Student/Other _____ *Job description* _____ .
- (7) **EDUCATION** Highschool AA BA BSc MA MSc PhD Certif Dipl
Training _____ .
- (8) **ADDRESS** _____ .
- (9) **EMAIL** _____ . (10) **PHONE** _____ .

**Please check ✓ - circle O - number (1-2-3...) - or write in blanks.
 You're very welcome to write comments in margins!**

- (11) Number of people in your household? _____. (12) Children? _____ .
- (13) Do you ever eat quality local or organic food from Supermarkets? Albertsons
Fred Meyer Larry's Puget Consumer Coop Safeway Others _____ ?
 Or Farmers Markets? Columbia City Lake City W. Seattle Univ. Dist Pike Others _____ ?
 Are you more attracted to food labelled Local or Organic ?
- (14) Or from Box Schemes Community Supported Agriculture Farm Shops?
- (15) Have you regularly done *risky* activities? hang-gliding motorcycling rock-climbing
scuba-diving ski-racing sky-diving snow-boarding other _____ ? Yes No
Type of motorcycles or equipment & comments:
- (16) If you were younger *and/or* not responsible for children or dependants *and/or*
had proper training & equipment, would you try such activities? Yes No
- (17) Do you eat organic food? Yes No Weekly Daily
up to 1/3 cost of diet up to 2/3 cost of diet over 2/3 cost of diet
up to 1/3 calories up to 2/3 calories over 2/3 calories
 Favorite (1-2-3) organics: Bread Dairy Eggs Fruit/Juice Meat Veg Other _____
- (18) Do you consume low-fat food & diet drinks? Yes No (19) Do you smoke? Yes No
- (20) Are you vegetarian? Yes No *Vegan?* Yes No
- (21) Music faves (1-2-3...) Classical Country Dance/Electronica Folk Jazz Latin
Hip-Hop/Rap International New Age Rock/Pop Other _____ Comments:
- (22) Radio heard weekly? BBC KIRO KOMO KVI NPR KUOW Others _____
- (23) TV watched weekly? ABC BBC CBC CBS Fox NBC PBS Others _____
- (24) Magazines read? Atlantic Business Week Cycle World Consumer Repts Economist
Nation Newsweek New Yorker Time US News Utne Rdr Vanity Fair Others _____
- (25) Newspapers read weekly? Guardian Int'l Herald Trib Seattle Times Seattle P-I
Stranger Weekly NYT Roadracing World Wall St. Journal USA Today Others _____

[US 12July03-17Feb04]

- (26) Hosts? Tom Brokaw Connie Chung Paul Harvey Peter Jennings
 Larry King Jim Lehrer Rush Limbaugh Bill Maher Dan Rather Cokie Roberts
 Dave Ross Dan Schorr Jerry Springer Barbara Walters Others _____
- (27) Top (1-2-3...) risks in US food system: anorexia bulimia asthma
 BSE (*aka* Mad Cow Disease) campylobacter CJD (Creutzfeldt-Jakob Disease)
 CWD (Chronic Wasting Disease) FMD (Foot & Mouth Disease) E. coli
 gluten intolerance lactose intolerance heart disease listeria obesity
 plague salmonella staph West Nile Virus Others _____
- (28) Please number (1-2-3...) your most important sources of food information:
 Church Coops Family/Friends Print Radio TV Stores Web Other _____

YOUR OPINIONS: Please ✓ (If no opinion, leave blank.)

- (29) Food is safer than 30 years ago. AGREE ①②③④⑤ DISAGREE
- (30) Most people are healthier than 30 years ago. AGREE ①②③④⑤ DISAGREE
- (31) Risky activities (e.g. motorcycling) are important to me. AGREE ①②③④⑤ DISAGREE
- (32) Humans are a main cause of Global Warming. AGREE ①②③④⑤ DISAGREE
- (33) The US food system puts science to good use. AGREE ①②③④⑤ DISAGREE
- (34) Free trade puts US food safety at risk. AGREE ①②③④⑤ DISAGREE
- (35) Organic food is too expensive for most families. AGREE ①②③④⑤ DISAGREE
- (36) I have plenty of food choices. AGREE ①②③④⑤ DISAGREE
- (37) USDA gov't organic standards (effective Oct 2002) are good. AGREE ①②③④⑤ DISAGREE
- (38) Irradiation would make food safer. AGREE ①②③④⑤ DISAGREE
- (39) Consumers can affect food quality standards. AGREE ①②③④⑤ DISAGREE
- (40) Food labelling is adequate. AGREE ①②③④⑤ DISAGREE
- (41) Risky activities (e.g. motorcycling) help keep people mentally healthy. AGREE ①②③④⑤ DISAGREE
- (42) Multinational corporations dominate the food system. AGREE ①②③④⑤ DISAGREE
- (43) A little dirt in food immunizes kids against disease. AGREE ①②③④⑤ DISAGREE
- (44) Conventional food is as healthy as organic food. AGREE ①②③④⑤ DISAGREE
- (45) I like to garden. AGREE ①②③④⑤ DISAGREE
- (46) I believe in life after death. AGREE ①②③④⑤ DISAGREE
- (47) Farm animals are often treated better than 30 years ago. AGREE ①②③④⑤ DISAGREE
- (48) More organic farming would help the economy. AGREE ①②③④⑤ DISAGREE
- (49) Biotechnology is reducing risk in food systems. AGREE ①②③④⑤ DISAGREE
- (50) I exercise regularly to keep fit. AGREE ①②③④⑤ DISAGREE
- (51) Consumers have political power in food co-ops. AGREE ①②③④⑤ DISAGREE
- (52) Animals and/or pets are important to me. AGREE ①②③④⑤ DISAGREE
- (53) Genetically-Modified (GM) food is needed to feed the world. AGREE ①②③④⑤ DISAGREE
- (54) Organic farming is better for the environment. AGREE ①②③④⑤ DISAGREE
- (55) The government should encourage local food. AGREE ①②③④⑤ DISAGREE
- (56) A smaller percentage of the world is poor than 30 years ago. AGREE ①②③④⑤ DISAGREE
- (57) Current farming practices endanger the environment. AGREE ①②③④⑤ DISAGREE
- (58) Consumers know more about food than 30 years ago. AGREE ①②③④⑤ DISAGREE
- (59) What did you and/or your family/household dine on yesterday?
 (Veg, rice, pasta, meat, drinks, dessert, fast-food, other _____?)
 Any organic? Yes No **Organic** _____ % ? Comments:

(60) What did you serve last time you invited guests to a home meal?

(Veg, rice, pasta, meat, drinks, dessert, fast-food, other _____?)

Any organic? Yes No **Organic** _____ % ? Comments:

Thanks for your patience! Website: www.durham.ac.uk/b.a.scholten

[US]

she subscribed to a local box scheme at the time she was surveyed (later she did), Camilla would have been rated Loc1. These ad hoc formulae, based on intuitive logic designed into the Food & Risk Surveys, usually proved themselves adequate. Camilla said she preferred food labelled organic to food labelled local, when I later had the opportunity to ask her in a face-to-face interview.

- **R2: indicates Camilla is not risk-averse and has participated in risky sports.**

My list of risky activities, or risky sports undertaken by ‘thrill-seekers’ was suggested by Janda (1996: 99-101) who suggests that ‘a person low in sensation-seeking may enjoy the job of college professor’. Although my project generally upholds Janda’s stereotype, Camilla violates it, with her status as an academic educated to MA level who also enjoys so-called risky sports. Q15 shows she has participated in hang-gliding, microlite flying and skiing. Q16 shows that if she were younger and had proper training & equipment she would pursue the same activities. Comparing these answers to redundant questions on side 2, however we see that she disagrees with the statement Q31 *Risky activities are important to me*; and Q41 *Risky people help keep people mentally healthy* which went unmarked! Altogether these answers suggest that Camilla has zest for good food and the good life, seldom reflects deeply on risk, and that when she does she is uncomfortable thinking of the potential for injury in the dark side of risk.

Qualitative, ethnographic & photographic methods

Andrew Sayer acknowledges the value of quantitative questionnaires but notes their limits supporting my inclination to combine methodologies. Sayer writes (1992: 245):

By contrast, with a less formal, less standardized and more interactive kind of interview, the researcher has a much better chance of learning from the respondents what the different significances of circumstances are for them. The respondents are not forced into an artificial one-way mode of communication in which they can only answer in terms of the conceptual grid given to them by the researcher.

Examples of classic, positivist surveys are those drawing subjects randomly from telephone books or by postal codes. This appears an ideal methodology in terms of statistical randomness, and by extension the most statistically representative of the population. But there are epistemological problems with quantitative consumer surveys, including inaccuracies in consumer self-reported behaviours, recall errors, accuracy of estimating

portions purchased, etc., according to David Moore, Director, Quantitative Research for The Hartman Group, Bellevue (pers. com.). That is why Hartman – and I - use a suite of methods.

As mentioned above, experience in journalism familiarised me with interviewing subjects and also with surveys. Experience in teaching English for special purposes (business, engineering, civil service, science, etc.) in Germany and the UK preconditioned me to hold focus groups, but I made no assumption that I could immediately master them. To prepare myself for managing focus groups, I immersed myself in literature on ethnographic and qualitative methods. My ‘bible’ for focus groups, then as now, was *Doing Ethnographies* (1995) by Cook & Crang. Their booklet was a natural guide since nearly all their advice correlated with my experience in journalism and education. Cook & Crang’s warnings on the need to double-check organisation and arrangement of equipment in focus groups did not go amiss. Even so, I learned the hard way that transcription requires, as they say, a minimum of 10 or 12 hours for each hour of a group.

My groups were successful, but I would try to improve name discipline and microphone discipline in any future focus groups. I have two suggestions for others. First, begin groups with folded 3’ by 10’ papers indicating participant names in bold, black marking pen. Second, ask participants to state their name each time they speak into the microphone, as this helps transcribers immensely in name attribution. Explaining the reasons behind this to participants and any facilitators is a worthwhile. Finally, it is important to employ two tape recorders, and wise to check that they are running occasionally. Other researchers might well consider videotaping focus groups. Seeing the body language of participants around the table may help understand group dynamics and the flow of ideas. However, researchers should carefully consider the probability that actors will *play to the camera*. Fear of intrusion by the camera, plus the added expense and complexity of added equipment (perhaps requiring a camera operator) determined my decision to opt for the relative simplicity of ‘mere’ tape machines to record focus groups. If one videotaped focus groups, ideally it would be by hidden camera, after participants signed permission to be filmed.

The history of focus groups, in their origins in psychology and market research by socialist parties in Austria, and in early research on TV broadcasting for David Sarnoff’s NBC - temporarily employing Theodor Adorno - is found in Dixon & Leach (1978b; also Krueger 1988; Morrison 1998; Morgan 1998). Krueger is insightful on the use of open-ended questions. And most of these books discuss ethics and privacy considerations of subjects.

Target groups, sampling frame & snowballing

While I lacked the means to perform censuses of the greater Seattle and Newcastle areas, I could devise a sampling frame that optimised representativeness. Core research themes were risk of disease such as BSE, and organic consumption. Therefore it was appropriate to frame samples in a way that encompassed a full range of consumer risk perceptions and educational and income parameters thought to be linked to organic consumption.

Recall that my PhD committee heard my proposal to study organic consumption of academics and motorcyclist. When I mentioned access to firefighters they leapt at their inclusion. One advisor suggested prostitutes as subjects accustomed to dangers as significant in effect if not type as motorcyclists, but poor access and funding hampered this. I had counter-suggested clergy as substitutes for academics (assumed to be well-educated individuals aware of societal discourses on organics and risk), but as mentioned above, they unexpectedly proved a non-starter. I did begin fieldwork intending to incorporate a group of exotic dancers, and a female friend secured several questionnaires and reported interviews from dancers in Seattle clubs *Déjà Vu* and *Sugar's*. But these were allotted to the group of others when cooperation was not secured from Newcastle club *For Your Eyes Only* (FYEO). The PhD committee's suggestions were considered and partly accepted. Final methodology targeted groups in an effort to research a wide range of risk-linked subjects within funding and time constraints. Above we discussed the pros and cons of postal sampling. This study rejected that in favour of a 'snowball' distribution of questionnaires to firefighters willing to participate, and then relying on gatekeepers or myself to facilitate focus groups (Atkinson & Flint, 2001). Snowball sampling may be defined as a technique for finding research subjects, in which one subject gives the researcher the name of another, who in turn provides the name of a third, etc. (Vogt 1999). Subjects can also recruit acquaintances for surveys or interviews. While a snowball strategy may not render results as representative as a classic post code sample, the geographic disparity of my study sites (ca. 35 miles or 50 kilometres apart) increased diversity of samples, as did the fact that each of my focus groups drew participants from radii of about 60 miles or 100 kilometres.

This sampling method produced results which may be faithfully indicative of consumption trends in these cities, by combining quantitative data from questionnaires with qualitative evidence from margin comments and interviews, via the ethnographic practice of triangulation (Cook & Crang, 1995). Respondents in the 30-55 age range were especially sought, on the assumption that most negotiated strategies on food and risks with household

partners and children. A range of responses was elicited by targeting groups 1-3, as 4. Others acted as a sort of control group of subjects who did not fit in groups 1-3:

1. Academics: stereotypically risk-averse, informed on risk, undergraduates to professors, school teachers and other educators;
2. Firefighters: variably risk-embracing or risk-averse, but apt to manage risk in a 'strategy for career advancement' (Lupton, 1999: 156);
3. Motorcyclists: risk-embracing 'edgeworkers' justifying risk in work or hobbies (Lyng, 1990: 859);
4. Others: from all walks of life *or not fitting above groups*, e.g. academic bikers, or motorcyclists with higher degrees if they were also teachers.

Groups were chosen for stereotyped relationship to risk. In similar studies clergy might substitute for academics; police for firefighters; and dancers or jockeys for motorcyclists, but the methodological aim was to query groups on a stereotyped range of risk from risk-averse to risk-embracing (i.e. thrill-seeking). In the overall sample others were snowball-recruited to improve diversity and serve as a control – but they do not constitute a sub-group, per se.

Atkinson & Flint (2001) note 'Much of snowball sampling rests on the assumption that social networks consist of groups with relatively homogenous social traits', and cite Avico *et al.* (1988) on snowballing's ability to elicit internationally comparable data and usefulness to earn the trust of people who may be weary of academic research. The assumption here, built on insider knowledge of the targeted groups, was that UK/US surveys would find similar attitudes to *physical risk* between counterparts, i.e. British firefighters feel more social empathy with American firefighters than British professors.

But correlating with Mary Douglas' (Gofton 1999; Lupton 1999; Phillimore & Bell 2005) claim that risk attitudes are socially determined, UK/US trends on *food risk* – as well as local or organic preference – were also expected to diverge, because it was suspected that the 'discrepancy between positive attitude and behaviour' (Makatouni 2002) was less pronounced among working classes and manual workers in Seattle than in Newcastle. For instance, while firefighters in both Newcastle and Seattle reflect on organics, those in Seattle are embedded in a consumer culture which encourages and empowers them to go out and buy organics. Interviews in Newcastle revealed a spirit of defensive localism (Winter 2003)

on local food, but a lingering attitude that organics were for the rich – unless adoption of organics was compelled, e.g. by health concerns for infants or ill people.

Although the survey gleaned data on awareness of food pathogens, gender, media, politics, religion, economics and environmental regulation, this thesis focuses on questions about food scares, organic consumption, and the binary of local/organic food preference, revealed in quantifiable questionnaires and qualitative methods.

Sub-groups: Academics, Firefighters, Motorcyclists, and Others.

Recruitment of sub-groups was similar in Seattle and Newcastle. Frequently, I approached people on the street, explaining my research and asking them to complete surveys. Primary conduits for focus group participants were gatekeepers, with whom I had a variety of relationships - or built from scratch.

Motorcyclists: Motos were recruited through snowball sampling in moto communities of Newcastle and Seattle. Journalist experience with publications such as *Cycle News*, semi-pro organisations such as the Washington Motorcycle Road Racing Association (WMRRA), and dealers and staff at UK/US motorcycle shops helped identify gatekeepers, staff and customers. In practice, this meant that I would stop by a shop, speak for five minutes with an owner or manager, explain that my food & risk research was interested in their social sub-group, and ask them to distribute, i.e. to snowball questionnaires. A week later I would gather completed questionnaires and chat with any willing respondents on the premises. The result was a broad sample of motos and/or close relatives, engaged as commuters, hobbyists or professionals in sales, management, accounts, repair, racing, and touring, comprising a social group constructing its own discourses on food and risk. Motos per se are those sharing physical risks, thrills and even enhanced feelings of ‘personal agency’ (Lyng 1990: 860; Lupton 1999: 152-154) as drivers or pillion riders. Over two-thirds of respondents have ridden/driven their own bikes, and virtually all have ridden pillion.

Firefighters: Recruitment of fires was similar to that of motos, but benefited from facilitation by fire officers in the Lynnwood and Renton stations near Seattle, and the Durham and Darlington brigades and training centres near Newcastle. Training officers are committed to improving the knowledge base of their services, and believed participation in my research would increase reflection on food and risk by personnel and perhaps contribute

to fitness and well-being. Just as an army marches on its stomach, firefighters bond, relax and converse daily over food and held a variety of opinions (Scholten 2006b). Some engaged in part-time farmers' market work that increased their value as informants.

Academics: Acad gatekeepers from, for example, the linguistics and geography departments of the University of Washington in Seattle, and the Association of Part-time Tutors in Newcastle, kindly facilitated snowballing of questionnaires, as well as focus groups and venues. Acads' expected leading role in organic consumption (confirmed in this thesis) elicited occasional surprise that issues such as organic/local preference were more complex than assumed, although such remarks were certainly not limited to acads. Before pilot studies began, I considered elaborate sampling procedures, such as obtaining a fixed number of responses from the sciences, social sciences, arts and humanities. This was deemed unnecessary after responses were secured from biologists, engineers, geographers, linguists, musicians, teachers and so on in both Seattle and Newcastle.

Others: Were routinely recruited through family friends, and also discovered when recruiting acads, fires or motos. Some were initially assigned to a sub-group, then cut to avoid skewing results. For instance, one middle-aged educator surveyed at a Toastmasters Club was cut from acads and listed in others, when examination of her questionnaire revealed she was a biker since her parents taught her to ride in her teens.

Photography

While writing methodology and discussion papers for the department in 2002, I imagined using photography in fieldwork. One intention was to involve subjects in activities that would appeal to them as useful and fun. I considered asking interviewees' permission to photograph (*aka* shoot) their refrigerator contents. Snapshots of larders would be evidence of consumption behaviour to be compared to attitudes expressed in surveys. Although developing the fridge shot methodology was interesting, and some such pictures adorned my PowerPoints, the method proved too cumbersome when survey analysis and interview transcription required hundreds of hours, but yielded better data. However, photography was intrinsic to fieldwork, and about 10,000 pictures were taken. The main digital cameras were a Kodak DC3800, succeeded by a Canon A700, both prized for compactness because cameras larger than a Nikon 35mm can distract subjects.

As for ethics, I had training in ethical photo-journalism at the UW News Laboratory in 1987 by Patricia Foote (on furlough from *Seattle Times*). Seminars at Durham University by geographers returning from the field highlighted ethics in ethnography involving, as Peter Jackson writes, 'working class and ethnic minority communities' (*TDoHG* 2000: 239). Since AFNs are patronised by the poor and immigrants, not just elites, all interests must be considered along with my positionality (Rose 1997). For example, farmers' market vendors routinely and enthusiastically granted me permission to shoot. If customers were in the frame, I would explain that photos were for food research. If they were happy, the photo might be used; if not, not. This process describes use of a multiethnic scene from Pike Place farmers' market (Chapter 7, Figure 7.1). Once, at West Seattle market when colourfully-garbed people showed reluctance, perhaps due to immigration issues, photos were not used.

The ethics of my academic photography are almost identical to my journalism, and congruent with guidelines from Chitrabani, a Christian media centre in India (2002-7 Centre for Media Literacy). Their 23 points suggest a golden rule, that subjects be treated as honourably as photographers would wish to be. One of the most compelling reads in part: 'Be true to the image people want to have of themselves, but at the same time do show what you believe is their real image'.

Photography assisted research in several ways:

- Nearly all farmers, food marketers and researchers, vendors, customers and so on welcomed a researcher who photographed them respectfully.
- A role as a picture-taking researcher helped me fit in like any Kodak-wielding tourist.
- Pictures on my website represented my work, increasing trust that it was supported by a reputable university.
- PowerPoints for focus groups showed UK/US fieldwork. This raised interest and cued discussion on question menus.
- Photos are visual mnemonics for my memory of people and events.
- Interviewees often asked me to email pictures. Photos have been used in websites or literature for box schemes, Slow Food groups, and a book (CABI 2006). My poster from the COR conference (Scholten 2002a) was given to prime contacts who hung it where customers could see their family's 'brush with greatness'.

Conclusion

This chapter covers elements of the planning and development of my methodologies. It is a mixed bag of tools. Fridge shots were rejected as inefficient, while photography found more useful roles. The quantitative survey tool ultimately grew from a planned 72 to 404.

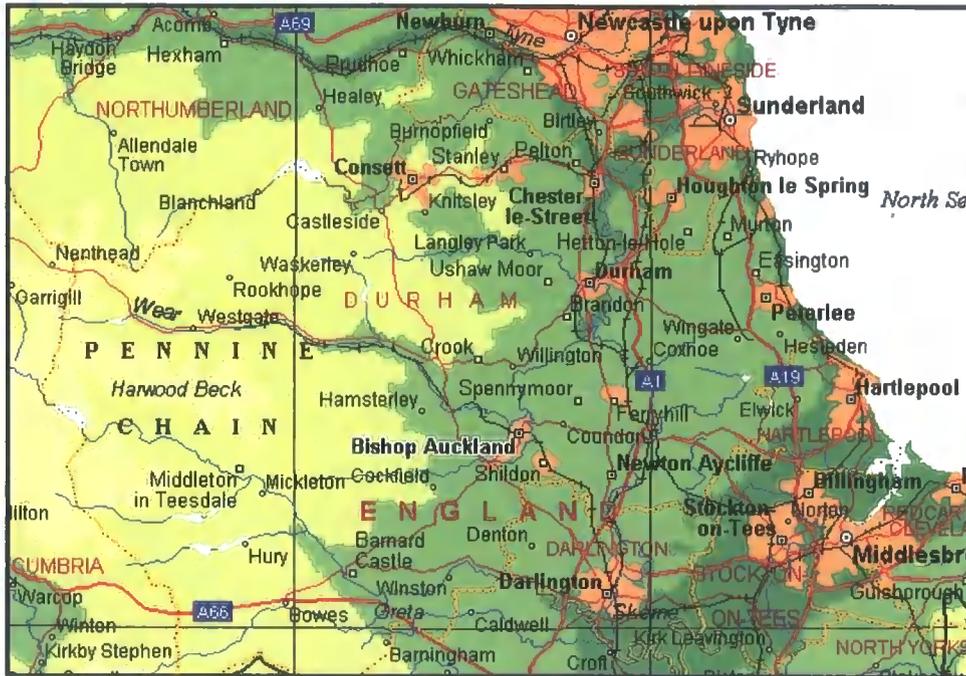
The linking methodology between these tools and focus groups is the process of triangulation (Cook & Crang 1995). Comparing views from different standpoints is a traditional truth test. Analysis from different methodologies is distilled into coherent models of consumer attitudes and behaviour regarding food and risk. The Eureka moments of triangulation are profound when, as Cook & Crang predict, researchers begin to hear the same stories repeated by actors working on different nodes of networks.

The surveys were lengthy for several reasons. Time was insufficient for 400+ interviews, so the 60-question surveys were designed to reveal facets of age, class, occupation, political-economic, and cultural beliefs that might otherwise have been sensed in face-to-face encounters. Redundant questions helped reveal cognitive dissonance, or simple failure to fit behaviour to professed attitudes on food systems, the environment, science, etc. Although not all data gathered were used directly in the thesis, data indirectly benefited the study when, for example, focus group utterances were compared with surveys. Surveys and focus groups produced a large corpus of data which can be mined for future papers.

