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WHY THE BIG 5?

UNDERSTANDING UK SEAFOOD CONSUMER BEHAVIOUR



Sarah Tetley, PhD Management

Kent Business School

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ABSTRACT

UK consumers bought just under 500 thousand tonnes of seafood in 2010, at a cost of £3.8bn. Despite rising prices, consumption is on a general upwards path, with the average UK adult now eating 2% more seafood than they would have eaten a generation ago, and demand predicted to grow by a further 17% by 2030. However, this demand is increasingly restricted to a narrow range of imported and wild-caught species (Cod, Haddock, Tuna) and farmed products (Salmon and Prawns) over locally-available species with the consequence that between 60% and 80% of UK domestic landings are currently exported and 80% of all the seafood eaten in the UK is one of either Cod, Haddock, Salmon, Tuna or Prawns – the so-called Big 5. The shortage of local markets for native fish species is arguably reducing the relative viability of small scale, over large-scale, fisheries in the UK. It also increases pressure upon wild stocks of commercially valuable species and is driving the rapid expansion of fish-farming operations which can have negative environmental and social implications. Considering the above, it is suggested that UK consumers could make a positive contribution to the UK economy and marine environment if they chose to buy native, locally-caught species, over farmed and exotic imports. In order to achieve this, however, significant behavioural change would need to take place; and for behavioural change initiatives to be successful, it is argued that it is first necessary to understand *why* these consumption patterns have developed, i.e. Why the Big 5?

Accepting that no single theory has been found that can fully explain behaviours from intentions, this research used mixed methods to develop a consumer-centric view of the full range of factors that might be driving these unsustainable consumption patterns. Regular consumers of seafood from four contrasting localities in England were recruited to complete surveys, maintain shopping diaries and to take part in group and one-to-one interviews to understand their reasons for eating seafood in general and the Big 5 in particular. Drawing on the Literature on seafood consumption, demographic and geographic-induced differences in consumption were explored; and consumer understanding of, and concern for, the sustainability of their seafood was assessed. Retail behaviour was also examined by undertaking an on-line review of the seafood offered for sale by the UK's five largest retailers.

Consumers were generally ill informed and confused about the sustainability of their seafood and had little to no awareness of labelling. In their confusion/apathy, they tended to revert to habitual behaviours and safe choices tending towards the Big 5. They felt strongly that retailers should be making it easier for them to make sustainable choices. The evidence from this study is that Retail is failing in this respect. Interest in and demand for local seafood was very high, with consumers equating local with sustainable, even though the evidence to support this assertion is currently lacking. Consumer definitions of "local" and "sustainable" were found to vary from accepted policy and academic understanding, presenting the possibility of adding to consumer confusion when communicating about sustainable seafood; further, "sustainable" possessed negative connotations for these consumers who, in stark contrast to the average UK consumer, were found to score highly for Hedonism.

In total, twenty eight distinct variables were identified as influencing unsustainable UK seafood consumer behaviour. Key amongst these were consumer ignorance/apathy regarding sustainability; retail behaviour; and habit – factors that are presented in the Trifold Model of Unsustainable Consumer Behaviour. This model brings much needed clarity to a complex and poorly understood area of consumer behaviour and marks a significant contribution to three areas of academic study: Sustainable Consumption; Consumer Behaviour; and Business Ethics. The Trifold Model is presented for further testing. Recommendations for policy and industry are highlighted as are areas for further research.

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Glossary of Terms / Acronyms

ABC	Attitude-Behaviour-Context model of behaviour
CADM	Comprehensive Action Determination Model of Behaviour
CITES	Convention on International Trade in Endangered Species
DEFRA	Department for the Environment and Rural Affairs
Dunnhumby	The database containing Tesco club card data
EEZ	Exclusive Economic Zone
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
GHG	Green House Gas
ICCAT	International Commission for the Conservation of Atlantic Tunas
ICES	International Council for the Exploration of the Seas
IUU	Illegal, Unregulated and Unreported (fishing)
MMO	Marine Management Organisation
MSC	Marine Stewardship Council
MCS	Marine Conservation Society
NAM	Norm Activation Model of Pro-Social Behaviour
NEF	New Economics Forum
NGO	Non-Governmental Organisation
PBC	Perceived Behavioural Control
PC	Political Consumerism
PO	Producer Organisation
RPI	Retail Price Index
TAC	Total Allowable Catch
TPB	The Theory of Planned Behaviour
TRA	Theory of Reasoned Action
The Big 5	Cod, Salmon, Tuna, Prawns and Haddock
VBN	Values-Beliefs-Norms Model of Environmentalism
WWF	World Wide Fund for Nature

CHAPTER 1 : INTRODUCTION TO THE THESIS

1.1 INTRODUCTION

This chapter provides the context to the research, describing why the research is important and relevant in the context of the sustainability of UK seafood consumption. A research problem is highlighted and research questions are identified. This is followed by a summary of the literature on consumer behaviour and sustainable consumption which then leads into an introduction to the methodology chosen to address the research questions. The chapter concludes with an explanation of the remaining sections of the Thesis and an assessment of the contribution the research makes to academia and practice.