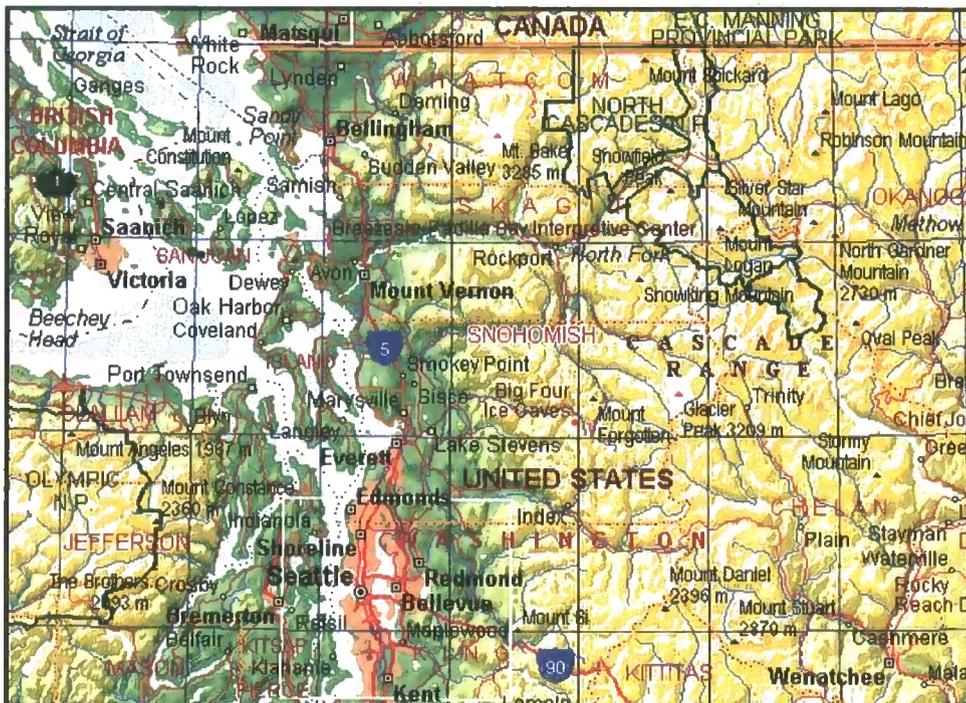
Now let us turn to chapter 6, an amalgam of quantitative and survey data.

Table 5.1. ORIGINAL RESEARCH TIMETABLE (Part-time)

Year	Period	Fieldwork	Academic
2000	October to December	Contact Houghall Farm and Northumbria Organic Producers (NOP).	Dept. courses in research methodology. Begin literature review on quality food, ANT, etc.
2001	January to September	Limited by FMD. Consult Seattle (UW) geog. dept. on farmers markets. Contact major US organic MNCs.	Further lit review on risk, and sustainability, while writing annotated bibliography.
2001	October to December	Contact Durham County Council Trading Standards, etc. Contact US-UK organic offices in UK.	Philosophy & Theory in Human Geography classes, plus Research Methods.
2002	January to March	Begin casual photography in informal audit of organic products at farm shops & markets. Cultivate NFU and ONE Northeast contacts on alternative food economies. Extend Puget Sound contacts.	Write Methodology Paper. Pilot Discussion Paper at Newcastle Geographical Imaginations. CRIC 9-11.Jan. Quality workshop. Uni-Aberystwyth 26-28.Mar poster Colloquium Organic Research.
2002	April to June	Pilot focus group. Increase farmers' markets contacts. Liaise with DCC Trading Standards.	Give Dept. Discussion Paper. Uni-Salford, May 9/10, 2002, postgraduate conference.
2002	July to December	Visit Puget Sound, Seattle, Edmonds, Bellingham to arrange facilitation of fieldwork.	Analyse and revise pilot questionnaires & interviews. Read & plan chapters.
2003	June to September	Focus groups and other fieldwork in King and Snohomish counties. Visit farmers' markets, farmers, consumers, etc. Plan Newcastle focus groups.	Read more on focus groups, consulting with colleagues at UW Geography Dept., and attending colloquia.
2003 on		Finish fieldwork, but maintain contact for post-doc work. Finish Newcastle FGs.	Quant/Qual data analysis. Finish thesis and prepare for viva. Write paper for Jarosz AFN session at AAG04 Philly & more conferences e.g. RGS-IBGs.



Map 5.1. Newcastle in Northumbria on the North Sea (Microsoft 2003)



Map 5.2. Seattle on Puget Sound (Microsoft 2003)

CHAPTER 6 CONSUMER SURVEY QUANTITATIVE DATA: *risk perceptions of BSE, organic and local food*



Heretofore, 'in the organic trade, there are currently few sources of comparable international data', writes Laura Reynolds (2004: 726; see also EISfOM 2006). That is particularly true on the micro-level of consumption, and this thesis is an effort toward filling the gap. Previously available data are ambiguous, sketchy and sometimes inconsistent, even when useful as background. IFOAM (2004) notes that North America has surpassed Western Europe as the largest continental organic market, while the UK is the world's third largest national market after Germany and the leading US.

Dimitri & Greene (USDA 2002a) find organics have shifted from a lifestyle choice for a small share of consumers to being consumed at least occasionally by a majority of Americans, and they note national surveys by the Hartman Group and the Food Marketing Institute in the early 2000s showing two-thirds of shoppers bought organic foods. Hartman (2006) claim 73% of the US population buy some type of organic food at least occasionally, up from 55% in 2000, while 23% buy organics regularly (at least weekly), up from 17% in 2000. The UK Soil Association (2002) says 79% of households make at least one organic purchase annually, but a committed core of 8% of consumers accounts for 60% of sales.

As previously noted, Tregear *et al.* (1994) found that in early-1990s' Edinburgh, 50% of professionals consumed organics, compared to just 15% of working class people surveyed. Empirical data in this chapter show Newcastle exceeded those Edinburgh figures a decade later, and holds its own against other reports that half of Britons eat organic occasionally. It is also shown that Seattle leads Newcastle, and probably most UK/US areas, not just in the proportion of consumers saying they eat organic food, but in the *depth* of consumption in households, and offered to guests. Data on organic/local preferences, and risk perceptions of diseases, extend this quantitative comparison.

Data and analysis

This chapter is an amalgam of survey data from sub-groups of *academics*, *firefighters* and *motorcyclists* compared to control groups of *others* and *all* survey respondents. Focus is on quantitative survey results of the consumer groups and the relationship of each to risk activities/perceptions and relative knowledge of BSE, and it will be complemented with qualitative data analysis in chapter 7. As methodology chapter 5 detailed, *others* are not a cohesive group because their main uniting aspect is that *other* subjects simply do not belong in sub-groups of acads, fires or motos. Nonetheless *others* are vital to raise diversity in the set of *all* respondents. *All* subjects provide empirical data for UK/US international comparisons, while data from sub-groups enrich analysis of commonalities and differences in Newcastle and Seattle consumers. UK/US Food & Risk Surveys in chapter 5 contain the precise wording of central questions which are distilled into the forms below:

1. Do you eat organic food? (Questions 13 & Q17)
2. Do you prefer organic or local food? (Q13)
3. Did you and/or your family/household dine on organics yesterday? (Q59)
4. Did you serve organics to guests at your last home meal? (Q60)
5. Is BSE/vCJD in your top food risks? (Q27)

Q1: Do you eat organic food?

Please see Tables 6.1a&b and Figures 6.1a&b below (some salient data are underlined) in which statistics are given to 0.001. For simplicity, text and bar graphs often round data to the nearest percent below if <0.005 , but higher if ≥ 0.005 (e.g. 1.49% is given as 1%, but 1.50% as 2%).

Linguistically, this question is in the present-indicative verb tense, implying that a positive answer connotes routine consumption. These answers were straightforward, and the quantitative findings meet expectations of higher organic demand in Seattle than Newcastle. Unisex data show organic consumption was 16% higher for all subjects in Seattle (70.78%) than in Newcastle (54.42%). It might be said the shorter growing season of Newcastle (55.00°N) inhibits an organic turn compared to Seattle (47.62°N), but Newcastle's familiarity with mad cow disease is an organic impetus. Evidence that BSE spurred UK organic farming is found in a Soil Association report (2004) stating that in 2003 the UK imported only 56% of its organics, down from 70% in the 1990s. Unisex statistical gaps are striking among motorcyclists and

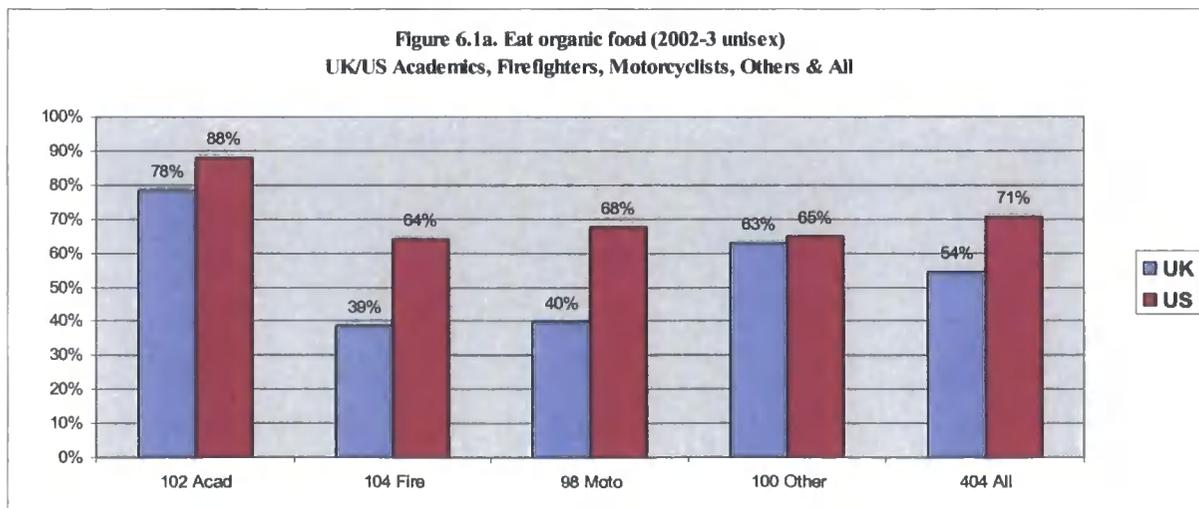
firefighters, but not academics who were the leading organic consumers in both cities. Seattle motos (68%) are more apt to say they eat organics than Newcastle motos (40%): a 28% gap. Seattle fires (62%) more often claim to eat organics than Newcastle fires (41%): a 21% gap. Seattle acads (88%) are a bit more apt to confirm eating organics than Newcastle acads (78%): a 10% gap.

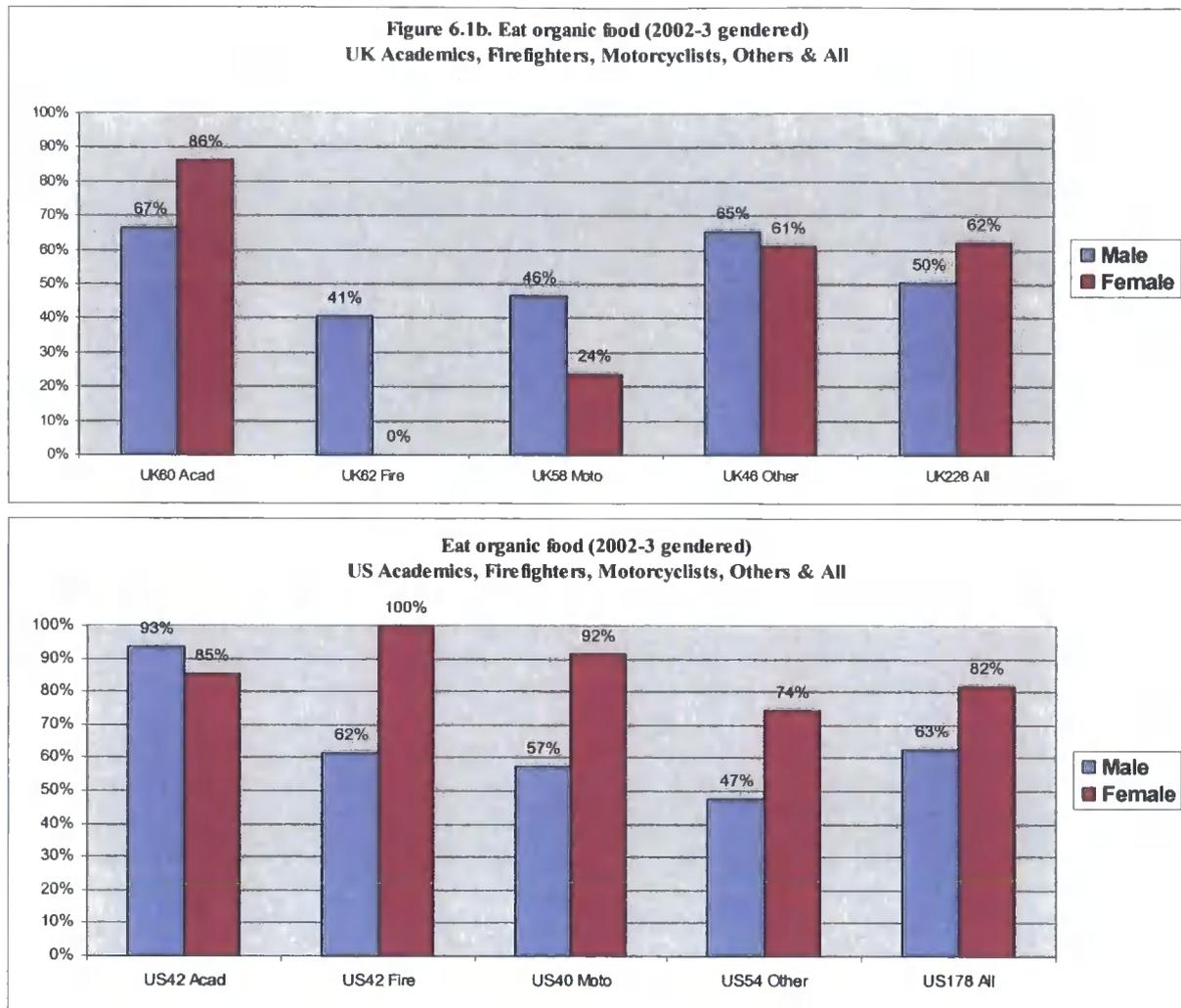
Table 6.1a. Eat organic food (2002-3 unisex)

UK	Newcastle	Seattle	US	Total (404)
60 Acad	47 (78.33%)	37 (88.09%)	42 Acad	84/102 (82.35%) Acad
62 Fire	24 (38.7%)	27 (64.28%)	42 Fire	51/104 (49.03%) Fire
58 Moto	23 (39.65%)	27 (67.50%)	40 Moto	50/98 (51.02%) Moto
46 Other	29 (63.04%)	35 (64.81%)	54 Other	64/100 (64.00%) Other
226 All	123 (54.42%)	126 (70.78%)	178 All	249/404 (61.63%) All

Table 6.1b. Eat organic food (2002-3 gendered)

Newcastle	Male	Female	Seattle	Male	Female
UK60 Acad	24 (66.66%)	36 (86.11%)	US42 Acad	15 (93.33%)	27(85.18%)
UK62 Fire	59 (40.67%)	3 (0.00%)	US42 Fire	39 (61.53%)	3 (100.00%)
UK58 Moto	41 (46.34%)	17 (23.52%)	US40 Moto	28 (57.14%)	12 (91.66%)
UK46 Other	23 (65.21%)	23 (60.86%)	US54 Other	19 (47.36%)	35 (74.28%)
UK226 All	147 (50.34%)	79 (62.02%)	US178 All	101 (62.37%)	77 (81.81%)





Moto samples (UK 58 + USA 40 = 98) are large but not enormous, so the gap may be a bit more or less than 28%. However, a 28% gap is wide enough to conclude that Seattle bikers engage in significantly more organic consumption than those in Newcastle. Seattle fires also clearly show more organic consumption than their counterparts in Newcastle. Recalling that others lack group cohesion, the finding that Seattle others show about 2% higher consumption than those in Newcastle also reflects Seattle’s lead on a continuum of organic consumption.

Absolute numbers of all 404 informants are sufficient for statistical significance. One insight from all categories is that UK/US gaps are closing; certainly Newcastle consumers’ familiarity with organics is nearing that of Seattle consumers. We can surmise that the organic trend that

flourished earlier in the UK's richer cities such as London and Edinburgh is expanding into England's northeast, a historically poor region in terms of education and income. This is not the same as saying the *volume* of Newcastle organic consumption is near Seattle's. Volume is explored below in questions of household or guest use.

Gendered data: Table 6.1b and Figure 6.1b show 12% more Newcastle females (62.02%) say they eat organics than males (50.34%), reflecting Makatouni's (2002) profile in which women pay more attention to organics. Likewise in Seattle, nearly 82% of women report eating organics compared to 62% of men – a gap over 19%. Gendered data must be examined with an eye to sample numbers: That 86% of Newcastle female acads say they eat organics is significant because 36 were surveyed; that 0% of Newcastle women fires deny eating organics is less so because a sample of just 3 answered. That 100% of Seattle women fires say they eat organics may be less significant because only 3 were surveyed, yet the figures suggest such common acceptance of organics in Seattle that organic tastes by female firefighters are not stigmatised as tree-hugging. Gendered data for academics and motorcyclists show that Newcastle male motos (46%) and Seattle male acads (93%) more frequently claim to eat organics than their female counterparts (24% and 85% respectively), breaking the stereotype of women as more inclined organically. Such quantitative findings will be fleshed out with qualitative data in chapter 7.

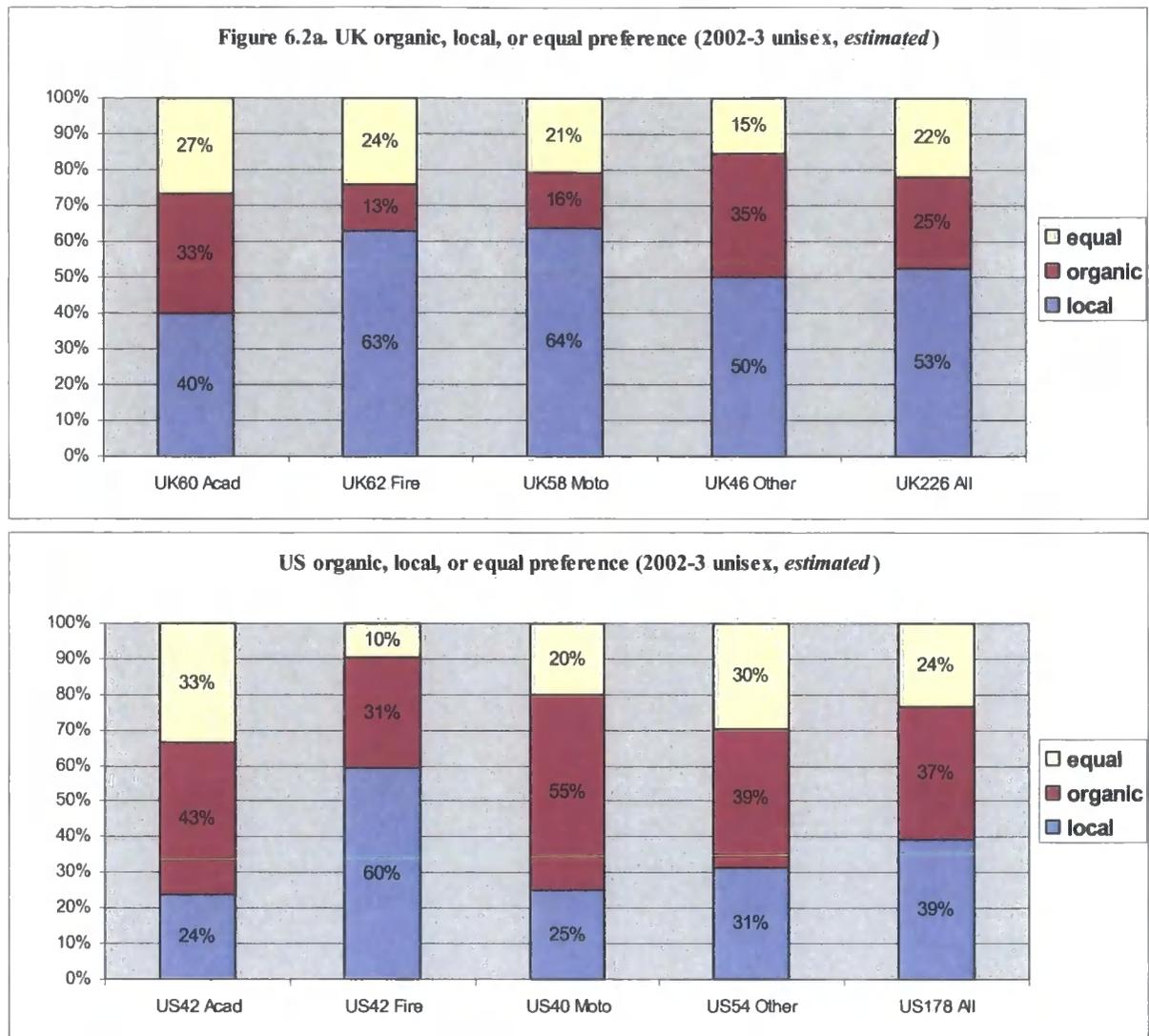
Q2: Do you prefer organic or local food?

Italics are used liberally here for readability. Please see Tables 6.2a&b and Figures 6.2a&b. The local/organic binary is crucial as, Greens claim, agribusiness appropriates their local markets (Beck 1992; Fine *et al.* 1996). Many food issues pivot on the local/organic nexus, but eliciting preferences was difficult. Respondents often ignored the question or checked both boxes! Initially, preference was inferred or *estimated* from surveys completed when many subjects were also interviewed, giving additional inputs of vocal inflection and body language. For those not interviewed, redundant survey questions helped crosscheck ambiguities for better calculations, and a comparison of *estimated* with *stated* preferences shows that this process was generally reliable. Respondents without clear preferences were listed as equal. A rule of thumb emerged, i.e. most people say they prefer all food (except exotic imports) to be organic and local, but they question the affordability of that scenario.

Table 6.2a. Organic, local, or equal/no preference (2002-3 unisex, <i>estimated</i>)		
Academics	UK 60 est.	US 42 est.
Local	24 (40.00%)	10 (23.80%)
Organic	20 (33.33%)	18 (42.85%)
Equal	16 (26.66%)	14 (33.33%)
Firefighters	UK 62 est.	US 42 est.
Local	39 (62.90%)	25 (59.52%)
Organic	8 (12.90%)	13 (30.95%)
Equal	15 (24.19%)	4 (9.52%)
Motorcyclists	UK 58 est.	US 40 est.
Local	37 (63.79%)	10 (25.00%)
Organic	9 (15.51%)	22 (55.00%)
Equal	12 (20.68%)	8 (20.00%)
Others	UK 46 est.	US 54 est.
Local	23 (50.00%)	17 (31.48%)
Organic	16 (34.78%)	21 (38.88%)
Equal	7 (15.21%)	16 (29.62%)
All	UK 226 est.	US 178 est.
Local	119 (52.654%)	70 (39.32%)
Organic	57 (25.221%)	66 (37.078%)
Equal	50 (22.123%)	42 (23.595%)
Organic, local, or equal/no preference (2002-3 unisex, <i>stated</i>)		
Academics	UK 34/60 (57% stated)	US 34/42 (81% stated)
Local	18 (52.94%)	11 (32.35%)
Organic	11 (32.35%)	15 (44.11%)
Equal	5 (14.70%)	8 (23.52%)
Firefighters	UK 30/62 (48% stated)	US 26/42 (62% stated)
Local	20 (66.66%)	16 (61.53%)
Organic	5 (16.66%)	8 (30.76%)
Equal	5 (16.66%)	2 (7.60%)
Motorcyclists	UK 29/58 (50% stated)	US 26/40 (65% stated)
Local	19 (65.51%)	11 (42.30%)
Organic	8 (27.58%)	14 (53.84%)
Equal	2 (6.89%)	1 (3.84%)
Others	UK 13/46 (28.3% stated)	US 21/54 (38.9% stated)
Local	8 (61.53%)	8 (38.09%)
Organic	4 (30.76%)	12 (57.14%)
Equal	1 (7.69%)	1 (4.76%)
All	UK 106/226 (46.9% stated)	US 107/178 (60.1% stated)
Local	65 (61.32%)	46 (42.99%)
Organic	28 (26.41%)	49 (45.79%)
Equal	13 (12.26%)	12 (11.21%)

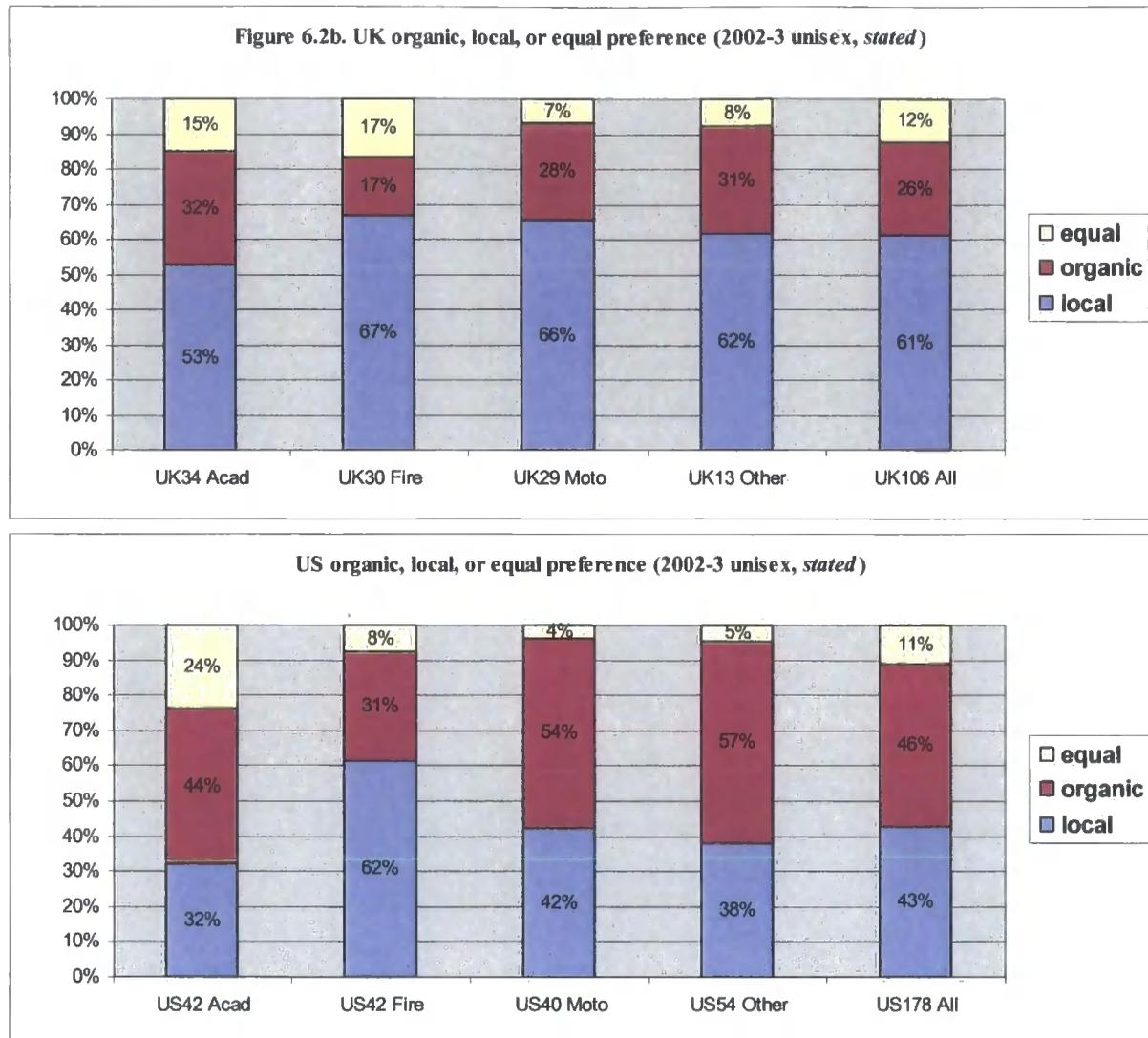
Familiarity with Puget Sound fostered assumptions that Seattle consumers were relatively steeped in organic discourses, and from food & risk surveys I *estimated* that almost 12% more Seattleites (37.07%) preferred organics over local food, compared to Newcastle (25.22%).

Table 6.2b. Organic, local or equal/no preference (gendered, estimated & stated)					
UK Acad 60 estimated	Male 24	Female 36	US Acad 42 estimated	Male 15	Female 27
	Loc 13 (54.16%)	Loc 11 (30.55%)		Loc 4 (26.66%)	Loc 6 (22.22%)
	Org 4 (16.66%)	Org 16 (44.44%)		Org 3 (20.00%)	Org 15 (55.55%)
	Eql 7 (29.16%)	Eql 9 (25.00%)		Eql 8 (53.33%)	Eql 6 (22.22%)
UK Acad 28/60 (46.66%) stated	Male 11/24 (45.83%)	Female 17/36 (47.22%)	US Acad 33/42 (78.57%) stated	Male 12/15 (80.00%)	Female 21/27 (77.77%)
	Loc 6 (54.54%)	Loc 8 (47.05%)		Loc 5 (41.66%)	Loc 6 (28.57%)
	Org 3 (27.27%)	Org 8 (47.05%)		Org 3 (25.00%)	Org 12 (57.14%)
	Eql 2 (18.18%)	Eql 1 (5.88%)		Eql 4 (33.33%)	Eql 3 (14.28%)
UK Fire 62 estimated	Male 59	Female 3	US Fire 42 estimated	Male 39	Female 3
	Loc 36 (61.01%)	Loc 3 (100.00%)		Loc 23 (58.97%)	Loc 2 (66.66%)
	Org 8 (13.55%)	Org 0 (0.00%)		Org 12 (30.76%)	Org 1 (33.33%)
	Eql 15 (25.42%)	Eql 0 (0.00%)		Eql 4 (10.25%)	Eql 0 (0.00%)
UK Fire 30/62 (48.38%) stated	Male 29/59 (49.15%)	Female 1/3 (33.33%)	US Fire 26/42 (61.9%) stated	Male 23/39 (58.97%)	Female 3/3 (100.00%)
	Loc 19 (65.51%)	Loc 1 (100.00%)		Loc 14 (60.86%)	Loc 2 (66.66%)
	Org 5 (17.24%)	Org 0 (0.00%)		Org 7 (30.43%)	Org 1 (33.33%)
	Eql 5 (17.24%)	Eql 0 (0.00%)		Eql 2 (8.69%)	Eql 0 (0.00%)
UK Moto 58 estimated	Male 41	Female 17	US Moto 40 estimated	Male 28	Female 12
	Loc 23 (56.09%)	Loc 14 (82.35%)		Loc 8 (28.57%)	Loc 2 (16.66%)
	Org 7 (17.07)	Org 2 (11.76%)		Org 15 (53.57%)	Org 7 (58.33%)
	Eql 11 (26.82%)	Eql 1 (5.88%)		Eql 5 (17.85%)	Eql 3 (25.00%)
UK Moto 29/58 (50.00%) stated	Male 21/41 (51.21%)	Female 8/17 (47.05%)	US Moto 26/40 (65.00%) stated	Male 19/28 (67.85%)	Female 7/12 (58.33%)
	Loc 13 (61.90%)	Loc 6 (75.00%)		Loc 9 (47.36%)	Loc 2 (28.57%)
	Org 6 (28.57%)	Org 2 (25.00%)		Org 9 (47.36%)	Org 5 (71.42%)
	Eql 2 (9.52%)	Eql 0 (0.00%)		Eql 1 (5.26%)	Eql 0 (0.00%)
UK Other 46 estimated	Male 23	Female 23	US Other 54 estimated	Male 19	Female 35
	Loc 8 (34.78%)	Loc 15 (65.21%)		Loc 6 (31.57%)	Loc 11 (31.42%)
	Org 12 (52.17%)	Org 4 (17.39%)		Org 4 (21.05%)	Org 17 (48.57%)
	Eql 3 (13.04%)	Eql 4 (17.39%)		Eql 9 (47.36%)	Eql 7 (20.00%)
UK Other 13/46 (28.26%) stated	Male 5/23 (21.73%)	Female 8/23 (34.78%)	US Other 21/54 (38.88%) stated	Male 7/19 (36.84%)	Female 14/35 (40.00%)
	Loc 2 (40.00%)	Loc 6 (75.00%)		Loc 3 (42.85%)	Loc 5 (35.71%)
	Org 3 (60%)	Org 1 (12.5%)		Org 4 (57.14%)	Org 8 (57.14%)
	Eql 0 (0.00%)	Eql 1 (12.5%)		Eql 0 (0.00%)	Eql 1 (7.14%)
UK All 226 estimated	Male 147	Female 79	US All 178 estimated	Male 101	Female 77
	Loc 80 (54.42%)	Loc 43 (54.43%)		Loc 41 (40.59%)	Loc 21 (27.27%)
	Org 31 (21.08%)	Org 22 (27.84%)		Org 34 (33.66%)	Org 40 (51.94%)
	Eql 36 (24.48%)	Eql 14 (17.72%)		Eql 26 (25.74%)	Eql 16 (20.77%)
UK All 100/226 (44.24%) stated	Male 66/147 (44.89%)	Female 34/79 (43.03%)	US All 106/178 (59.55%) stated	Male 61/101 (60.39%) ok	Female 45/77 (58.44%)
	Loc 40 (60.60%)	Loc 21 (61.76%)		Loc 31 (50.81%)	Loc 15 (33.33%)
	Org 17 (25.75%)	Org 11 (32.35%)		Org 23 (37.70%)	Org 26 (57.77%)
	Eql 9 (13.63%)	Eql 2 (5.88%)		Eql 7 (11.47%)	Eql 4 (8.88%)



Follow-up contacts were made with those whose organic/local preference was vague, prompting many to make a decision. They were asked: *When food products cost and appear similar, but one's labelled local and the other organic, which do you buy if you have money for just one?*

Table 6.2a shows that 106 of *all* original Newcastle 226 respondents ($106/226 = 46.9\%$ return) *stated* a preference between food labelled organic or local, and far fewer (26.41%) chose organic compared to Seattle (45.79% from 107/178 respondents, a 60.1% return). This *stated* gap hints lingering uncertainty about definitions of organics in Newcastle, where the Tyneside area's strong defensive localism (Winter 2003) is shown with nearly two-thirds of *all* (61.32%) *stated*

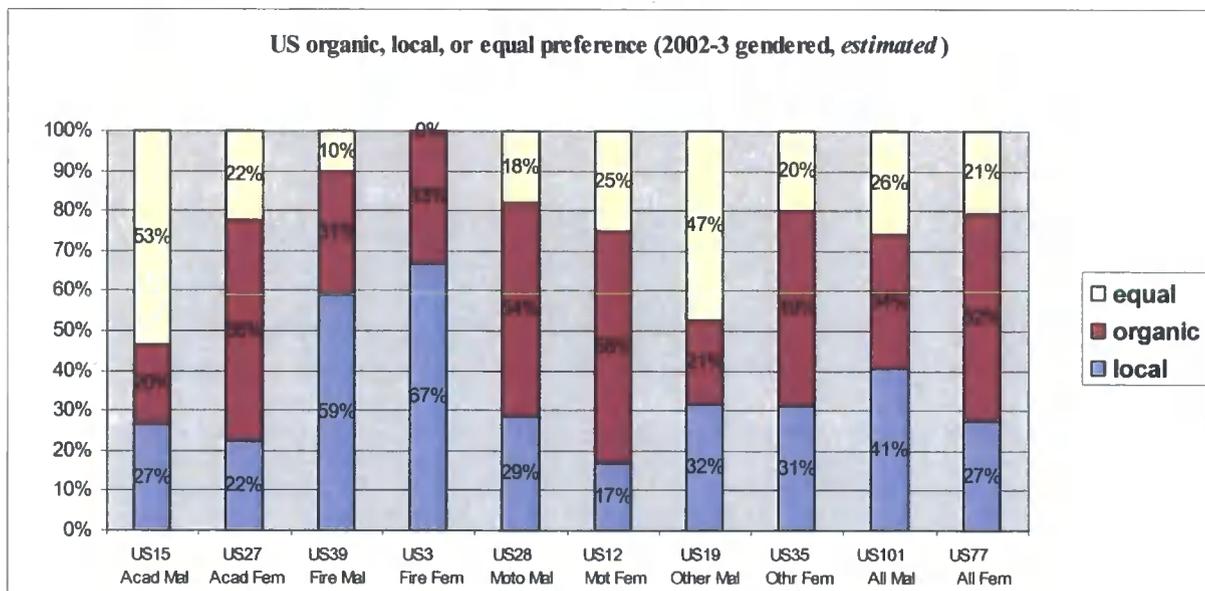
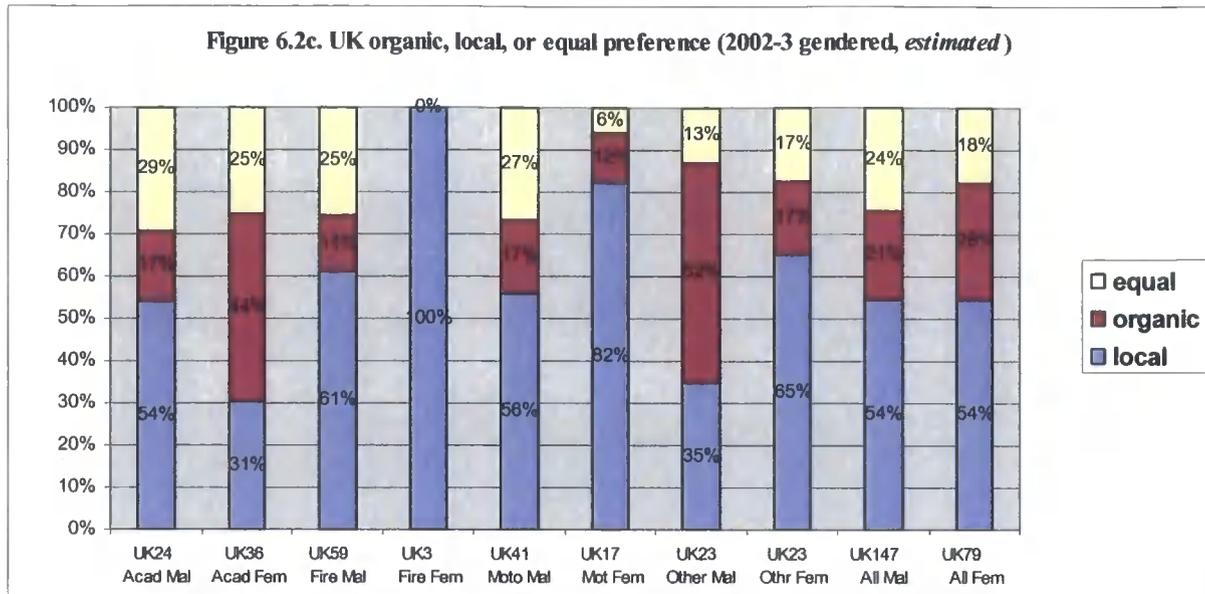


preferences indicating local, compared to 43% in Seattle. This *stated* gap of nearly 20% suggests that, while much greater organic preference was found in Seattle pilot studies, *estimates* were conservative. The proportions of organic, local, or equal preferences are so similar in bar chart Figures 6.1a&b that, arguably, judgements made in *estimated* preferences were so accurate that months spent in follow-ups to confirm them were unnecessary. If there is a surprise, it is that *stated* organic preferences of Newcastle motos (27.58%) were 12% higher than *estimates* (15.51%), and it is possible that this higher organic demand in follow-ups is slightly biased by easier telephone or email contact with bikers who happen to be organically-inclined. *All* unisex Newcastle *stated* preference was much stronger for local (61.32%) than organic food (26.41%),

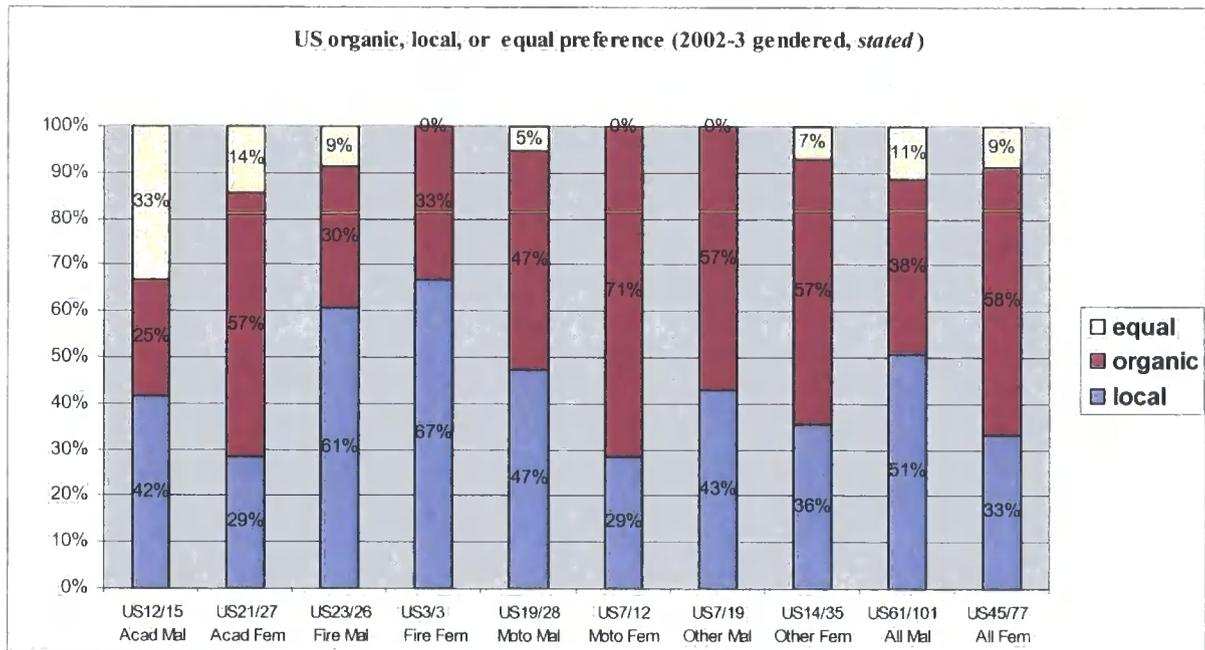
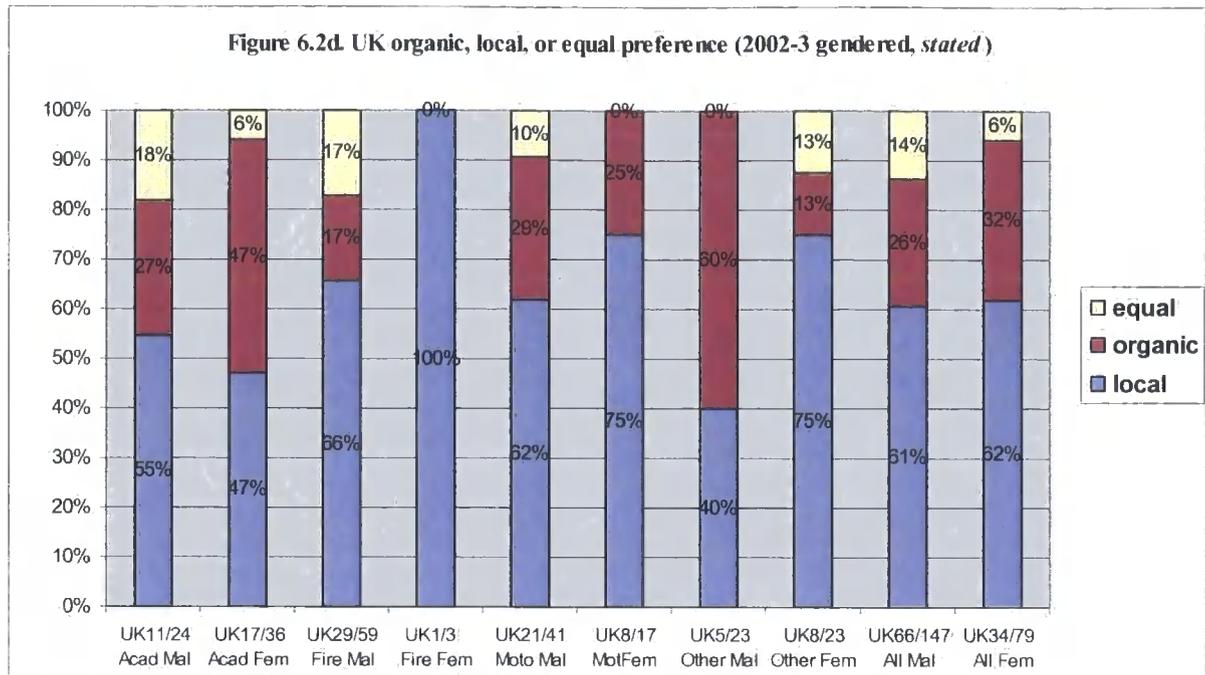
although demand for the latter was impressive. Unisex *estimates* that *all* Seattle's overall local (39.32%) preference slightly exceeded that of organics (37.07%) were reversed in follow-up statements for local (42.99%) and organics (45.79%). This might follow the greater availability around Puget Sound of food that is both organic and local, as well as some consumers' continuing conflation of organic with local provenance. Consumers are increasingly nonplussed by the food miles debate. Some, who assumed that importing organics from poor countries improved labour and environmental conditions in them, are confused by reports that air freight exacerbates climate change, and consider a turn to local.

Gendered preferences: In Figures 6.2c and 6.2d below, the proportions of *estimated/stated* preferences for organic, local or equal are roughly parallel, indicating methodological reliability of formulae used in estimates. Of the original 24 male acads, 11 *stated* preferences as 27% organic, 10% more than *estimated*. This could mean too much weight was given to survey answers suggesting preference for local food over organic, or that subjects' tastes shifted toward organic in the interval between questionnaires and follow-ups, but a 10% shift is not enormous considering that *stating* males were just 11/24, or 46% of the original sample of 24. *Stated* organic preferences are also a bit higher for UK moto males (est.17%/st.29%), and UK moto females (est.12%/st.25%). What is remarkable is the closeness of *estimated/stated* organic preferences for *all* UK males (21%/26%), as well as by *all* UK females (28%/32%), compared to *all* US males (34%/38%) and *all* US females (52%/58%). As for UK local preference, female academics stated 16% higher (47%) preference for local, compared to estimates of just 31%; this is the apparent result of the equal/no preference portion of UK female acads declining from 25% in estimates to just 6% in statements.

Estimated/stated organic preferences are close for *all* aggregate Seattle males (34%/38%) and females (52%/58%). The eye is drawn to high organic preference *estimates* for female acads of 56%, male motos of 54%, and female motos at 58%. *Stated* preferences were close to those for female acads at 57%, but lower for male motos (47%), while female motos (71%) showed the strongest *stated* organic preference of any gendered sub-group, well above the 58% organic preference of all Seattle females. Bearing in mind that just 7/12 of the original group of Seattle female bikers *stated* preferences, their 71% partiality for organics is almost three-times *stated* organic preference of the 8/17 Newcastle female bikers of 25%.



In concluding this section, UK and US *estimated/stated* preferences follow this pattern: organic preference is stronger among female acads, fires, motos, and all - than in males – except for Newcastle female fires and motos. *Why?* Firefighting and motorcycling are stereotyped as male bastions. One might imagine that a Newcastle woman trying to fit into such activities might assume an ethos of disdain for foods considered elitist or undemocratic. Unfortunately, the sample of gender-disaggregated female fires is too small for firm conclusions: Just 1 of 3 of



the Newcastle female fires made a *statement*, and it was for local, while 2 of the 3 Seattle female fires opted for organic, the other for local. *Stated* organic preference at a low 14% by 29/59 Newcastle male fires, along with their 66% preference for local food, probably mirror a male

culture vaunting local food that, with voluble exceptions, is slower to adopt organics. Newcastle fires seem to reflect more traditional working class attitudes and behaviour than fires in Seattle.

In Seattle, data suggest the cultures around supposedly macho pursuits seem accepting of organics, with Seattle male fires and motos showing organic preferences about double those of their Newcastle male counterparts (The exception to this pattern being 21/41 male Newcastle bikers who *stated* a noteworthy 29% preference for organics, compared to just 25% of 8/17 female bikers *stating*). It can be said that the finding for Newcastle female bikers is more significant than for women firefighters because it is from a larger sample.

In both cities, male motos seem more amenable to organics than male fires. If we apply Lupton's (1999) understanding of risk-takers, or Lyng's (1990) portrayal of edge-workers to motorcyclists, we can imagine they question conventional food just as they question the pervasive culture of automobility (Urry 2004. My idea of motobility is discussed in chapter 7.). A new generation of male motos in Newcastle seems, like bikers in Seattle, more accepting of organics than fires, and Newcastle women motos' 25% stated preference for organics could rise to the 71% of Seattle women bikers eventually, *ceteris paribus*.

Finally, *stated* preference for local food in Seattle was 61% among the 23/26 answering male fires, but just 33% of an admittedly small group of 3/3 *stating* female fires. The *stated* local preference of *all* Seattle males is 51% (50.81%), about 11% (10.95%) lower than all Newcastle males (61.76%). Organics are clearly on Newcastle's culinary map, but organic preferences are more pronounced in Seattle.

The 38% organic preference of all Seattle men compared to 26% of all Newcastle men is significant – but less impressive than all Seattle women's robust 58% organic preference, compared to 32% of all Newcastle women.

This resonated with Lucy Jarosz' (2000) finding that women are high profile actors in organic and alternative food networks. Nor is it surprising to those mindful of the ancient 'role of women as providers and mediators between the raw and the cooked; between nature and culture' (Atkins & Bowler 2001: 311).

Q3: Did you and/or your family/household dine on organics yesterday?

Please see Tables 6.3a&b and Figures 6.3a&b below. Data from the 404 respondents comprise an empirical snapshot of gaps between consumer attitudes and domestic behaviour on organics.

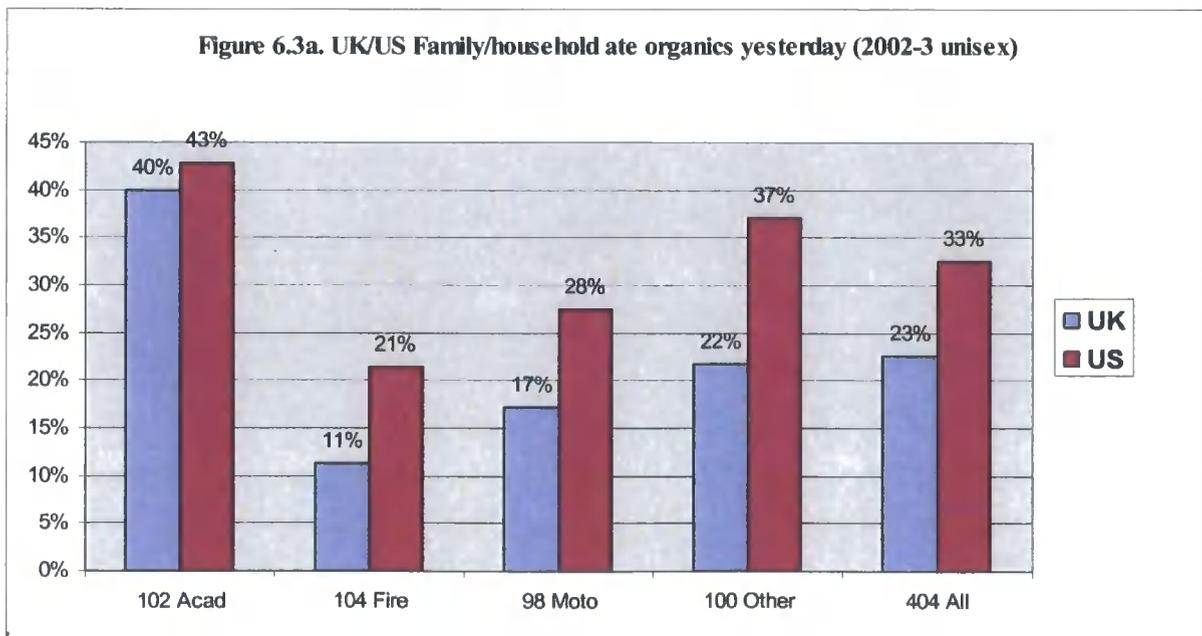
Table 6.3a. Family/household ate organics yesterday (2002-3 unisex)

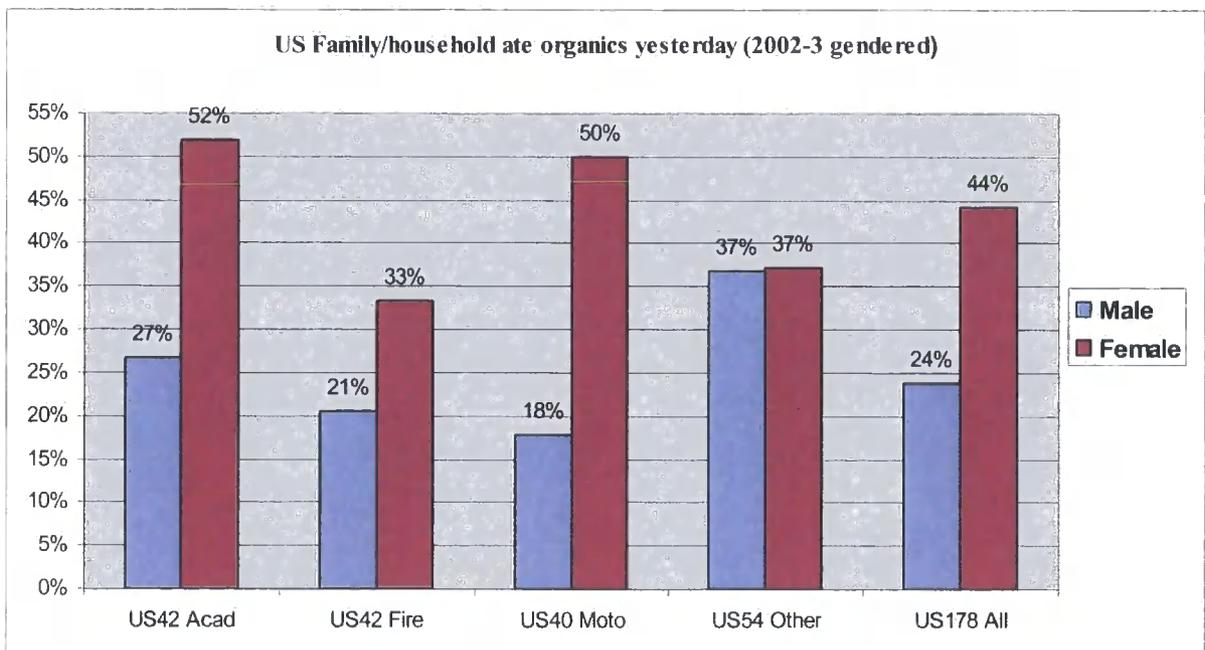
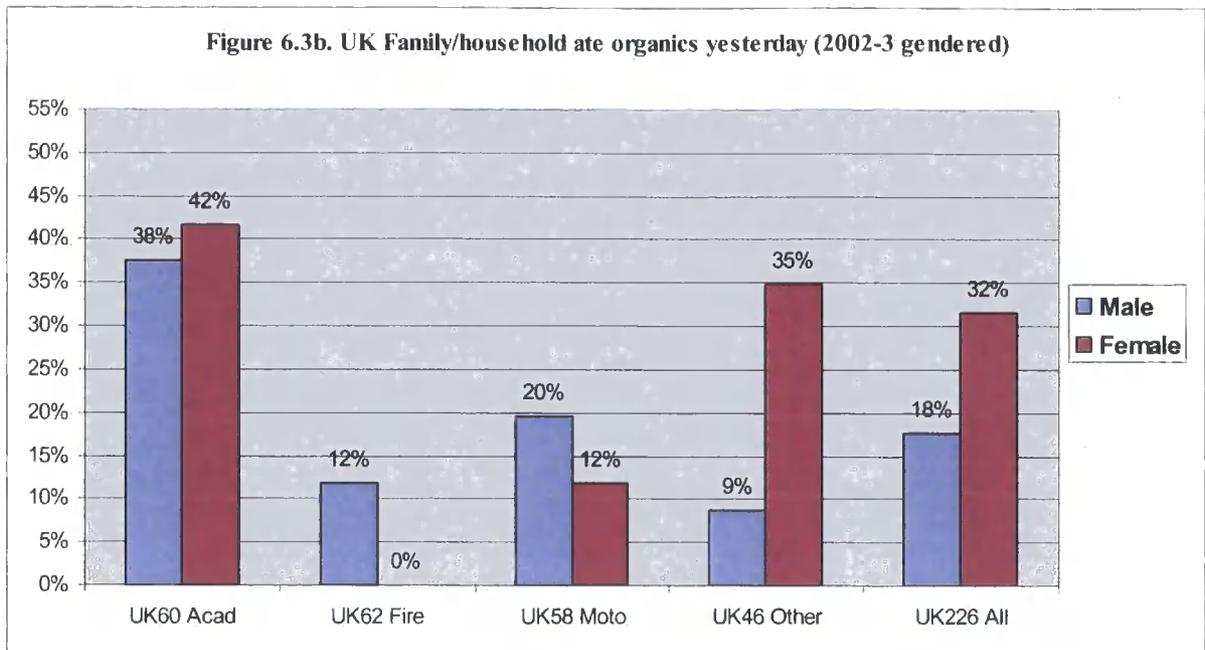
UK	Newcastle	Seattle	US	Total
60 Acad	24 (40.00%)	18 (42.85%)	42 Acad	102 Acad
62 Fire	7 (11.29%)	9 (21.42%)	42 Fire	104 Fire
58 Moto	10 (17.24%)	11 (27.5%)	40 Moto	98 Moto
46 Other	10 (21.73%)	20 (37.03%)	54 Other	100 Other
226 All	51 (22.56%)	58 (32.58%)	178 All	404 All

Table 6.3b. Family/household ate organics yesterday (2002-3 gendered)

Newcastle	Male	Female	Seattle	Male	Female
UK60 Acad	9/24 (37.50%)	15/36 (41.66%)	US42 Acad	4/15 (26.66%)	14/27 (51.85%)
UK62 Fire	7/59 (11.86%)	0/3 (0%)	US42 Fire	8/39 (20.51%)	1/3 (33.33%)
UK58 Moto	8/41 (19.51%)	2/17 (11.76%)	US40 Moto	5/28 (17.85%)	6/12 (50.00%)
UK46 Other	2/23 (8.69%)	8/23 (34.78%)	US54 Other	7/19 (36.84%)	13/35 (37.14%)
UK226 All	26/147 (17.68%)	25/79 (31.64%)	US178 All	24/101 (23.76%)	34/77 (44.15%)

Figure 6.3a. UK/US Family/household ate organics yesterday (2002-3 unisex)





Most respondents checked boxes indicating whether or not organics were consumed in their domestic situation the previous day; for those who didn't, straightforward deduction resolved the question. For example, one Newcastle-area academic, checked the 'no' box on the question asking if he ate organics, but wrote 'occasionally' beside it. For the question asking if his

family/household ate organics yesterday, Gerard wrote 'Sainsbury's Indian ready meal...', and I deduced that no organics were eaten. In a follow-up interview he confirmed no organics were eaten, saying he believed organics were better for the environment, but bought none personally and ate them only occasionally when others provided them.

Excepting academics, whose UK/US rates are very close, Newcastle family/household rates trail Seattle at least 10% for all unisex groups. All Newcastle respondents (22.56%) report about 11% less domestic organics use than all in Seattle (32.58%).

Important conclusions are drawn from these unisex domestic data. While the UK Soil Association (2002) said 79% of households make at least one organic purchase annually - with a core of 8% making 60% of purchase – nearly 23% (22.56%) of all Newcastle respondents reported eating organics in a single day.

This is remarkable in a city still stereotyped as a working class haven of the chip buttie, but credible when national organic sales doubled in about five years. Did questionnaire bias inflate organic reporting? Possibly, in some cases, but the fact that respondents frequently asked my own preferences supports the fundamental reliability of the results. Newcastle acads (40%) were over three-times as likely to report domestic organics use as fires (11.29%), but motos (17.24%) already surpass the 15% share of working class people around Edinburgh found to eat organic occasionally, a decade before by Tregear *et al.* (1994).

Gendered family/household use: In a 2:1 pattern, all UK/US women report eating organics in domestic meals almost twice as often as men. Nearly 32% of all Newcastle females (31.64%) report organics in their last domestic meal compared to just 18% of men. Close to half Seattle females (44.73%) report organics in their last domestic meal compared to less than a quarter of males (23.52%).

In international comparisons, almost 32% *all* Newcastle females (31.64%) domestic rates trail *all* Seattle women (44.73%) by over 13%. *All* Newcastle males (17.68%) report nearly 6% less domestic use than *all* Seattle males (23.52%).

Sub-group data vary. For example none of the 3 Newcastle female firefighters (0%) reported organics at their last home meal, compared to almost one-eighth of Newcastle firemen (11.86%). One surprise is that slightly more Newcastle male motorcyclists (19.51%) reported organics at their last home meal than Seattle male motos (17.85%) – although the reverse is the case for Newcastle female motos (11.76%) and Seattle female motos (50%).

Concluding this section on family/household use, it is worth noting that spouses were not routinely recruited to answer the surveys, but the database does contain several spousal pairs, and on several occasions interviews determined that male partners were oblivious to organic components of family menus sourced by their female partners.

It remains possible that males and females have equally accurate memories of their previous day's household organic consumption. But the data persuade me that males are often less knowledgeable about household diets than females and often less cognisant of routine domestic consumption.

Based on this, Newcastle will likely advance on the conventional-to-organic continuum toward the rate already found in Seattle, increasing its depth of organic use, especially if organics are sourced locally, with women spearheading consumption increases as men follow.

However, while women seem the *prima mova* in Newcastle organics, any near- or intermediate consumption gains will likely be pushed by women among the general population and academics for, as we have seen, Tyneside female fires and motos seem relatively uninterested in organics, compared to local food.

Q4: Did you serve organics to guests at your last home meal?

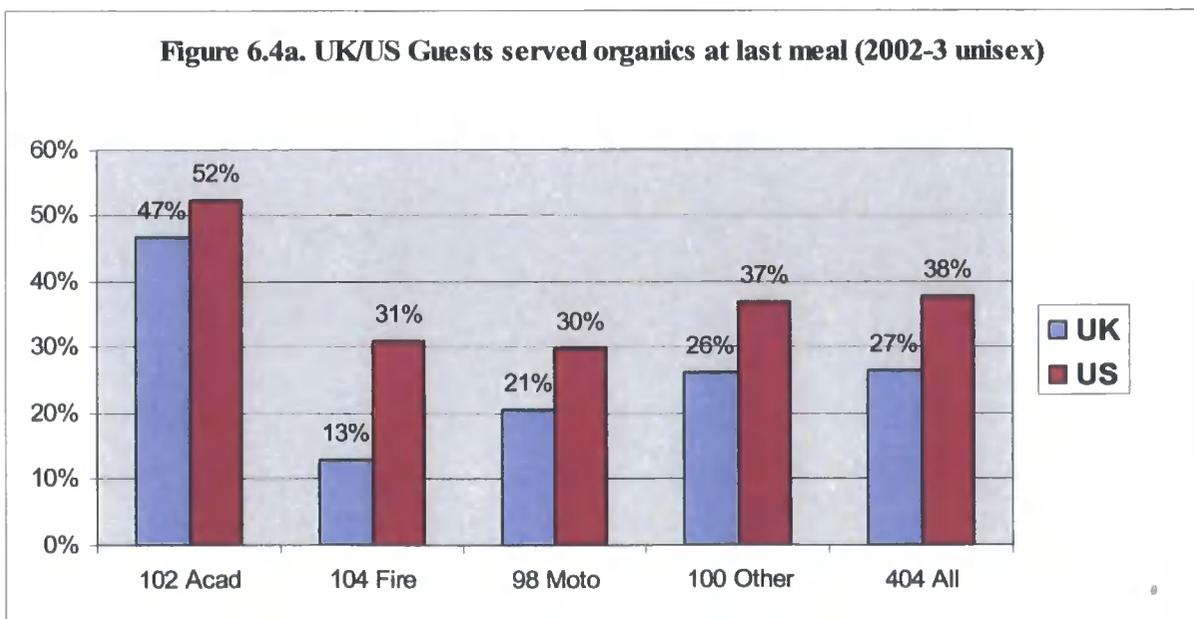
See Tables 6.4a&b and Figures 6.4a&b. Once again, acads led the use of organics with close UK/US rates, while Seattle use by fire and moto sub-groups led Newcastle's about 10%. Display

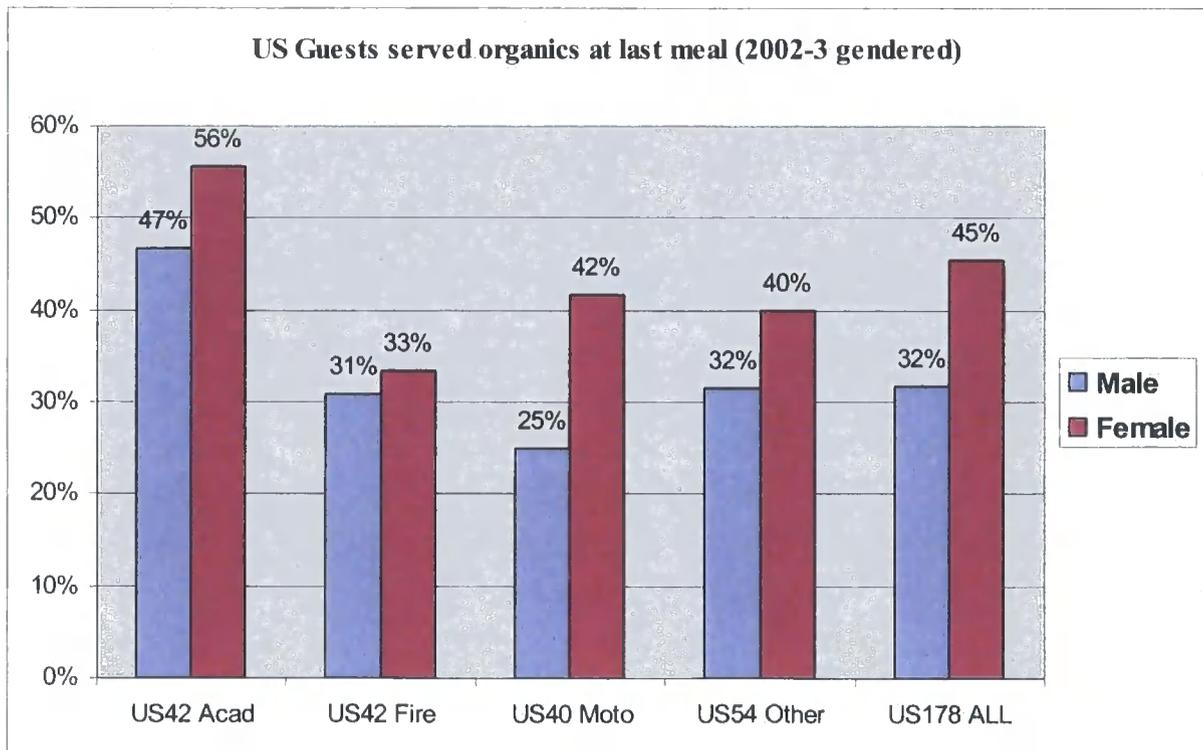
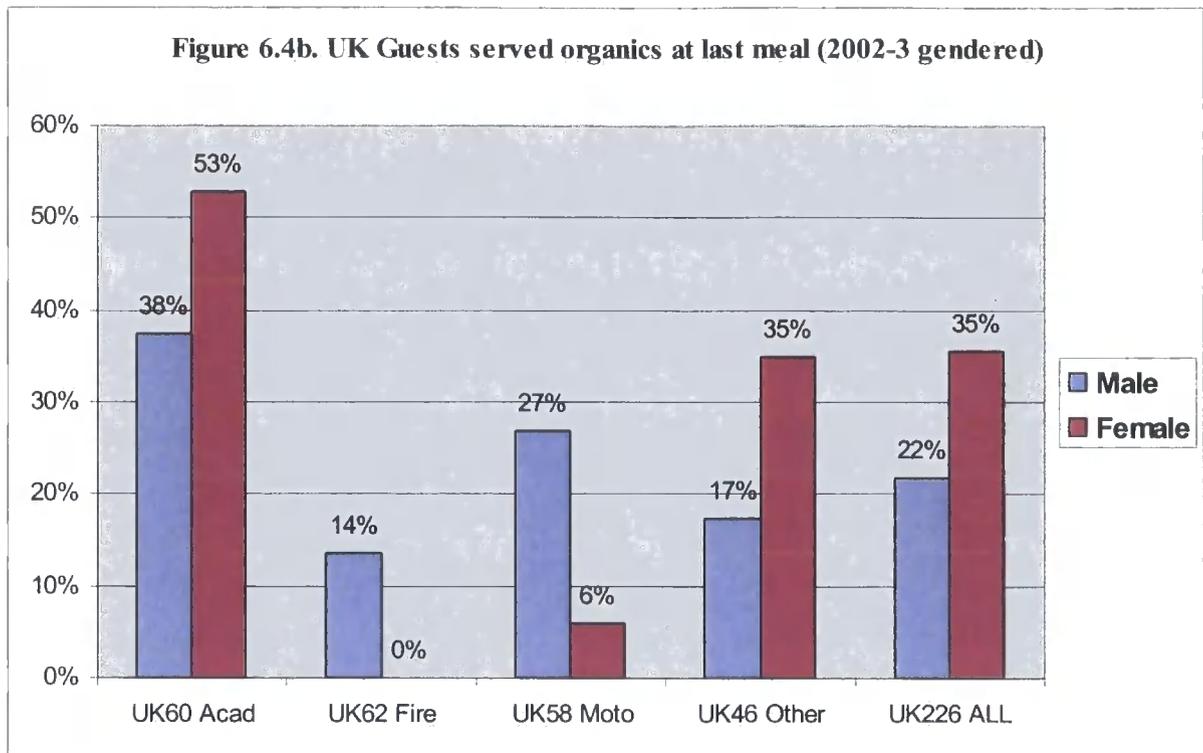
Table 6.4a. Guests served organics at last home meal (2002-3 unisex)

UK	Newcastle	Seattle	US	Total
60 Acad	28 (46.66%)	22 (52.38%)	42 Acad	102 Acad
62 Fire	8 (12.90%)	13 (30.95%)	42 Fire	104 Fire
58 Moto	12 (20.68%)	12 (30.00%)	40 Moto	98 Moto
46 Other	12 (26.08%)	20 (37.03%)	54 Other	100 Other
226 All	60 (26.54%)	67 (37.64%)	178 All	404 All
147 UK males	32 (21.76%)	31 (30.69%)	101 US males	248 UK/US All males
79 UK females	28 (35.44%)	36 (46.05%)	77 US females	155 UK/US All females

Table 6.4b. Guests served organics at last home meal (2002-3 gendered)

Newcastle	Male	Female	Seattle	Male	Female
UK60 Acad	9/24 (37.50%)	19/36 (52.77%)	US42 Acad	7/15 (46.66%)	15/27 (55.55%)
UK62 Fire	8/59 (13.55%)	0/3 (0.00%)	US42 Fire	12/39 (30.76%)	1/3 (33.33%)
UK58 Moto	11/41 (26.82%)	1/16 (5.88%)	US40 Moto	7/28 (25.00%)	5/12 (41.66%)
UK46 Other	4/23 (17.39%)	8/23 (34.78%)	US54 Other	6/19 (31.57%)	14/35 (40.00%)
UK226 All	32/147 (21.76%)	28/79 (35.44%)	US178 All	32/101 (31.68%)	35/77 (45.45%)





of social capital, distinction or 'class taste' are often factors in presentation of ethnic, foreign, healthy, organic, or local foods when people host guests at home meals (Bourdieu 1984: 190; Guthman 2003: 52). Warde & Martens (2000: 56) find that 'entertaining...was expected to take more time and effort than everyday cooking, dinner parties ideally including various courses and dishes prepared freshly and especially for such occasions', although this formal 'template' was followed to varying degrees.

Whereas ethnic and world cuisines from India, Italy, Thailand and so on manifested cultural capital in the aspirational dinner parties of the 1980-90s, organic foods came to dinner tables in the late 1990s, sometimes reflecting more concern for animals, the environment, or the search for safety in foods identified with nature (Murdoch & Miele 1999). In UK/US 2002-3 fieldwork, an expanded organic range offered by supermarkets and alternative networks was giving people more convenient opportunities to share the meanings they associate with organics with their guests.

Unisex data show almost 38% of all Seattle respondents served organics to guests, compared to nearly 27% of all in Newcastle. Once again Seattle acads (52.38%) lead UK/US sub-groups, but Seattle fires (30.95%) and motos (30%) are catching up. Uni-sex data for Newcastle motos find more than one-fifth (20.68%) serving organics (just 10% behind Seattle bikers) and leading Tyneside fires (12.90%) by nearly 7%.

Gendered organics for guests: As expected, most gendered US subgroups, specifically acads, fires and all, had higher rates of serving organics to guests than UK sub-groups. But curious gendered effects are again observed among Newcastle motos and fires. Fewer than 6% of Newcastle female motos say guests were served organics at the last home meal. None of the three Newcastle female fires served organics to guests, compared to 14% of their fellow fires. In contrast, 33% of Seattle female fires, and 42% of Seattle female motos report that guests were served organics.

Concluding here, organics increasingly express food tastes as trendy Newcastle male motos, and Seattle motos and fires of both genders get on the bandwagon with academics. With 43% of Seattle acads and 41% of their Newcastle counterparts serving organics to guests at their last home meal, organics are *de rigueur* among many taste.

In both Newcastle and Seattle, acads, fires, motos and all unisex and gendered subgroups (except US male others) report eating organics more frequently with guests than family/household members in their last domestic meal. This supports the expectation that serving organics is a means to honour guests while upholding the host's honour.

It appears that organics are mainstream in middle and working class Seattle entertaining, as they begin to take hold in comparable Newcastle demographics.

Q5: Is BSE/vCJD in your top food risks?

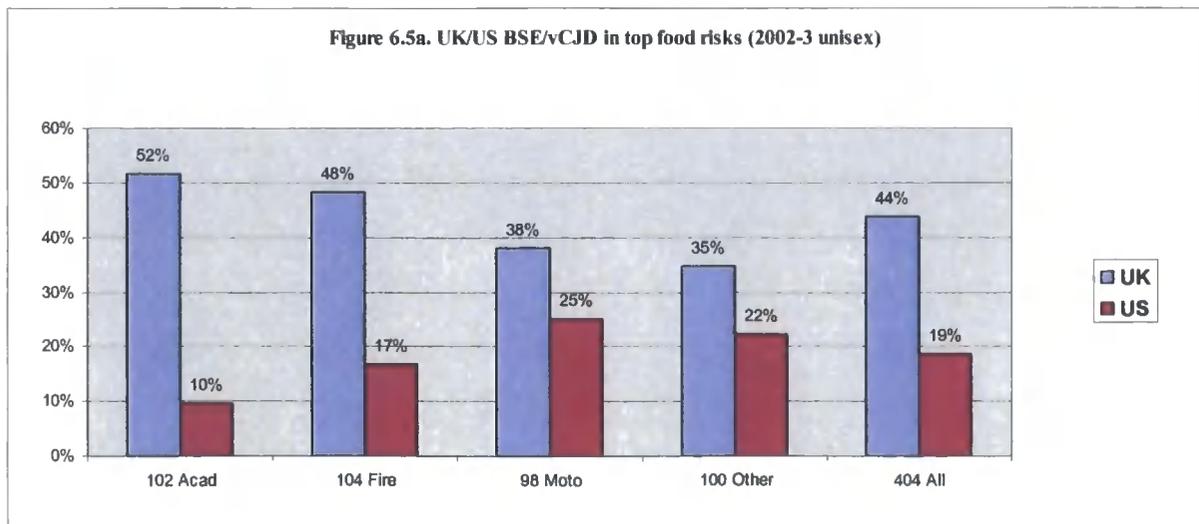
Please see Tables 6.5a&b and Figures 6.5a&b. Chapter 5 gives the exact wording of Question 27 in surveys. Seattle unisex answers indicate more concern for body image and corporeal issues such as obesity, cardiovascular disease, diabetes and obesity than to prion diseases. Overall Newcastle (43.8%) showed much higher unisex fear or risk-awareness of BSE/vCJD

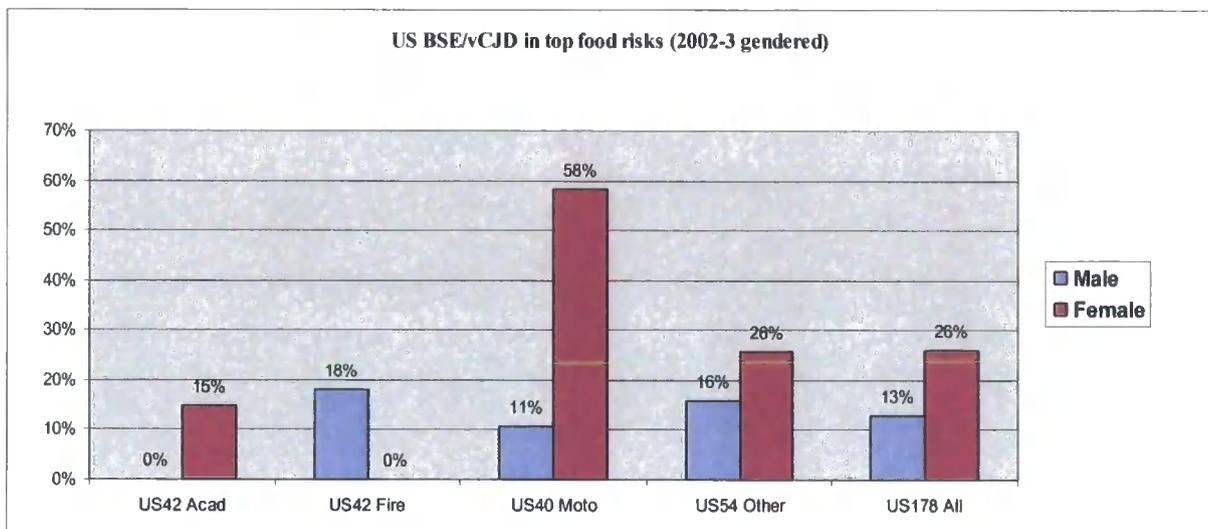
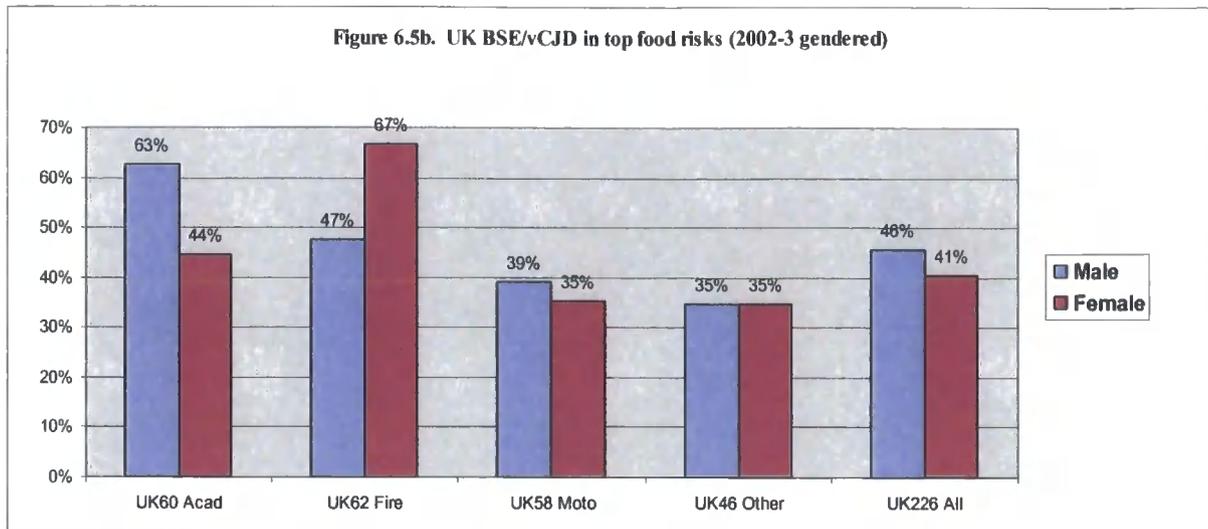
Table 6.5a. BSE/vCJD in top food risks (2002-3 unisex)

UK	Newcastle	Seattle	US	Total
60 Acad	31 (51.66%)	4 (9.52%)	42 Acad	102 Acad
62 Fire	30 (48.38%)	7 (16.66%)	42 Fire	104 Fire
58 Moto	22 (37.93%)	10 (25.00%)	40 Moto	98 Moto
46 Other	16 (34.78%)	12 (22.22%)	54 Other	100 Other
226 All	99 (43.8%)	33 (18.53%)	178 All	404 All

Table 6.5b. BSE/vCJD in top food risks (2002-3 gendered)

Newcastle	Male	Female	Seattle	Male	Female
UK60 Acad	15/24 (62.5%)	16/36 (44.44%)	US42 Acad	0/15 (0.00%)	4/27 (14.81%)
UK62 Fire	28/59 (47.45%)	2/3 (66.66%)	US42 Fire	7/39 (17.94%)	0/3 (0.00%)
UK58 Moto	16/41 (39.02%)	6/17 (35.29%)	US40 Moto	3/28 (10.71%)	7/12 (58.33%)
UK46 Other	8/23 (34.78%)	8/23 (34.78%)	US54 Other	3/19 (15.78%)	9/35 (25.71%)
UK226 All	67/147 (45.57%)	32/79 (40.50%)	US178 All	13/101 (12.87%)	20/77 (25.97%)





than Seattle (18.53%), starkest among Newcastle acads (51.66%), but paltry in Seattle acads (9.52%). The Seattle sub-group with highest BSE/vCJD awareness was motos (25%), whose reports of personal organic consumption, and organics at the last family/household meal, were also ahead of fires, although trailing acads.

Gendered awareness of BSE/vCJD: This question produced one of the most curious anomalies in the entire study. BSE/vCJD awareness remains high in the risk pantheon of Newcastle and reaches its apogee in 63% of male acads (and 2/3 of the few female fires). UK academics and educators mention BSE/vCJD among their top national food risks fully five-times more often

than their US counterparts. When males and females are disaggregated, the data for Seattle male academics is stunning: 0% of 15 Seattle male academics listed BSE/vCJD among top food risks, and just 15% of females did.

In Seattle, surveyed before mad cow was found in late 2003, it is reasonable that the disease was low priority for most consumers, although knowledge of it was rampant among Greens, funnelled by BBC reports on PBS and in the mainstream and environmentalist press. Seattle consumers frequently mentioned, in passing, that rates of Alzheimer's disease are rising, but few linked this to any possibility that vCJD was misdiagnosed as Alzheimer's. Much remains uncertain.

Nor can this chapter fully explain why the nadir of BSE-vCJD fear is reached among Seattle male acads, admittedly not a large group, but in which *not one subject* listed prion diseases. Perhaps Seattle male acads rationally perceived mad cow disease as a more remote risk than the clear and present dangers of cardiovascular diseases stalking North America which, upon reflection, can be cognitively linked to preferences and meanings of organic and local foods. At the same time, one wonders why 58% of Seattle female motos ranked BSE among top food risks. Qualitative data analysis will further explore such questions.

Conclusions

Unisex survey results indicate that academics are among leaders of organic consumption in both Newcastle and Seattle. A pro-organic pattern emerges in which acads have the highest rates of reporting organics in: personal diets, the previous day's domestic meals, or served the last time guests were hosted – at rates higher than for *all* consumers in their respective cities.

Preferences for organic or local food alter that pattern. UK unisex acads' 32% *stated* organic preference is higher than for *all* Newcastle consumers' 26%. But US acads' 44% organic preference is appreciably less than motos' 54%, and slightly below all Seattle respondents of 46% (In this case, strong organic preference by others boosted the overall rate.). Pundits claiming 'local is the new organic' point to the public's growing concern about food miles as evidence. But each new media report of BSE/vCJD likely increases organic preference at least temporarily, so the organic/local spatial question will continue to plague consumers concerned

with health but distrustful of local farming methods (see Figure 4.4; Scholten: 2006a). Suppliers who can claim both local and organic provenance could attract the most non-conventional consumers if they also show them that prices are reasonable.

Acad, fire, moto and all groups reported organics served to guests *more often than* in their last domestic meal (except Seattle others which were equal). Hosting guests resumes the unisex pattern of pro-organic acads, with 47% of Newcastle acads and 52% of Seattle acads recalling guests were served organics at their last home meal, compared to just 27% and 38% of *all* respondents in their respective cities.

Unisex data for BSE/vCJD awareness is, as discussed in the preceding section, at least 35% in each Newcastle group, and pronounced in acads at 55%. Seattle's highest unisex fear of BSE/vCJD is among motos at 25%, but very low with less than 10% of acads and 19% of all consumers listing prion diseases.

Gendered results: These reveal some under-reporting organics by male fires, motos and others – but usually not acads - compared to females including their own spouses. I noticed this several times when given the opportunity to survey both partners, unless the male was an apparent Green. There can be a variety of explanations for this, but it seems that Seattle male academics somewhat ignore routine family/household consumption, but are sensitive to menus on special occasions, or hosting important guests with distinctive foods. Suspicion lingers that a certain level of obliviousness to everyday diet is inked to their dearth of concern for BSE/vCJD.

High organic consumption in Seattle is unsurprising in Washington State which developed high certification standards years before the USDA national organic rules were published in 2002. Seattle's high education and income levels have long been linked to organic consumption, but Hartman (2004, 2006; USDA 2002a) offer nuanced demographics showing that race is a key predictor of organic consumption in the US, where Caucasians are now led by Asian and Hispanic shoppers. That Seattle had a large east Asian population from its beginning, and its Hispanic population has been growing for decades, are factors pushing organics.

My UK/US Food & Risk Surveys show that Seattle's depth of organic consumption is striking, as one-third of *all* (32.58%) respondents report organics eaten in their family or household on

the previous day – a higher rate than the 23% of the US population who buy organics regularly (Hartman 2006; USDA 2002a). Newcastle's overall familiarity with organics is rising toward Seattle's. But the depth of its consumption lags behind Seattle with less than one-quarter (22.56%) of all respondents reporting organics eaten in their domestic situation on the previous day. Yet, Newcastle's snapshot figure of 23% of households eating organics *on a given day* is significant when Hartman (2006) found just 23% of US consumers buy organics regularly.

Quantitative survey data show conclusively that mad cow disease is only one driver of the turn to organics, though it can be intrinsic to the organic turn of those knowledgeable about it.

Observers question whether products of alternative food networks are affordable and available only to upper class elites (Allen 1999; Goodman 2004). But survey data here show that citizens of cities such as Newcastle, a historic industrial hotbed, and Seattle, initially a transport node for agriculture and extraction industries, can progress on a consumption continuum from industrial diets toward quality foods including organics that are increasingly accessible to the democratic mainstream.



Figure 7.1. Seattle Pike Place farmers' market on Organic Wednesday.



Figure 7.2. Organic, local and place-linked cheese at Durham market.

CHAPTER 7 CONSUMER QUALITATIVE DATA ANALYSIS

Acad, fire, moto & other risk perceptions of BSE & organic and local food



To flesh out quantitative survey data, this chapter focuses on qualitative data from consumer sub-groups of academics, firefighters and motorcyclists compared to control groups of others and all survey respondents. The origins of qualitative data include: respondents' remarks written survey margins, emails or telephone messages from many of them in follow-ups, and notes from conversational interviews with individuals or small groups at dinner parties, markets, shops, etc. However, the principle sources of qualitative data are more formal focus groups held around Seattle and Newcastle. A few quotes here are reprised from Chapter 4, but this chapter is the prime account of data following discursive profiles and vignettes of sub-groups or cases.

Human geographers often mutter that social science is a messy process whose subjects fit awkwardly in analytical boxes. Here we do find messy subject positions in which attitudes and behaviour do not follow stereotypes of class, gender, job, lifestyle, etc. But, as the last chapter on quantitative data, some stereotypes are upheld, notably the association of academics with organics use. But the same data indicate that reflection on the sources of foods is not limited to altruistic elites, and is increasingly found in the democratic mainstream. Further, while some ask whether my methodology picks up cross-cutting dynamics such as life-course, parenting, and experience of ill health, it must be said that while 30-55 year-olds were targeted, not all were in prime health and some more elderly informants whose health is contingent on organic diets affect their younger kin's diets. It was also found that parenting, common in the 30-55 demographic, can be a gateway experience to reflection on food and risk. Acad, fire and moto sub-groups are addressed in turn, finding commonalities and differences with others and all, in intracity and intercity comparisons. While class, gender, job and lifestyle are relatively enduring categories, they are permeable by consumption turns to organic or natural foods. Now let us seek patterns in this process.

 UK/US Food & Risk Survey 



University of Durham

Department of Geography
Science Laboratories, South Road, Durham, England, DH1 3LE

Figure 7.3. Focus Group questions.



This farmer has supplied farmers markets & restaurants for two decades.

Bruce Scholten * July 2003 * B.A.Scholten@durham.ac.uk *
www.durham.ac.uk/b.a.scholten

Your name here please (alias is OK!) _____

15 mins: Welcome drinks & questionnaire.

Thanks for participating! Our research depends on your opinions. Information will be used in my PhD thesis, journal articles and conference talks. Privacy? All personal data will be held in strict confidence according to the ethical policies of University of Durham Geography Dept. Names will be changed. If you have any questions on the research, please don't hesitate to contact my super-visor Dr. Peter J. Atkins: http://www.geography.dur.ac.uk/information/official_sites/pja.html .

FOCUS GROUP QUESTIONS (90 mins)

- **30 mins: PiX, Key Words & Definitions (Go to bottom Page 2 please).**

15 mins: Your opinions: Markets? Organics? Risk?

- Does it make sense to discuss Food & Risk together?
- Academics/Firefighters/Motorcyclists face different Risks. What's your Cost/Benefit ratio?
- Do different people accept different levels of food risk? Rich, poor, educated?
- Do some groups care more about Nature (or understand Nature better) than others?
- Who buys Organic? Box & CSA? New parents? Ill people? Elites?
- Are we *passive Consumers* who eat whatever Agribusiness supplies? (Hormones in beef & milk? Alar apples? Fat-Fast-Food?) Or are we *Citizens* who can force change?
- Is Government (FDA, USDA, EPA) safeguarding food security – or big business?
- Have PCC, Trader Joes & Whole Foods changed Seattle's food scene? Permanently?
- Do you think petitions are politically effective?
 - Milk hormone (rBST/rBGH) for cows?
 - USDA 2002 National Organic Rules?
 - Saving farmland & forest?
 - Save our Creeks/Salmon?
- Are you more attracted to food labelled Local or Organic?

- Is the flurry of new Farmers Markets a sign that agribusiness is becoming more environmentally sustainable? Or are these markets just a past-time for the idle rich?
- Organic/Alternative food:
 - Does it make a difference to your Health? To Society?
 - Does it make a difference to the Environment? Animals, Air, Soil, Water?
- Genetically-Engineered food (GE/GM)
 - Do we need it? What risk/benefits does it pose?
 - Does it worry you that GE research is led by privately-funded forms like Monsanto – not public institutions that led the Green Revolution of the 1950-60s?
- Green movements
 - Are they dominated by fanatics such as the Environmental Liberation Front (ELF)?
 - Were they right about the dangers of pesticides like DDT & chemical fertilizers?

15 mins: Environment & Nature in the future?

- How do you see the future 30 years from now around Puget Sound?
 - About the same?
 - Doomed like Dolly the (cloned) Sheep?
 - Return to Ecotopia?
 - Should the rest of the USA & World follow Seattle & Puget Sound's example?

15 mins: Your conclusions.

- Do Academics, Firefighters & Motorcyclists typically have different attitudes & behavior to food, risk & the environment?
- Your final conclusions.
- Questions for me.

xxx

Thanks for your patience & participation!!

Email: B.A.Scholten@durham.ac.uk

Key Words: Please write definitions or phrases that occur to you!

- CONVENTIONAL food.
- LOCAL, ORGANIC, QUALITY food.
- BIO-TECHNOLOGY (Bt)
- GENETIC ENGINEERING/MODIFICATION (GE/GM)
- SUSTAINABILITY
- TRUST
- RISK in food systems (disease e.g. Mad Cow disease (BSE/vCJD), anorexia, bulimia...)
- RISK at work (e.g. heart disease, fire, asbestos exposure)
- RISK in hobbies (e.g. crashing, drowning, paralysis, etc.).

Focus groups

Please turn to the UK/US Food & Risk Surveys in Figures 5.3a&b and 5.4a&b. The questionnaires varied slightly, chiefly on media, to address Newcastle and Seattle populations. However focus group prompts (Figure 7.3) asking participants their definitions of key words were so similar that one version suffices. The dozen main tape-recorded FGs around Newcastle and Seattle began by offering brownies and a drink to participants as they completed surveys. They received a copy of the focus group questions as three-dozen PowerPoint slides showed actors in alternative food networks, from farmers to consumers including academics, firefighters and motorcyclists. Images were selected to evoke first, opinions on markets, organics and risks, and second, their expectations for the environment or nature on local to global scales in coming decades. In this welcome phase, participants were free to chat with each other or to ask me about my own definitions of keywords, or even factual matters on certification or biotechnology. But they were blocked from ascertaining my consumption attitudes or behaviour - even when they asked whether or not the brownies they were eating were certified organic.

Academics' profile & qualitative data¹



Figure 7.4. UK academic barbecue.



Figure 7.5. Academics toast as Seattle rain begins.

After President George W. Bush won re-election against Senator John Kerry in 2004, many pundits interpreted the result as a geographical defeat of sophisticated voters in the blue states on east and west coasts by conservative or redneck (see Jarosz & Lawson 2002) voters in the Midwestern breadbasket states. But from his adopted home in Seattle, Washington, British novelist Jonathan Raban saw a deeper divide. Raban said the election did not show a red state-blue state schism so much as rural-urban conflict (2005 Appelo). According to Raban, most

states replicate the culture war between university-ridden Seattle and its agro-industrial hinterland. Support for Raban's view is found in Joan Qazi & Theresa Selfa's (2005) analysis of the politics of AFNs in eastern Washington, where appeals to local geographies are more effective than fears of biotechnology identified with elites. In eastern Washington, dairy workers in Monsanto-Posilac-rBST baseball caps are apt to mock Seattle professors fretting over GMOs. But the profs are also feared for their suspected access to special information. In *Distinction*, Pierre Bourdieu (1984: 13) writes that his:

survey sought to determine how the cultivated disposition and cultural competence that are revealed in the nature of the cultural goods consumed... vary according to the category of agents and the area to which they are applied, from the most legitimate areas such as painting or music to the most 'personal' ones such as clothing or furniture or cookery...

As soon as my thesis topic was confirmed, academics were chosen as an archetypal consumer sub-group. This vignette explains why. UK dons know that according to Prof. Hugh Pennington 2000; also Scholten 2007d): 'There is no doubt at all that BSE is an English disease'. So it seems unremarkable that 40% of my Newcastle acad respondents served organics to their families the day before. Yet, despite expert assurances that humans can not get vCJD from milk, one local academic chose organic rather than conventional milk - but continued to smoke cigarettes which experts agree is dangerous. Sadly, smoking was the probable cause of death of this academic's parent, a physician who worked strenuously for public health but died prematurely. That a distinguished academic avoids the miniscule threat of BSE/vCJD in milk, while continuing to smoke can be explained by the addictive properties of nicotine. But it also illustrates the cognitive dissonance between consumer knowledge, attitudes and behaviour.

Are academics, not generally trained in agriculture, expected to understand the merits of organic or local foods? Yes, according to Bourdieu (1984: 90) who said secondary teachers were judged more competent than those in professions, or public sector executives and engineers to judge abstract painting. In other words people with higher incomes and more responsible positions were judged to be culturally *less* competent to judge art than educators or scholars who may not have been educated in art. Thus if academics feel expected to know something about a cultural phenomenon such as the organic boom they may actively seek to learn about it. Bourdieu (1984: 78-79) links persons' 'infant' or 'native world' and class to their dispositions: The way clothes, furniture and food are bought. Thus the mode of acquiring furniture (department store, antique-

dealer, shop, or flea-market) depends at least as much on social origin as on schooling. One thing Bourdieu is showing is the difference between educational capital and class. He finds that academics born into the upper classes with very high educational qualifications (aggregation grand école 60.5%) buy from high class antique dealers more often than less refined auctions, flea markets, specialised shops or department stores - compared to those whose social origin was, say, the working or middle classes (43%) – *but not as often as people born into the upper classes but possessing lower than baccalaureate degrees (65.5%)*.

Deep explorations of class are beyond this study, but space must be given to insights on the interplay of diet and nine classes identified by Pulitzer Prize-winning Paul Fussell in the US. In his painfully accurate book *Class* (1983: 12, 48) Fussell uses Vance Packard's (1955) *status systems* with Weberian notions of *status* and *party* political links, combining the three into his concept of class with the emphasis on *status* – while wishing the American lexicon included 'caste' since it expresses 'the rigidity of class lines here' (Fussell 1983: 12). Fussell finds: 1. Top out-of-sight, 2. Upper, 3. Upper middle, above a mid cohort of... 4. Middle, 5. High proletarian, 6. Mid-proletarian, 7. Low-proletarian, 8. Destitute, and 9. Bottom out-of-sights. Fussell (1983: 48) writes: 'Because 62% of Americans are overweight, a cheap way to achieve a sort of distinction is to be thin. .. It's the three prole classes that get fat...' Fussell (1983: 49-50) also cites Jonathan Raban for proposing a:

Fatness Map, which would indicate that the fattest people live in areas where the immigration has been the most recent and 'ancestral memories of hunger closest... The flab capital of the USA should be located... in the triangle of Minnesota, Iowa and the Dakotas.

Bourdieu extends cultural competence from the fine arts to furniture and cookery. An academic whose family has enjoyed at least one generation in the upper class is more apt to buy from antique shops than IKEA. In Table 7.1 below, I place their purchases are on a continuum from industrialised conventional food on the left, culminating on the right with the most distinguished food items, i.e. organic products from local farms. This draws on my inference that organic or local consumption from AFNs can be a high culture signal in a double hermeneutic with low culture agribusiness (Scholten 2005 RGS-IBG). This may signal health concerns – but Seattle writer Roger Downey (2002) hints it is also one of 'the innumerable tiny ways in which being a snob is defined hereabouts'. Table 7.1 is my map of purchases of furniture, or organic and local food by people of varying social capital.

Table 7.1. Bourdieu's furniture spectrum applied to organic and local food.

Furniture Paris, France	Department store	Specialised shop	Flea market	Auction	Antique- dealer
Furniture Newcastle, UK	Debenhams, DSF, MFI	Fenwick's, Barker & Stonehouse	Craft markets & fairs	Auction	Antique-dealer
Furniture Seattle, US	K-Mart, Levitz, Sears	Frederick & Nelson, IKEA	Craft markets & fairs	Auction	Antique-dealer
Food	Conventional, industrial, globally-sourced food to... organic and/or local food				
Food Newcastle, UK	Aldi, Lidl, Asda, Tesco, Safeway, Morrison's	Sainsbury, Waitrose, Out- of-this-World	Newcastle or Durham indoor markets daily	Farmers' markets weekly	Broom House local organic meat. Butterby boxes.
Food Seattle, US	Costco, Fred Meyer, Wal- Mart, Safeway,	Central Market, Whole Foods, QFC	Roadside and ethnic food stands daily	Farmers' markets daily & weekly	Whistling Train Farm local org. Pioneer boxes.

Scholten 2007

The point is that academics are expected to acquire certain cultural currencies – just as *creatives* in global financial and legal services must navigate world cuisines, music, ethnic, racial and gender differences (Binnie & Skeggs 2004). Acads were included in this study first because my UK/US contacts saw them as risk-averse, and second because they were seen as leading consumers of organic food. Whether or not acads are more prone to social display than other groups, the last chapter showed they put organics where their mouth is: 77-88% of acad respondents eat organics, at rates 10-20% higher than firefighters and motorcyclists. Many acads also served organics to family or guests in a last home meal.

Academics are among those in service economies expected to be au courant with an ever-widening array of cuisines. In the late-1990s it was possible to find consumers in pit villages near Newcastle who said they had never eaten Italian spaghetti. But their children or grandchildren will learn the cuisines of India, Japan, Mexico, and Thailand if they are to climb the social ladder. Whether or not national cuisines are *authentic* is discussed by many (see Appadurai 1988, Phil Crang 1995, Bell & Valentine 1997: 126, Crang *et al.* 2003, Hobsbawm & Ranger 1983). When Newcastle customers at Harry Ramsden fish restaurants pay a moonlighting opera singer to perform over their cod, the custom may actually be of short tradition. Likewise, newcomers to Seattle coffeehouses imagining that the jargon of customers and baristas is local tradition would be wrong. Such performativities are trained into staff who,

in turn, condition customers to perform the coffee encounter *just so*. In fact, these mannerisms were hybridised from Italy by Starbucks officer Howard Schultz (Moody 2003; Phil Crang 1995; Butler 1990). Pre-1980s customers might call this snobbiness. Others say this invented grammar ('double grande skinny wet decaf cappuccino' translates as 'double shot, grande size, skimmed milk, a bit less foam') is Seattle's idiolect acquired by urbanised dons. That is not to say it won't be scorned by rural farmworkers.

In the 'scholastic habitus' (Bourdieu 1984: 88) of an academic, s/he is expected to distinguish high aesthetics, novelty and the hopelessly *déclassé*. But what is new is that academics are expected to reflect critically not only on human health and nutrition, but also on animal welfare, environmental sustainability and social justice. Discussion below will touch on these issues, linking to themes of 1. Markets, organics and risk, and 2. Environment and nature in the future.

UK academics: The foci of a Newcastle academics' focus group were principally animal welfare and GMOs. This could be because of widespread EU concern about animal confinement and, particularly in the UK, over veal transport to other countries, as well as resistance to synthetic dairy hormones (Scholten 1989b, 1990, 1993, 1994, 1995; Cook 2004). The group's focus was also likely related to the fact that three of the eight participants, aged 30s-70s, had upper degrees in chemistry or biology, while another man lectured on shipping law which often involves food. Economic questions on the affordability of organics gave way to ethical concerns.

Tikka defined: 'Biotechnology is manipulation of the organic world for material gain... without consideration for the impact on society'. Neeman expressed concern for 'animals in small cages'. Cab, the facilitator with specialities in education and philosophy noted 'The ethical component of how humans being negligent with animals relates to humans being negligent with humans'. Tanya, PhD in chemistry said she ate 'fresh' if not organic on the preceding day, and listed BSE as a top risk. Kit, biologist, did not list BSE among her top food risks, but wrote 'dioxins, pesticides and herbicides' as top risks. She and her husband eat organics daily and she said 'Soil Association standards are good'. When poor nutrition was raised Kit claimed that:

women going out to work has nothing to do with the modern use of ready-meals and convenience foods.

This group mentioned class very little, though educator Natalie said that when she was a 'live-wire at Cambridge' during WW-II, 'rationing made more people healthy with a balanced diet'.

Daria, who was not at this focus group but acquainted with the participants, posted her comments to my university address. She mentioned her distrust of GMOs, writing:

I'd buy more organic food if it were available on my doorstep. Otherwise I wait till I go to Berwick, Edinburgh or Galashiels where it is sold in Tesco, Sainsbury, or Safeway. We have a local small co-op that stocks a fair bit of organic but supplies are irregular.

US academics: In Seattle, there was more discussion of class, especially in multi-ethnic focus groups with academics including linguists and geographers. Asked if it makes sense to discuss food and risk together, linguist Faron laughed saying:

It seems to me that there's a possible confound, and that is that your motorcyclists and your firefighters are likely to be from a different class, and of a different education level than your academics. And it might not be because they're interested in risk, but because of their education or something that they feel differently about organic food and things like that.

One or two participants noted that people from all classes operate motorcycles just as they do cars. (Note: University of Washington car parks attract hundreds of motorcyclists of all types everyday, including those next to the building hosting our FG.). The group agreed that firefighters were easier to fit into income quintiles, and a few suspected that Seattle's firefighters were paid more than academics in Seattle. We moved on.

BAS: Who buys organic food?

Nora: Firefighters have a reputation for being really good eaters, and there are all these great stories about you know, one guy in the company becomes the cook and does all this fancy cooking for people... Whether they do organic? You know, I think there're probably more like academics. I mean, there's the Hells Angel type of motorcyclist, but that's a small percentage; their attitudes to food are probably different, but... the rest of motorcyclists are a small section of society, so it's hard to generalize.

Nina added: 'But it takes a certain kind of psyche to become a motorcyclist. I'd say 'they' would be less environment-conscious or food conscious.'

Dai made a key point on altruism or caring for the environment:

But we're not buying organic food for the sake of our own health, we're buying for the environment... so people in academia are a little bit more conscious of organic food.

Most of the upper-level acads gardened and composted from conventional and organic food waste. Such green activities may occasionally generate what Douglas (1962) and Lupton (1999) note is the allure of transgression. Faron admitted:

I would buy more organic if a place like PCC or Whole Foods weren't quite so holier than thou, so that it only has things that you know meet all of the proper requirements. Sometimes I want a diet yogurt with fake sugar in it! So I have to go to another store.

Asked if risk plays a different role in rich, poor, or educated people's lives Kay said:

I think that the term risk is ambiguous. So that, on the one hand there are the risk seekers we know who go on roller coaster rides, or some people do anyway, because there's some kind of thrill involved. There's also a dimension of risk which is not a chosen factor; but clearly, poor people have a lot greater risk for a lot of things than people with money. So, there's kind of an ambiguity there.'

Nina evoked several nods in her attempt to find working definitions of food and risk:

There is a long-term risk like eating junk food, and short-term risk - people who go bicycling or jumping off the roof or something. So we really need to specify what we think risk is all about. If we combine food and risk, then I would say it is preference for junk food or fatty food that is risky, but not riding on bicycles - even though there might be a correlation between eating junk and riding on bicycles.

BAS: Are there different ages when people assess risk differently? Faron had a logical answer:

Faron: Well, the insurance industry recognizes that young men are risk takers! You know, once you get a little older, and you have kids, and you have assets that people could sue you for, I think you become a little less risk-taking.

Klaus: I don't think I really ever engaged in risky activities. But maybe that's just, you know, me, I guess.

Dai: Even among people in academia there are different levels of risk. We're different, like we're students or sometimes we're professors. Students, when we go shopping, go to shopping, we always go for the cheapest one, for day-old bread. Or when we go to farmers' market like once a month, or once every two 2 months - it's like a field trip... When my friend's mom was visiting from Taiwan, she insisted on going to farmers' markets.

Klaus responded neutrally when all were asked if, say, geologists, mathematicians, or semanticists accepted different risks:

I just don't know if I could distinguish risk-taking within academics. I would think it's a personality matter so... I don't know.

Faron added:

These may be stereotypes, but I tend to imagine that anthropologists and linguists, say, who tend to live abroad a lot, maybe live in unusual places that are very different from where, you know, they grew up might be more risk-taking than someone than like... Well, chemists are reputed to be extremely dull and never do anything or go anywhere! Who knows if it's true?

BAS: Well, let's skip to a political question: In American society, are most of us passive consumers who must eat whatever agribusiness provides? For instance, steroid hormones in beef - or are we citizens who can force change?

Nora, who gardens as organically as she can, said:

I think most people are mice, and there are a few men that lead... But when you look at the incidence of obesity in this country, you know, it's pretty clear to me that people aren't really thinking too carefully about what they eat. And academia, I think people are... it's kind of an elite class, in a way, and people there do, do think more about those things. And they usually have more money to deal with it.

BAS: So academics have more money, and they think more, they're better educated? Is there peer pressure on academics to conform to a certain eating pattern?

Klaus answered:

I think it may be some peer pressure... I mean, in general I hate to be a part of *mice*... I probably do follow the crowd. But I guess the money correlation may not really be there either, because I don't think academics are rich... And the rich people with SUVs maybe have some pretty unusual or maybe bad eating habits... although it seems I don't really want to be a follower - but I just don't do anything about it. *It's also because basically my wife takes care of all the food. I just eat!* [This male admission brought laughter.]

BAS: Have PCC, Trader Joe's and farmers' markets changed Seattle forever?

Kay noted the new emphasis on glamorous presentation in so-called ethical foods:

I'm not sure. PCC's been around for, well, a really long time. So it always seemed like a part of the whole Seattle scene. But... now these stores like PPC – and Whole Foods which has you know come in as kind of the competitor – are glamorous! And they have wonderful house wares, they're aesthetically pleasing, and they have this deli section, and it's sort of like they're very, very upscale! So it's very different. We belonged to PCC in 1970 and we cut cheese – like all the members did work! And so what's happened... And now PCC doesn't, I mean it doesn't even matter if you're a member. You used to show your card and you'd get a discount on something, but now it just doesn't work that way anymore. So that in a sense they've become, you know, sort of mega-businesses too.

Nora thought changes were permanent:

I go to the Lake City one from time to time – in fact I think it's opening in about an hour. And it's amazing, especially at 3 or 4 o'clock when it opens, that there's a real cross-section of the Lake City neighbourhood there. And it's certainly not rich housewives doing their shopping. The Lake City one's fairly racially diverse as well – a lot of Asians. So I don't think it's fluff - I think it's here to stay.

Nina added: 'I don't often go to farmers' markets, but my daughter does, and she says that there is a lot of Russian community and so it's not all that expensive, but it takes more time, for sure.'

Klaus commented: 'When we go to the University Market... they seem to be academics and immigrants... This is a cultural thing and I think Americans... it's probably a minority that are used to that.'

Nora thought: 'I don't think farmers' markets will ever, here, get to be like they are in France because Americans are just used to one-stop shopping.'

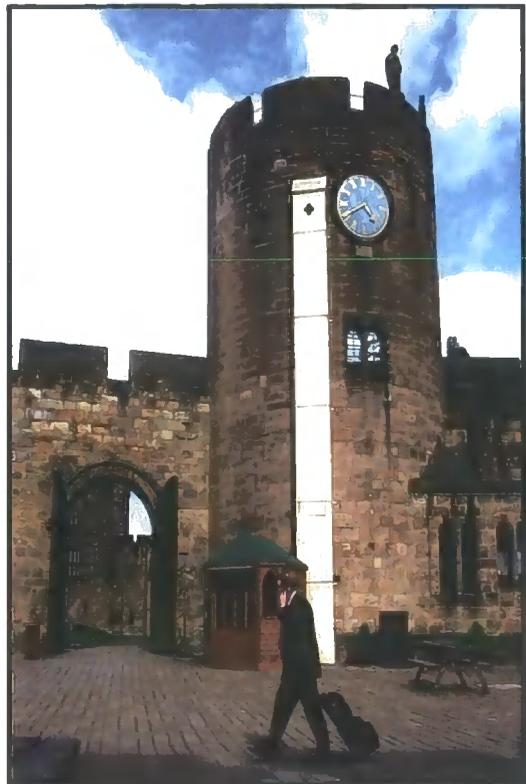


Figure 7.6. Organics in the Ivory Tower?

Other topics surfaced. The groups generally agreed more government oversight was needed to protect biodiversity during GM trials. Finally, they were asked about the future environment.

BAS: How do you see Seattle in 10-20-30 years? What about water quality? Can Seattle lead the USA or the world as an environmental model?

Kay: Seattle does lead in certain ways. The recycling programme has been kind of a model. I lived in Chicago for three years, and things that are normal here, like recycling, were almost impossible in Chicago. I don't know 30 years from now.

Klaus says Seattle has deteriorated due to traffic and lack of leadership:

In Seattle people seem to be very much aware of all these good things about the environment and also recycling. But I think the quality of life certainly has gone down the drain... in the last 30 years that I've lived here, and I don't see any reason that it's going to get better in the near future. The state overall has obviously gone down as far as being responsible and there's always the argument that there's not the money. But these politicians have no guts. The most obvious problem is you know the traffic – that just about any time of the day in Seattle that you just can't get anywhere. It's just traffic jams everywhere... people with certain health problems would find that there's more pollution.

Nina: 'Traffic is a problem. But... they take more care of parks and trails. And they seem more taken care of – trails – now... so people are more interested in hiking than 30 years ago.... so that's why I have some hope for Seattle. Kay mentioned, 'Lake Washington used to be so polluted that there was no... it was off limits, and now – well I guess that got improved.' Klaus said, 'In those days when there was something done about the environment, there was some progressive politicians in the state. Now – I mean for the last 10, 15 years – they've died.'

Nora agreed:

No leader has stepped up... because there is so much infighting. So it has to be an exceptional person that could rise above that with a vision and get everybody going.

Participants had some hope that light rail transport would connect Sea-Tac Airport, Downtown Seattle, and the University District, but feared delays and cost over-runs. Meanwhile, civic life was acceptable for most of them. They moaned the fact that their workloads were so demanding, but it pleased them to think that the neighbourhood farmer's markets were nearby and thriving. One or two PhD students may have been eyeing career moves, but none of the upper-level academics expressed intentions to leave their jobs.

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Firefighters' profile & qualitative data

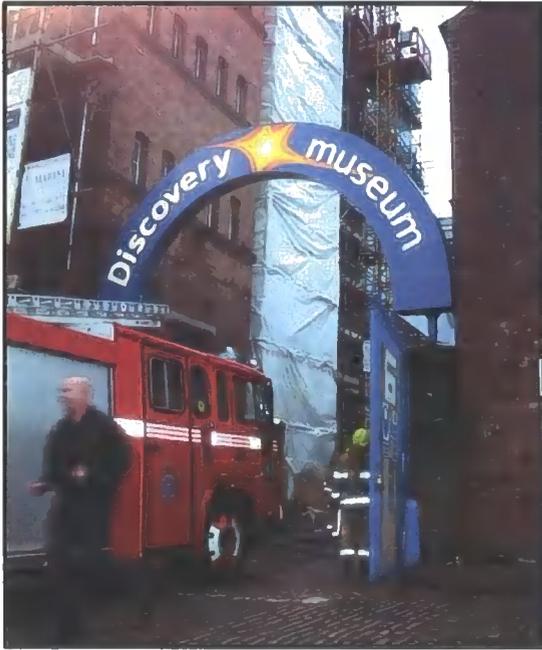


Figure 7.7. Newcastle fire emergency.



Figure 7.8. Seattle smoke-eaters like gardens.

Napoleon reportedly observed that ‘an army marches on its stomach’, and the same is said of firefighters (Scholten 2006b). Quantitative data show Newcastle firefighters have been slower than other groups to adopt organics, but data here show how attitudes and behaviour can change. David Goodman’s (2004: 11) query whether ‘alternative quality food production seems destined to retain its status as a narrow “class diet” of privileged income groups’ is answered negatively even by fire brigades in the industrial working class culture of northeast England. Firefighters fill a gap in the risk spectrum between academics stereotyped as risk-averse, and motorcyclists as thrill-seekers. Whatever their proclivities, all fires are trained to manage risk in their jobs.

Fire services in developed countries promote employee fitness to maintain efficiency and, not least, limit the costs of injury. As part of this they confront the costs of convenience and fast foods implicated in cardio-vascular disease, diabetes and obesity (Schlosser 2001). Participants in such efforts include the International Association of Fire Fighters, and the International Association of Fire Chiefs (IAFF, IAFC, 2000), and the US National Institute of Occupational Safety and Health (NIOSH, 2003) under the Centres for Disease Control. Firefighters are often required to work near maximal heart rates for long periods (Gledhill & Jamnik 1992). Careers last into middle age, when dietary habits established in youth affect performance. They typically

work several days on-shift, dining communally, often cooking for each other. This is followed by days off-shift, leaving time for hobbies, second jobs or inactivity. For such reasons, wellness programmes have been introduced in many countries and have proven cost-effective in reducing the number of work-related injuries and lost work days (Maniscalco *et al.* 1999). Recognising that food and exercise are key to fitness, fire services in the UK, the US and other countries incorporate nutrition training. These are akin to campaigns promoting healthier diets, such as the controversial ‘Food Pyramids’ in the US (Nestle 2002). In the UK, the ‘5 A Day’ campaign (DoH 2004) asks consumers to eat several portions of fruit or vegetables a day to cut the risk of cancers and other pathologies. The ‘Generation Scotland’ (2002) campaign combines knowledge from the human genome project with findings on diet and lifestyle in the Scottish Family Health Study to improve health (University of Glasgow 2006). These are examples of a global movement to address health woes in the conventional food system by turning to alternative systems identified with an ecological approach and localised markets.



Figure 7.9a&b&c. Scuba-like gear helps these US firefighters manage risk.

The survey queried men and women in fire stations near Newcastle and Seattle. They are trained to tackle risks on-duty, and encouraged to pursue activities like scuba diving and rock-climbing off-duty, in a socially-constructed culture of risk (Lupton 1999; Phillimore & Bell 2005). One Seattle officer joked before a focus group: ‘There’s a risky bunch.’ Many families have gardens, and since there is time to read and talk between emergency call-outs, it was unsurprising that many subjects were conversant on biodiversity, crop rotation, food miles, sustainability and other concepts associated with AFNs. Many know heart disease, obesity and diabetes are linked to cholesterol and sugar, and aware of what Morgan *et al.* (2006: 46, 168) call a ‘lengthy series of health scares’ including food additives, botulism, pesticides, Alar, rBST, salmonella, BSE, E. coli, GM foods, foot-and-mouth disease, dioxins in cattle feed, etc. Many crews seem to prize at least one dietary eccentric, but the ethos is one of compromise and teamwork. Firefighters

debate food scares widely, but at the end of the day, they seem to put much trust in government experts (Scholten 2006b). Focus groups found scars from food scares in Newcastle, and keen interest in food in Seattle.

UK firefighters: Dick, age over 35, estimates that organic food represents up to 33% of the cost and up to 33% of the calories in his diet. Dick recalled no organic food in the previous day's family meal, but estimated 20% organic content on the last occasion of hosting a guest at home. Off-duty, he works part-time as a butcher for an organic vendor in farmers' markets. He says his family eats fish, poultry and lamb – but no beef. Knowledgeable on local food lore, Dick emphasised that he is equally attracted to food labelled local or organic because he regarded meat with those qualities as safest. (He is one of a strong minority of respondents who refuse to budge from insistence that food be local and organic.) When asked to confirm that he butchered organic beef, but did not consume it, Dick criticised the weakness of expert knowledge on BSE/vCJD:

That's true. And I don't eat beef because of CJD and the lack of information that was available when policies were being set to prevent it. They didn't know the incubation period; they didn't know what caused it. ... So for that reason I don't eat beef. I mean for me, it's pretty well slamming the stable door after the horse has bolted. But my children haven't eaten beef, and for that reason, we haven't and we still don't.

Nick, a 40-something bachelor, jokes that his diet is little more than chocolate cake and ice cream. He is vegetarian, says he eats organic 'only if given it' by others, and reported none in his last home meal, or hosting a guest. His casual mien masks reflection: On the questionnaire he claimed equal preference for local or organic food, but in conversation confided preference for organic in certain cases. Nick suggests the public responds slowly to health campaigns due to conflicting media messages. While vegetarianism is atypical among firefighters, Nick articulated his own and his colleagues' anger over so-called expert knowledge:

We get told: You need salt in your diet. The next year: Don't have any salt . . . Then we get told: Cholesterol is good. Then there's bad cholesterol. Then there's good cholesterol, then there's bad cholesterol - and it keeps changing! We don't get consistency of information. . . . The problem is that, at the end of the day you just gotta think: Heck, I've had enough. I'm just gonna eat what I think is right for me, and do the best I can.

But Nick said firefighters would buy more organic or alternative food if it cost less: 'Most people around here think, well, we don't want to damage the environment, and we want to have something sustainable. But it's the cost!' But despite concerns with motorway congestion, man

Newcastle fires' outlook is optimistic for the environment in 10-20-30 years. People happily note that otters breed in River Tees again. But the spectre of mad cow disease is not forgotten, and cases of FMD and bird flu maintain doubts about safety.

US firefighters: Sid is in his 40s with a wife and two children. He is cost-conscious and defends McDonald's as a lot cheaper than sit-down restaurants in Seattle. He says he eats no organics, and reported none in recent family or guest meals. Sid buys local food but his rare visits to farmers' markets left him more impressed with the social aspects than the food:

I think. . . they're an event people go to, just like the fair. There's a farmers' market in town and it's convenient, and you wander around town. It's a family type of environment. I don't think it means anything about, how you eat on a normal basis. If you go down to the farmers' market and buy, you know, a pound of cherries from some local farmer, it doesn't mean you don't go to Safeway the next day and buy from Safeway. I don't think it means a whole lot . . . I think they're very social.

Darrell is notable for growing veg and flowers for his wife's farmers' market stand. He is more attracted to organic than locally-labelled food and estimates organics are 66% of the costs and calories of his diet in which dairy and veg feature highly. He is wary of GMOs and lists BSE with heart disease and obesity among top risks. Yet, familiarity with AFNs leaves him concerned about price and availability:

But even the people who raise organic foods... don't eat strictly an organic diet. And the costs... at farmers' markets... are much higher for the same item of food. And the stores, I don't think are gonna get organic foods to be readily available throughout the entire public sector, until you make them much more common, more easily accessed. For now . . . people know what it is [local and organic food] a whole lot more so than they did 10 years ago, but it's not much more than that.

Seattle firefighters have guardedly benign expectations for their environment in 10-20-30 years. Darrell said, 'You look at Renton and...the relocation of the Boeing plant, and other industry that's expected not only in Renton, but in south King County as a whole, and the redistribution of the wealth even in the last 10 years... Renton's socio-economic place in regard to per capita income has probably changed substantially.'

Rick added, 'It's gone up. Probably the average household has gone up, the cost of the house. What's it gonna be in 30 years - who knows? It won't get any worse. I think it's on a stable, if

not improving trend. Is it gonna be measurably better so we consider it for utopia – or Ecotopia? I'm not that confident.'

Clem recalled the past to predict Seattle's future:

I remember the time that the Green movement started, and all that, and things that conservation officers went through with different farmers, struggling to convince them to do things differently... The EPA regulations on cars... drive me half crazy! But a lot of those things that grate me because they're so extreme, by the time they shuffle through the system, and get input, usually what comes out is a product or a regulation that is at least fairly acceptable. You know, it's not too extreme... and it's probably a function of politics and just people getting input all over that it's better for the environment. We get more efficient cars and it's better... You know, Lake Washington used to be basically a sewer pit. Now it's a great lake. Like Darrell said I don't think things will be worse in 30 years. I think it will continue to improve, at least in this country because we have people who have time and/or money to focus on that rather than just focusing on just shelter and food like a lot of the rest of the world has to.

BAS: Is Seattle an environmental model for other regions?

Tanner, an experienced officer replied:

I think so. We've shown that the public are willing to fund issues that cost money for ecological reasons: Metro, other types of preservation, open space. Private enterprises and individuals have helped fund things, and it's to maintain their own standing in the community. Paul Allen and others contributed a lot to open space preservation, and I think there is a real consciousness in this area that... has a tremendous amount to do with our quality of life, our own values, our own assets, houses, real estate and what we're going to leave to our children. You go to some parts of the country and I don't think that's [environment] as big of an issue. I've spent a lot of time in Alaska, and environmental quality was not an issue up there; you know it was: *harvest the resources*. I think we're way beyond [that attitude].



Figure 7.10. Fires near Seattle grab a brownie.

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Motorcyclists' profile & qualitative data

Figure 7.11. US cruisers are like Cadillacs.



Figure 7.12. UK semi-pro roadracers.

Motorcyclists, *aka* bikers or motos, were selected for this study because of their stereotype as 'risk-embracing 'edgeworkers' like hang-gliders, rock-climbers, surfers and other thrill-seekers (see Lyng 1990; also Scholten 2006a: 115 in Holt & Reed 2006). Many respondents work in the motorcycle industry, and some of those who are, from mechanics to clerks, average lower education and income levels than most academics or firefighters (personal communication from prominent retailer). About half moto respondents are hobbyists from all professions (except academia or firefighting). Ultimately, motos' food preferences may have more significant societal outcomes than those of academics or firefighters, because motos are more numerous and represent all socio-economic demographics.

It is useful to examine the relations between motorcyclists and their machines, in the context of sociologist John Urry's theory of automobility, and emotional aspects of their lifestyle in terms of affect and emotion noted by Mimi Sheller. First, consider the truism that there are two kinds of motorcyclists: those who have crashed, and those who will. The same can be said of auto drivers or bicyclists, but car drivers are cocooned in boxes of steel, restrained by belts and air bags, while bicyclists never attain velocities routine to motorcyclists. Motorbikes are nothing new: the invention of motorcycles arguably predated that of automobiles. Yet, motos' lengthy provenance does not diminish their aura of risk. Motorbikes account for a disproportionate number of traffic deaths. One of the more successful bike dealers in the US once spun the tyre of a powerful cruiser through a parking lot, laughing gleefully. Stopping next to me he cupped my ear whispering, 'These things are dangerous!'

Why do people ride motorcycles? In developing countries, families and individuals who already own a TV and washing machine, buy motorbikes for cheap transport. In Thailand and India upwards of five family members mount one machine sans helmets. Moto-ownership is a sober financial decision and proud step up the economic ladder (*Economist* Feb. 3, 2007).



Figure 7.13. Cows & Kawasakis in NE Thailand.



Figure 7.14. Motobility in Bangkok.

In rich countries, few people are financially constrained to two-wheelers on working commutes. Nowadays they buy motos mostly for fun or adventure. In an analysis here dubbed *motobility*, I offer explanations for motorcycle use in rich countries, drawing on John Urry's system of automobility.² Urry (2005: 25) writes:

Country after country is developing an 'automobility culture' with the most significant currently being that of China. ...Yet strangely the car is rarely discussed in the 'globalization literature', although its specific character of domination is more systemic and awesome in its consequences than what are normally viewed as constitutive technologies of the global, such as the cinema, television and especially the computer.

Urry (2005: 33, 36) claims automobility dominates countries in material paths of dependency, globalised chains of glass, oil, rubber, and steel and the post-transport phases of junkyards and recycling. In a phenomenon of urban blight, motorways split South Parkdale in Toronto (Slater 2002), Georgetown in Seattle, and communities in Newcastle. Ubiquitous autos consume energy, income, time and patience. Thus Urry (2004: 25) asks if 'we might envisage an ending to this systemic domination'.

Automobility to motobility

Urry's 'automobility' applies to Seattle and Newcastle where motorways were built, and public transport neglected, in a vicious circle of construction and gridlock that is acknowledged as an anthropogenic basis for climate change by the IPCC (1988). In an article in the same issue of *TCS*, Mimi Sheller (2004: 221) agrees with Urry on the need to resolve the negative externalities of cars but goes further, writing that 'the dominant culture of automobility... is implicated in a deep context of affective and embodied relations between people, machines and spaces of mobility and dwelling, in which emotions and the senses play a key part.' According to Sheller (2004: 222) 'Car consumption is never simply about rational economic choices, but is as much about aesthetic, emotional and sensory responses to driving, as well as patterns of kinship, sociability, habitation and work.' Sheller cites Michel Callon and John Law (2004: 10) in maintaining that: 'Agency and subjectivity are not just about calculation and interpretation. They may also have to do with emotion.' Sheller adds subjective dimensions to Urry's automobility, comprising a bridge to motobility. Motobility is my idea of an oppositional social sub-system, springing spontaneously in bikers, partly in response to the negative externalities of automobility. Motobility is an 'other' to automobility (other 'others' include bicycling) that may be a directly descended from equestrianism.

Many bikers claim motos offer a sensation of freedom opposed to the confined boredom of automobiles, that their sensory experience of the external world, of urban street life or the flora and fauna of the countryside, is richer than that of drivers and passengers encased in autos. Cars with the top down improve aural and olfactory perceptions but cannot match the three-dimensional sensation of a motorcycle leaning into corners. The uncertainties of weather add fear to the moto experience. But slender two-wheelers can escape gridlock that traps four-wheelers. Their smaller traffic footprint induced Seattle to allow motos in bus lanes, and persuaded Mayor Ken Livingston to exempt them from London's congestion surcharge.

Motobility's validity as a theoretical 'other' to Urry's automobility, is not crucial here. But it is worth expanding on Sheller's observation that passion and emotion potentially form part of automobility – and I contend are intrinsic to motobility. Motos' non-conformist approach to transport and their social activities link to symbiotic relations between humans and animals established at the dawn of agriculture because, 'Motorbikes are modern substitutes for cattle

[and horses] that, thousands of years ago, accompanied us on the path to food surpluses and – for better or worse – gave us the chance to build cities.’ (Scholten 2007a: x-xi).

Social anthropology offers clues to the persistence of motorcycling in rich countries, as rational consumer analysis explains why most commuters choose autos affording more comfort and safety. In a video study of relationships between horses and riders Rhys Evans & Alex Franklin (2006) trace the transition of equestrian-human symbiosis from ‘workhorse to hobby horse’.



Figure 7.15. Horse show in NE England.



Figure 7.16. Motor racing fans at Donington Park.

Evans notes that Franklin’s equestrian friends suffer ‘more frequent and worse injuries’ than his biking friends. But whatever their relative levels of risk, equestrians and motos exhibit similar behaviour in races and other events (Figures 7.15 and 7.16 above). The culture of learning is akin to *kaizen*, explained in *Zen and the Art of Motorcycle Maintenance* (1974), a book by Robert Pirsig whose topic could as easily be sailing or equestrianism. That such modes of transport can be solo expressions of agency rather than structured groups is not just my opinion.

At an event for Riders for Health in Africa (www.riders.org) I was allowed to pose the horse-bike motobility question to its Patron, Her Royal Highness, Ann (Figure 7.17 below), the former Olympic equestrian who is a moto fan after a decade working with the NGO. The Princess Royal was asked, ‘Do motorcyclists and equestrians share any special similarities?’

Oh yes. First of all, the sense of balance. Then, the independence – maybe that most of all. I hate to tell you this, but motorcycles are harder. ...

Why is that?

Because horses have four legs to land on. But yes, the balance and the independence. That's what they share.

Figure 7.17. Royal equestrian (Source: Royal Windsor Horse Show).



So, according to one with global knowledge of both activities, motorcyclists share vital skills and mind-sets with equestrians. Balance is an attribute cultivated in training and competition. Independence is a tendency to assert one's will despite opposition. Such skills are cultivated in semi-pro events with the Washington Motorcycle Road Racing Association (WMRRA), or The North East Motorcycle Racing Club (NEMRC) and, for a few, reach their apotheosis in the Moto Grand Prix series which travels to all continents except Antarctica. (Ibbott 2006).

Those inclined to cruising or custom style may gravitate to choppers (see Figure 7.19 and 7.20). If this sounds tribal, Douglas, Lupton and Tulloch might agree. Expressing identity in a like-minded group at a bonfire, a racetrack, or on a cross-country trip, is a powerful psychological event (see chapter 4 risk, especially Douglas 1966/2002; Lupton 1999; Tulloch & Lupton 2003; also Hesse 1934; Koestler 1949; Sample 2006; Thompson 1966; *American Chopper* 2006; *Little Fauss and Big Halsey* 1970; *Easy Rider* 1969; and other films). Several motos told me they doubt their sport impacts their diet. But their typically critical attitudes toward consumer culture, epitomised by automobility, seem to extend to rational prioritisation of lifestyle risks, whether or not this leads to alternative foods.

Motorcycling is rife with people disaffected by 'Fordism' (see Amin 1994/2000; Dicken 2003: 108; Hobsbawm 1994: 263-264). They love technology but abhor the Taylorism that orders assembly lines (Hudson 2001: 101, 130). In a contemporary expression of craft traditions, they cultivate skills networks which from my observations in several countries, not only resemble each other, but also alternative food networks, in the trust among actors and their symmetrical treatment of black box technologies (see Latour 1991/1993 and 1997, and Murdoch 1995 on ANT). Women are an avid minority of motos and, as in AFNs, often serve as officers.

UK motorcyclists: Fewer of the Newcastle women moto respondents admit eating organic than men. This violates the stereotype of women as more organic-aware than men (Makatouni 2001). Tulloch & Lupton (2003) hint such women may be challenging restrictive gender stereotypes. The Newcastle statistics (24%) of women consuming organics contrast with the Seattle sample in which 92% of women eat them (Table 6.1 above). Peculiar findings invite analysis. Perhaps in Seattle, more than Newcastle, even women risk-takers perceive organics as part of what Lupton (1999: 161) calls 'performance of femininity'. Are Newcastle women more organic-averse than men? More likely, they think organics, however attractive, are too costly. Kay, a rock-climber and snowboarder who sells helmets and leathers in Newcastle, detested firms promoting GMOs. On the questionnaire margin she wrote: 'All multinational corporations should be closed down.'

Nevertheless, Kay's preference was local not organic. Her answers on organic affordability, health, economic or environmental benefits were ambivalent. One explanation for low organic uptake among Newcastle women motos is 'related to time experiences' which Warde & Martens (2000: 101) relate to women with jobs and families. Organics may seem inconvenient, requiring too much preparation. Low organic uptake can also be explained by BSE which drove many young UK females and some males from meat. Cher, another moto, said she prefers:

Local, even if organic price is the same. BSE doesn't affect me cos I'm vegetarian. Others? My husband still eats meat, but he tries to avoid rubbish like sausage and just eats whole meat.

Follow-ups found pro-organic movement too. Jan, a tuner respected for fast, safe sport-riding skills, seldom if ever bought organics, and neither did a group of mechanics interviewed in his Newcastle shop. Jan smokes cigarettes but BSE-awareness explains his comment:

I still don't eat organic...but I might if it was the same price as local.

A salon owner near Newcastle, Dionne, who has pillioned her partner's fast sport bikes for two decades said, 'I've paid more attention to things like organics since you asked those questions.' Her husband Reve loves chips but has a phobia of grease; aside that from he says, 'I just eat what's in front of me.' But family life can alter consumption over time: they feed their 10 year-old son a balanced diet, and encourage his interest in football alongside video games. Reve's parents used motorbikes in the past and now raise free-range chickens. His mum Cilla often brings them eggs and says:

Cilla: My husband agrees with me much but'd say GM is needed to feed the world. My sister walked seven miles a day in Nepal , and if I were younger I'd like to try that... maybe rock-climbing and what you call risky activities.

BAS: How do you define local, organic or quality products?

Cilla: Local is Quality, I think. It's organic if it's walking around. I like to eat things that've had a happy life. But some eggs say 'Free Range' but not 'Organic' so I guess they could be feeding them any old thing. It's confusing with all the different egg labels.

BAS: So you think free-range is more an animal welfare than organic issue. What about organic ingredients?

Cilla: 'I'd hope they're getting fed organic things. They have to don't they? Quality is just in the eating of it, the growing of it. Tomatoes at the wrong time of year are *not* quality; same as strawberries. We have blueberries here at the top of the hill that are good... Quality is the smell, the taste. Poor quality is like when the flesh is hard in the middle. The best tomatoes I ever tasted were in Tenerife on holiday - green & ugly, huge but good. Italy was good too, where man let me smell his bag, but he probably thought I was crazy. But Italy's one place I'd leave home for.

Cilla and the rest of the family share a vague understanding of Soil Association certification, but they have a firm view that organic farming connotes traditional free-range methods.

Pockets of organics eaters are found in accounts offices of Newcastle bike shops, dietary coteries that might be linked to health or religious views, but they were not interviewed. Passionate views on food systems were expressed by Sumner, a mechanic with a reputation for meticulous work, fast-but-safe riding and willingness to punch above his weight in fights. Interviewed with friends around a pool table he defined keywords:

Sumner: Animal welfare? I'm all for it. I hate to see animals suffer. It breaks your heart to see a truckload of cattle. I saw one this morning - and you know where they're going. If I didn't like the taste of meat so much I'd probably be vegetarian. Morally... I've been out with four or five vegetarians and I know all the arguments. Guess I'm lucky be born on top of the food chain.'

BAS: What about bio-technology (Bt) and genetic-modification (GM)?

Sumner: We've done that [Bt] for years. You know the [sculpture of] the Dunn Cow on River Wear? It's thin like cows before they were bred [by humans]... You see different things on Bt and GM in the media and on TV - but they're not always accurate. There's potential for good and evil, like anything! The truth is somewhere in the middle... *but it has to be controlled.*

BAS: Who funds R & D in technologies like GM?

Sumner: Now GM is probably funded privately. It depends on how controlled the state is. The UK now has no motor industry because of the way America is now. [He notes US tariffs on UK steel implying it will promote GMOs aggressively, unlike France or Germany.]. We used to import bananas from the Windward Islands until America complained we wouldn't buy from places it controlled. But for things like GM, at the end of the day, it's bound to happen. But left to market forces, I think it'll be really bad. Conventional farming is how farming's developed over the years with pesticides. Organic farming is trying to go back the way it used to be, before people realised you could get higher yields [with inputs]. I think organic is a niche thing for the middle class. But it won't go away – it's growing. But I bet if I put an organic carrot in soil with a conventional carrot, if you pulled them up you probably couldn't tell the difference.

BAS: Any other reasons for organic beyond human health?

Sumner: People have moral reasons for organic – their bit for the planet. Recycling tins and buying organic, they feel better. There's social pressure... In Newton Hall people change cars [only] so the registration doesn't show how old their car is [to keep ahead of the Joneses].

BAS: How would you define local food?

Sumner: That'd be like farmers market in Durham or Barnard Castle [from County Durham or NE England].

BAS: Quality food?

Sumner: Special occasions, like Valentine's Day when I bought special Monkfish tails for [his girlfriend, once president of a sportbike riders group]. Monkfish is really clean, meaty fish; it's not a scavenger like cod... But I don't have enough money for that [quality, all the time]. It's something for the middle class.

BAS: If you go to buy food, do you choose food labelled 'Local' or 'Organic'?

Sumner: I just look at the price, not the label. To be able to choose means [consumers have] extra time & money. You know the German, cheap supermarkets, Aldi, Lidl? They have good food at a good price. Maybe the Germans have better standards than we do. But some is trash. You have to watch what you buy.

A profound shift may be underway among the new generation of 20-something motos who have grown up seeing organic food in supers and farmers' markets. Stan, a sport-biker who sells helmets says his family eats traditional fare, but that diet can improve like biking has:

With a complete new generation from the grease monkeys who wore only black leather. Now there's more colour and style... Everyone wears armour, spine protectors. Now it's all about safety.



Figures 7.18a, b, c. *Pssst!* These are dangerous! But most or all raced in the next heat (Scholten 1996).

Class, income and morality inform Sumner's views (p255-6). But Kevin, a tattooed ex-racer interviewed with his employees in a Newcastle parts shop also reflects on health:

I used to race Tz750 sidecars, and hang-glide. Boats? I flipped one at 90mph and I still have back problems.

A thrill-seeker to delight Damon Runyan, Kevin has heterogeneous tastes. He mixes classical music with rock, and on his survey wrote that he served 10% organic to his last home guest: 'Veg grown in our gardens, pork and nothing packaged, processed or in cans, except the 4.7% beer.' Spotting me on the pavement outside, months later, he surprises me by walking out to announce improved blood pressure and sugar levels - apparently fighting for health like he fought for race wins. Like other optimists on Newcastle's environmental future, Kevin enthuses: 'Salmon come up the Tyne now - years ago there was no chance!'



Figure 7.19. Newcastle woman respondent likes her Harley. Figure 7.20. Function follows form: *American Chopper* (Discovery 2006).

US motorcyclists: Seattle area motos had seen a huge rise in the number of green food outlets, but differed on their affordability. Sandy, a veteran racer who published a book on IT before the dot.com crash said, 'Trader Joe's is not really expensive, it's insanely expensive. His wife Mary, an ambulance dispatcher, added, 'They have really a very limited stock and range.' They discussed Nature's Pantry near a mall and their friend Clint said, 'It is very expensive - I used to work there and stop by and stuff. It feels like kind of a select crowd that comes in.' Sandy pointed to the fragility of the environment:

I would say [organics] it has an awful lot to do with the pretension of Ecotopia. Seattle's still close enough to being wilderness, that people are embarrassed about the fact that we've managed to kill off all of our

salmon, just about all the cougars, and large pieces of wildlife. And that wistfulness, if you will, for at least some wild area, seems to carry through almost everything we do. And while I call it Ecotopia, and some people make that a swear word almost, it's not a bad value to have.

Mary was hopeful on the question of whether we are citizens or consumers:

We *can* force change. There's enough people that want less preservatives... at an affordable price. Markets that would never carry them now all have organic food sections. And they have certain areas where they have meat set aside, that's meat with nothing added. You know, no steroids; chicken with nothing added.

With exceptions, follow-ups support the reliability of qualitative judgements calculated from quantitative surveys. But local preference seemed to rise after Seattle's 2003 BSE scare. Some mid-50s Seattle men's eco- and nutrition-related survey answers indicated organic preference, but they declared local allegiance in call-backs. Chad, a university-educated, occasional organic buyer, who formerly rode his massive trike-bike in 4th of July parades, put BSE in this risk hierarchy: 'I made no changes. My attitude is that the risk of my being injured by mad cow meat was less than the risk I take daily when I drive on the freeway.'

Chapter 4 on risk introduced the Seattle moto dealer who offered to lead a ride to a post-BSE barbecue. But his opinion was not shared by Ernie, 20s, who said his preference for organic over local was unchanged because he thought food from a local industrial farm was no better and probably worse than an organic farm from near or far. That chapter also mentioned Nick and Kate, vegetarian motorcycle racers till their children were born and they turned to careers in IT and art. In a beer garden Nick was joined by a younger moto, Ernie, also drawn to organics. They were asked if farmers' markets and alternative supermarkets had permanently changed Seattle, and their opinion on the region's eco-future. Ernie, 20s, a journalism graduate from eastern Washington said:

Seattle's a very liberal city, the rest of the country's going the other way. Who knows, maybe all the foodies are all flocking up here, I don't know. Yeah, it's definitely changed things as far as having the awareness and having the ability for people to get something different. I've recently become friends with some people who are, you know, more liberal, progressive types. And it's been really interesting, you know, sort of their [green diets]. You know, because there's a demand for it, it's there, and because it's there, I started going to it. It's kind of interesting, because they created this demand for something and then the stores showed up, and now I pay for that as well, because I've found I like it better too – as somebody who traditionally has been just been, you know, a white bread sort of person.

Are alternative markets a sign that agribusiness is becoming more environmentally sustainable – or is organic or local food a past-time for the rich, the idle or students? After a laugh Nick answered:

I'll define my idea of agribusiness and then answer your question. My definition of agribusiness is a large industrial machine that puts profit ahead of quality. Okay, so using that definition... you almost can't talk about the Manna Mills and the PCCs of the world because – the farmers from whom they purchase [food] want to make money, obviously. But I still think, no matter what, that those guys can't be agribusiness - because they put quality ahead of profit.

How do motos see Puget Sound in 10-30 years? Nick said, 'Population will increase, and green space decrease. It's a sad reality.'

Ernie, who'd seen improvements in his own quality of life since moving to Seattle was optimistic: 'I think you'll see more people buying organic food, and quality normal food.'



Figure 7.21. Seattle International Raceway pre-race grid at (1977). Tuners and family assist in the pits, left.

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Others' profile & qualitative data



Figure 7.22. Box scheme, County Durham.



Figure 7.23. Seward Park Seattle PCC (2006).

What are others? What's their profile here? Human geography is steeped in texts by Edward Said (1978) and Derek Gregory (Gregory & Walford 1989) explaining the cultural-historical process of, for instance, occidental Britain *otherising* cultures of Asia as oriental, other, or fundamentally different. There is scope for otherisation in food, but that is not the theme here. Recall that the unifying factor of others is that none belong in sub-groups of academics, fires or motos, and that the 100 others who responded to questionnaires added diversity to samples – so here the shared culinary experiences of typical Newcastle and Seattle consumers are elaborated. Potlucks and dinner parties comprised informal focus groups of (mostly) others. But they were not tape recorded, so this section relies primarily on my observations.

In Newcastle dinner parties there has been a shift, following the supermarket revolution. In the 1990s, the man of the house might tempt guests with his special curry. Christmas dinners could involve endless savouries, meat dishes, Yorkshire Pudding, excellent gravy and soaked trifle – but few green vegetables. Gradually, lighter fare appeared with more fruit, veg, salad and cheeses. Now local, sometimes organic foods such as goat cheese, fruit juice and beer increasingly dot tabletops. Locally sourced, sometimes organic meat is prized, but more to be expected at formal dinners than casual lunches. The coming of Waitrose to the Northeast may strengthen this trend. Compared to the past, Newcastle is a beehive of quality food activity, and subscriptions in box schemes are rising. The public flocks to events such as open days at Newcastle University's Nafferton Farm, and Slow Food events are becoming more numerous in the Northeast (see photos below).



Figure 7.24. Newcastle University Nafferton Farm open day in fall 2005.

Figure 7.25. Parents and kids tour Nafferton.

Figure 7.26. Slow Food Durham launched by solo & council activists, 2006.



Figure 7.27. Pike Place Market Seattle 'Organic Wednesdays & Saturdays'.

Figure 7.28. Women, Infants & Children (WIC) coupons = cash.

Figure 7.29. Seattle markets lend red wagons for kids.

Once Seattle was culturally dominated by Scandinavian immigrants. Men were stereotyped as lumberjacks and fisherman if not working at Boeing (Serling 1991/1992), while women worked in factories, schools or stayed home. Nowadays Ballard sports an Azteca Tex-Mex restaurant and the old jokes about Norwegian *lutefisk* (lye-cured fish) fade. More women work. Seattle is more ethnically and racially diverse. Despite examples to the contrary the city has a reputation for healthy race relations (Berner 1991).

Seattle's farmers' markets (Figures 7.27-29 above), ethnic restaurants, and supermarkets specialising in, say, Korean food, put affluent cities such as Fort Meyer, Florida, and Palm Springs, California, in the shade when it comes to food that is *both organic and local*.

Michael Stusser (2007) observed a month-long 100% organic diet for *Seattle Weekly*, his answer to Morgan Spurlock's test of McDonaldization in *Supersize Me!* (Spurlock 2004; Ritzer 2000). He notes some of my sources such as Full Circle Farm, and developments at Washington State University (such as establishment of the organic farming degree programmes), so his data triangulate with mine. Stusser lists why Seattle is right for his plan:

- [Partly due to Seattle] organic food is booming 15% pa compared to 5% for non-organics.
- In the last decade, over 650,000 family farms have bit the dust.
- But... Washington Department of Agriculture reports the organic industry has grown over a hundredfold since 1988. Today, there are 1,000 certified organic operators in the state, 630 farms, and organic sales of \$438 million.
- According to... the Washington State Dairy Federation, Seattle has the highest percentage (11%) of citizens who purchase organic dairy products in the country. But there's still room for growth: Two years ago, Washington state had three organic dairies; today there are 52. By the end of 2007, 5% of all dairy farms will be organic.

While some of this organic support comes from acads, fires and motos, most comes from others. The trend to add-value by linking products including organic food to localness can hardly be exaggerated, because local products are generally trusted and valued by all sectors of the population.

Conclusions on all qualitative data

Stusser's (2007) finding that Seattleites have strong demand for organic products *that are local* is in line with the UK Soil Association's (2004) finding that their members prefer buying local food rather than organics from afar. Seattle celebrity chef Tom Douglas (2001) agrees, writing that he prioritises *local*, and *sustainable* over conventional fare averaging 1500 food miles. Newcastle-Durham restaurateur Bill Oldfield has vaunted local meat and food for decades. This was the consensus of my focus groups. After all, local is often fresher than food from far away.

As the last chapter quantified, local *estimated* and *stated* preference exceeds organic preference for all unisex groups in Newcastle (Figure 6.2a&b), but that is reversed among Seattle acads, motos, others and all, *though not fires*. This suggests the conclusion that US fires join all UK unisex sub-groups in local food preference drawing on the area's working class past, a conclusion congruent with Bourdieu's habitus (1984). Seattle, by contrast, with its longer history as a market catering to people's individualism, makes organics seem more of an entitlement that crosses class lines (Bauman 1988, 2001).

While acad focus groups unearthed suspicion that most motos are working class or less educated, the data counter that conclusion. Perhaps half the motos were working class while half worked in a variety of professions (except academia or firefighting) – giving motos higher and wider income ranges than acads or fires.

Newcastle retains an identification with the chip buttie (French fry sandwich in US parlance), but that is challenged by a new generation. The new kids in the shops are often warier of industrial food than their parents, and the increasing availability of alternatives in supers and farmers' markets increases their willingness to buy them. One important example of rising local and organic preference is the success of Acorn Organic Dairy in County Durham.

While GM protests have quieted since trials were halted, they have strengthened in the US where focus groups alerted me to the rising backlash against conventional milk with rBGH/rBST. Thousands of PNW consumers sent market signals to conventional coop Darigold, and family entity Wilcox Farms, that they did not want hormones in milk.

Responding to public interest in how the meanings of USDA NOP organic certification are represented in animal welfare practices, from traditional pasture grazing to feedlots and confined animal feeding operations (CAFOs), PCC Natural Markets joined a boycott by the Organic Consumers Association (2006) of Aurora and Dean-Horizon milk. The expectation of many urban consumers, i.e. that on rural visits they will see animals grazing fields, is a factor driving the USDA organic pasture debate (Scholten forthcoming; Figure 7.30).

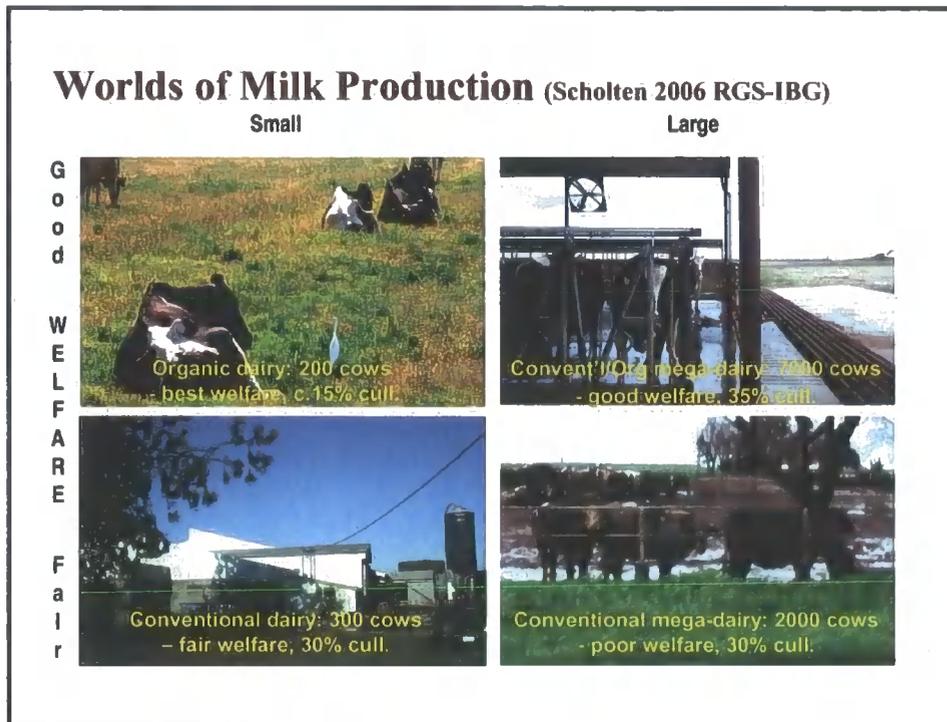


Figure 7.30. Worlds of Milk Production: pasture or CAFOs?

Ironically, the economic prosperity that increases producers' willingness to supply organic or local foods, along with consumers' willingness to pay for it, may contribute to deteriorating urban environmental conditions. Seattle is such an appealing place to live and dine that incomers jam the freeways to get there. While people in Newcastle celebrate the return of wildlife to their rivers, Seattleites moan loss of wildlife and habitat. But, on the ability of their regions to fund transport and water reforms needed in future, both populations manifest guarded optimism.

¹ Parts of this chapter were presented at conferences (Scholten 2005 AAG; 2005 and 2006 RGS-IBG).

² Thanks to Professor Urry for his symposium on automobility at the Centre for Mobilities Research, University of Lancaster, November 2004. This was the first academic forum in which I floated my concept of motobility.



Figure 8.1. Buzzwords at Seattle area farmers' markets. Here is Snohomish opening day.



Figure 8.2. Slow Food convivium in Durham in fall 2006. The UK Soil Association (2004) finds most consumers prefer local food to imported organics. Many people are locovores.

CHAPTER 8 CONCLUSIONS

on AFNs and risk



Before this final chapter highlights the main findings of the study, it is worth recalling points that answer the question of whether *Beyond organic = local*. It is already a decade and a half since Lowe *et al.* (1993) hailed the post-productivist transition. The aspirational 1980s in the US and the UK had introduced people to foreign cuisines. TV soap operas celebrated opulence but seldom induced reflection on why food was made in different places. Now, that seems long ago. As soon as exotic cuisines swept the world, an interest in organics rose partly in response to food scares. Lately, deeper questions about the link between farming and climate change are driving demand by more people for food that is organic *and* local.



Figure 8.3. In the 1980s this Magnolia Seattle supermarket spotlighted foreign cuisines. In the 1990s it featured organics, and now responds to demand for local cheese, etc.



Figure 8.4. Fresh fruit & veg.



Figure 8.5. Friendly fishmonger.

Seattle and Newcastle in the study

The original thesis remit was to explore and describe Seattle's consumption vis-à-vis organics and risk. This I have done, investigating risk perceptions while establishing the city in the same league with the Bay Area. The latter was implicated in the California cuisine of fresh and local food which, after natural food pioneer Alice Waters put 'organic' on her menu in 1971. Since my original intent was to study UK farm family responses to globalisation, I began pilot studies in Newcastle. Soon there emerged ways to delineate answers on organic consumption by exploring the organic-or-local preference binary in Newcastle. Although it required more time and effort to study Seattle with reference to Newcastle, it has been more rewarding than studying either city by itself.

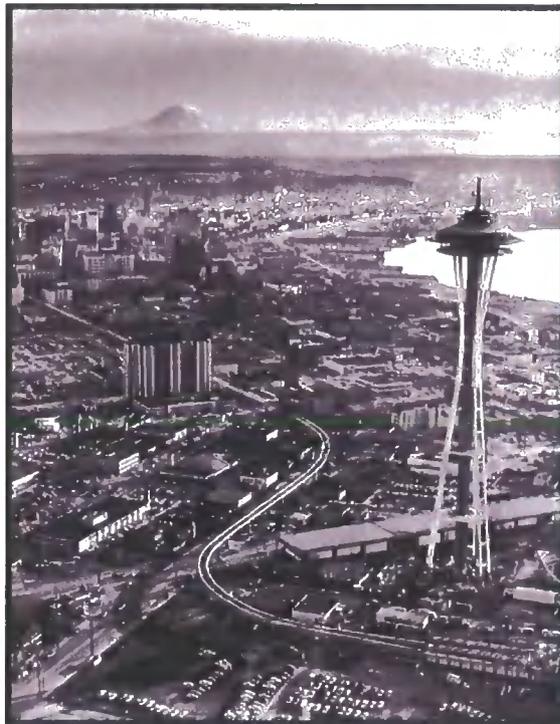


Figure 8.6. Seattle World's Fair under construction. Source: *Seattle Post-Intelligencer* 1962.



Figure 8.7. Newcastle's Castle Keep on a students' urban geography foray in 2005.

Part of the reason for Seattle punching above its weight as a hotbed of radical organicists is probably due to governance. Washington State law has a history of zoning in favour of family scale farms (85% by the USDA definition of farms earning less than \$250k yearly). This is significantly different from California's history of Spanish land grants rather than family farms (Guthman 2004). The situation around Newcastle, where organic production is at a lower level than Seattle, but nevertheless presses ahead with improved farmers' markets and increased local sourcing by restaurants, is probably due to two things, first, persistence of the UK North-South divide and lack of major industrial or manufacturing activity

competing for farmland, and second, patronage by noble families such as the Percys whose estate and tenant farms maintain the countryside in traditional British green while developing place-linked foods and other products.

At the beginning of this research my supervisor charged me to uncover grassroots contestation and resistance to globalisation. At the time this seemed politically moribund after dairy GMOs were approved in the States (Buttel 1997). But soon political and economic issues of power in the food system became prominent, as the direct sales renaissance rose in tandem with a coffee culture prizing purity in its beans – and the milk used with them. Obsession with coffee and non-conventional foods was partly spawned by fears the Emerald City would turn into Manhattan, as skyscrapers grew like mushrooms, and the Lesser Seattle hopes of newspaperman Emmett Watson fell to the global city aspirations of Mayor Greg Nickels (Moody 2003; Berger 2005). Coffee culture was embedded in the scramble for local uniqueness and stability when, as Marx said, ‘all that is solid melts into air’ (Harvey 1990: 11). Seattle’s post-modern shift from pubs to coffee shops is followed in Newcastle and globally. In *Selling Seattle* (2004: 156, 144-163) James Lyons notes that although corporate Starbucks was targeted as part of an ‘evil empire’ by anti-WTO protesters in the 1999 Battle of Seattle, coffee marketing was successfully linked to the city’s snug, local shops, even when expatriate Ally Svenson marketed her first Seattle Coffee Company store in London’s Covent Garden - a haven of foodies like the Pike Place farmers’ market neighbouring the first Starbucks in 1971. Lyons (2004:150) writes:

This mobilisation of ‘the closest Seattle’ was symptomatic of the reproduction of ‘the local’ within what Nigel Thrift terms the ‘distinctive economic, social and cultural systems’ of global consumerism



Figure 8.8. Starbucks at Pike Place Farmers’ Market (Starbucks 1971). The original stores learned from the Last Exit on Brooklyn coffee house owned by Irv Cisski (Scholten 1987a).

Figure 8.9. Gospel singers outside Starbucks Seattle (Scholten 2002). Organic vendors on right.

Routes to findings

It will be recalled that one initial impetus for the work was a search for farm trajectories that could ensure the economic survival of family-scale farms in the face of neo-liberal globalisation. Possible routes to economic sustainability included place-linked, organic and/or local foods, and I accepted the challenge by Atkins (1988), Marsden *et al.* (1996), Murdoch & Miele (1999) and others to empirically explore turns to consumption, nature, quality, organics, safety and trust.

Sites for fieldwork were carefully considered. Seattle was prime target because of the goal to prove it was an organic growth pole. Germany was also considered as a comparator because of my previous experience there, and for its history of biodynamic networks and farmers' markets. But Newcastle upon Tyne was selected due to familiarity with its growing alternative food networks, and because of the policy bents shared by the UK and US, i.e. aversion to quotas, preference for neo-liberal economics, large scale farms and cheap food (Scholten 1990b & 1997b; Morgan *et al.* 2006). Another advantage of Newcastle was its experience with food scares such as BSE/vCJD, the absence of which could be explored in the US; although there had been no declared cases of BSE in North America when the thesis study began, its disease vectors via meat-and-bone-meal were known and it was unsurprising when cases were found in the US after Seattle fieldwork was completed in 2003. A prime reason to bring BSE/vCJD into an organics study is that many consumers believe that organic production avoids the risks of industrial livestock production that accompanied, if not actually caused, the trans-species leap of prion diseases (Phillips 2000; Pennington 2006; Nestle 2002; Smith 2003; Whatmore 2002). In other words, organics were seen as a proxy for safety from mad cow disease.

Mixed methodologies included a quantifiable UK/US Food & Risk Survey, along with ethnography to elicit qualitative data in interviews and focus groups. Three sub-groups were targeted for study and focus groups. Academics, firefighters, and motorcyclists were selected not just because they were accessible, but also because they represented complementarily stereotyped positions on a risk spectrum from risk-averse to thrill-seeker. Beck's (1992) risk society thesis was applied from the beginning, but Douglas and Lupton were added in trying to link people's variable (and often healthy) predilection for short-term risks such as motorcycling with long-term risks including BSE.

Results were satisfying, and a few examples follow. Although variation was found within sub-groups, some stereotypes were generally upheld, e.g. when surveys showed UK/US acads were high consumers of organic food. Some stereotypes were broken. For instance, the caricature of bikers as being oblivious to food quality was demolished when Seattle motos' organics use was found to be just 10% shy of Newcastle acads, but it is important to note that Seattle's supply side capacity in alternative foods helps give consumers the *freedom* to make such *individualised* choices, in terms expressed by Bauman (1988, 2001). The role of organics in Bourdieuean (1984) *distinction* was validated by results showing that acads topped other groups in their reports of serving organics at their last hosted meal.

Perhaps the most salient empirical results were figures for household use of organics on the previous day, in which about 28% of Seattle moto respondents reported use which was surprisingly near that of Seattle acads (43%) and Newcastle acads (40%). It was no surprise that Newcastle academics placed BSE high in their risk pantheons. But the 42 Seattle acads, whose organics use was even higher, showed BSE to be low in their risk hierarchies - which can be explained by the facts that diabetes, heart disease and obesity are high in their risk pantheons - and of course BSE was not discovered near Seattle until months thereafter. The question remains why BSE was listed as a top risk by 26% of the 77 Seattle women respondents.

Consumers' preference for organic or local food was difficult to quantify. But, qualitative interviews helped triangulate data into a few conclusions. For example, the Soil Association's (2004) observation, that people prefer to buy local non-organic food rather than organics imported from afar, can be explained in how it simplifies uncertain debates about food miles by resolving them in favour of defensive localism (Winter 2003). Qualitative work also helped confirm the initial gender assumption that, despite significant exceptions, women often take the lead in selection, preparation and reflection on household food. The impression is inescapable that after the discovery of BSE in Washington State, Seattle respondents' preference for local rather than organic food seemed to harden. Fatalistic posturing might have been involved when men offered to join cheap barbecues.

Although there may be growing identification of organics with safety from BSE among US consumers, the country has fortunately not suffered a widespread epidemic of BSE/vCJD. But recent USDA moves to permit private testing of carcasses for export to Japan invite study (on the prevalence or not of BSE see van Zwanenberg & Millstone 2005).

Seattle is indeed an engine of organic growth. But profiles of Seattle as ecotopia and Newcastle as chip buttie hell are skin deep. Both cities have made contributions to local and international environmental issues and I see both as inhabiting different, if comparable, positions on a continuum from industrialised food to sustainability. That said, organic activities seem a little more outdoor in Seattle, while Newcastle's slightly cooler climate lends itself to interior meetings of cooking demonstrations (Figures 8.10 and 8.11 below).



Figure 8.10. Newcastle restaurateur Bill Oldfield & chefs cooking demo.



Figure 8.11. Seattle chef Tom Douglas demonstrates at a farmers' market.

The democratic potential of organics is revealed in the mass marketing of organics by Wal-Mart, Tesco, Safeway, Sainsbury, Waitrose, Whole Foods, etc. Organicists celebrated decisions by Starbucks US, and McDonald's UK to switch to organic milk, and hope the decision is long-lasting. But a fundamental challenge is to see if Sir Don Curry's (2002) call to shorten food chains to 'local' is also possible for macroactors like Starbucks, McDonald's, Pizza Hut and the like. Although some greens scorn UK supermarket Asda for its links to giant Wal-Mart, others claim Asda sells more local produce than any other UK vendor. Certainly enhanced logistics would be needed to bring reasonably-priced local-organics to vendors with complex supply chains.

Even when clear answers on food systems are possible, they are soon past their sell-by date. Marsden *et al.* (2000) note that supermarkets assumed governance for food safety after the UK government lost legitimacy in the BSE debacle, but complaints about the supers' oligopolistic power soon followed from consumers and farmers. The lesson is that eternal vigilance is the only answer to questions on power in the food chain.

Under neo-liberal globalisation, many have asked if we are citizens or mere consumers. The study found evidence for citizen political power, manifested in Seattle participation in boycotts of organic-industrial firms allegedly breaking dairy rules in the USDA organic pasture wars (Scholten forthcoming). Greens and farmer cooperatives have won a few battles against Monsanto and other GM rivals since the initial flawed organic rules were mooted by the USDA in 1997 (Goodman & DuPuis 2002). More evidence of renewed citizen vs. corporate power comes in US supermarkets' mass decision 2006-7 to ask farmers not to supply GMO-enhanced milk. However, GM interests view the rBGH/rBST dairy labelling issue as far from over – even as they press for USDA permission to market livestock products from cloned animals.

This study unearthed evidence of the suitability of organics for the democratic mainstream in the growing familiarity of Newcastle firefighters with them; their rates were lower than other sub-groups but significantly, were two-and-a-half-times higher than working class people surveyed around Edinburgh a decade before (Goodman 2004; Tregear *et. al* 1994). Consumer familiarity and understanding of organic certification systems and logos seemed to grow during the study, though data on this were not quantified.

So what are the implications? As speculated at the study's outset, organic methods, particularly with local content, offer family-scale farmers a potential niche, if they can maintain political support in their localities against corporate and GM rivals. There is potential to add-value to food in organics, and perhaps increase the rural employment base too. Farmers' markets improve community cohesion, as such rural spaces in urban places offer women and families safe, vibrant opportunities to connect farmers with consumers.

This thesis found evidence that childbirth is a trigger to first time organic consumption by parents who eschew rBGH/rBST in their infants' milk. Women are high profile in AFNs (Jarosz 2000). But there was insufficient time to fully investigate my hypothesis that a GRass Ceiling exists blocking women from CEO positions in the largest corporate organic firms, except in public relations roles, so this project may be resumed (see Chapter 2 Figure 2.6). Meanwhile, observers pose social justice questions such as: *Organics – by and for whom?* Among these are questions about legal and illegal immigrant labour posed by Guthman (forthcoming).

Pasture and food vs. fuel in future work

Just a decade or so ago organics seemed a precious obsession of elites and mystics. But recent research, hinting that anthropogenic contributions to climate change preceded the industrial revolution by millennia with the introduction of agriculture, suggests that this topic merits more study. Farming's environmental impact definitely increased with intensive inputs and petroleum-based transport, so it is understandable that consumer concern on food miles grew during the years of this study - fuelled by consternation with oil politics and war in the Mideast. There has been a reflex suggestion by the Soil Association to ban organic certification of air freighted foods. But Macgregor & Vorley (2006) suggest sophisticated sea containers and other transport improvements to mitigate carbon emissions, while maintaining the socio-economic capital of fruit and veg workers in Africa.

If petroleum-based farming proves to be a worse climate factor than formerly understood, it increases urgency to use low-input organic processes in food systems (*Time* April 9, 2007). But a glance at the Sustainability Compass, in our auto-dependent peak oil era's rush to bio-fuel suggests that nature is losing priority to neo-liberal ideas on the economy, well-being, and society (Chapter 1, Figure 1.14; Sustainable Seattle 2006; Urry 2004; Kunstler 2007).

This is apparent in Europe and the UK where agricultural set-aside is being phased out in favour of bio-mass, against the warnings of Greens that bio-diversity will suffer. In the US the ethanol boom is fraught with environmental risks, including enlargement of the dead zone in the Gulf of Mexico, where Mid-West farm chemical runoff carried by the Mississippi River feeds algae depriving the water of the oxygen needed by fish. Planting maize fencerow to fencerow for bio-fuel can also endanger the organic pasture movement, increase human hunger, and exacerbate global warming.

Plenty of work needs to be done.

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