1.2 RESEARCH CONTEXT

According to the UN Food and Agriculture Organisation, one-third of the world's fish stocks are overexploited, depleted or recovering from depletion, with over 60% fully-exploited (FAO 2014). Yet global demand for seafood is growing and shows no signs of abating. Aquaculture is heavily promoted as the answer to meeting the gap between supply and demand but social, environmental and logistical concerns surrounding this abound (Pauly et al. 2002). In any event, the growing body of evidence for the harmful environmental effects of fishing mean that changes in global consumption must happen if oceans are to both retain biodiversity and continue to provide the vital ecosystem services upon which we all depend (Worm et al. 2009)

UK consumers bought just under five hundred thousand tonnes of seafood in 2010, at a cost of £3.8bn (MMO, 2012). Consistent with global trends, consumption is on an upwards trajectory, with the average UK adult now eating around 2% more fish than they would have a generation ago. Annual household consumption has risen by 1.8% in the five years to 2012 and is predicted to grow by a further 17% by 2030 (Future Foundation 2012). UK consumer preferences for seafood are, however, narrow, with just 5 species (Salmon, Tuna, Cod, Haddock and Prawns) accounting for 80% of all the seafood sold. As a consequence of this skewed demand:

- The UK is now a net importer of fish, with imports exceeding exports in 2011 by 283 thousand tonnes (Marine Management Organisation 2012);
- Between 60 and 80% of UK domestic landings are exported (Tetley 2010); and,
- As much as 17% of UK catches are discarded at sea, because of weak or non-existent demand for the species being caught (Revill Nation Ltd 2011).

Currently underutilised and / or discarded species, such as Dab, Pouting and Gurnard offer the possibility of sustainable and cheaper alternatives to whitefish such as Cod and Haddock; and, in the case of Gurnard, of new sources of fish high in Omega – 3, with its important health

implications (Revill Nation Ltd 2011). Yet any review of supermarket wet fish counters will demonstrate that availability of these species to consumers is limited. This presents a challenge considering that 80% of sales of all seafood in the UK are made through the Big 5 supermarket chains of Tesco, Sainsbury, Asda, Morrisons and Waitrose (Seafish 2012)

Globally and within the UK, numerous NGO-led campaigns have attempted to raise consumer awareness of the sustainability of their seafood and to enable them to make more informed purchases (Jacquet and Pauly 2007; Jacquet et al. 2010a; Greenpeace 2006; Greenpeace 2011a). These campaigns appear to have yielded some results, for sales of eco-labelled seafood products in the UK have continued to grow, even in the face of rising prices and at a time when sales of other eco-labelled goods (e.g. organic) have fallen (The Co-operative Group 2012). Sales of the most commonly-available certified seafood still only account for 6% of the UK market (Marine Stewardship Council 2013), however, and consumers are continuing to demand a very narrow range of product, maintaining pressure upon wild capture and aquaculture operations alike (Seafish 2013a).

1.3 OVERVIEW OF THE LITERATURE

1.3.1 Consumer Behaviour

The *general* literature on consumer behaviour is vast and diverse – having been considered through a variety of different lenses – from the micro to the macro; and, from the different philosophical and theoretical perspectives embraced by the academic disciplines of sociology, economics, psychology, anthropology and political science. Despite the best efforts of these many researchers, however, and arguably *because* the issue has been considered from so many perspectives, no one model has yet been identified that can fully predict behaviours from intentions (the Theory of Planned Behaviour arguably comes closest, although calculations of its accuracy vary between 34% and 71% (Guillaumie, Godin and Vezina-Im 2010; Ajzen 1991). Further, numerous variables have been discovered that have an effect upon intentions and subsequent behaviours, including subject confidence, age, gender, life-stage and educational attainment; social norms; and, personal values (Verbeke et al. 2007; Verbeke and Vackier 2005; Carrigan and Attalla 2001; Shaw et al. 2005).

An interesting characteristic of the wider Literature is that it is largely quantitative and draws heavily upon student populations (Stolle, Hooghe and Micheletti 2005; Carrigan and Attalla 2001; Axelrod 1994; Kaiser, Hübner and Bogner 2005; Klöckner and Blöbaum 2010). It also tends to be limited to a consideration of only a handful of variables and uses previous consumer experiences (through participant recollections of past behaviours) rather than real-time observations of actual behaviour (Kaiser, Hübner and Bogner 2005; Andorfer and Liebe 2012;

Jaffry et al. 2004). Consequently, while there is a great deal of information explaining *what* people do, some of the findings may be unrepresentative of wider society; and, there is only a limited literature that really seeks to explain *why* certain choices are made.

1.3.2 Seafood Consumption

These distinctions are also reflected to a large extent in the seafood consumer behaviour literature, although student populations are not as prominent here – with studies instead concentrating upon female consumers (as typically the main buyers of household food) living in Western Europe and the United States (Verbeke et al. 2007; Jaffry et al. 2004; Kemmerly and Macfarlane 2009).

Two broad areas of investigation dominate. The first, and largest body of work, concerns identifying the characteristics of seafood consumers, their motivations for consuming seafood in the first place and the implications of these factors upon demand. Typically, these studies focus upon comparing consumers with non-consumers and are frequently driven from a health-perspective of wanting to encourage the greater consumption of oily fish (Clonan et al. 2012; Scholderer and Grunert 2001; Leek, Maddock and Foxall 2000; Altintzoglou et al. 2010).

This branch of the Literature tells us that increasing age, income, educational achievement and household composition are positively correlated with an increased likelihood to buy, as is being female (Wessels, Johnston and Donath 1999; Olsen 2003; Myrland et al. 2000). There is also some evidence for a regional disposition to buy, with those living in coastal areas more likely to consume seafood than their inland counterparts (Trondsen et al. 2004). The exception to this may be for eco-labelled products for which only gender (femaleness) has so far proved to be a reliable predictor of buying behaviour, both in favour and against, depending upon nationality (Wessels, Johnston and Donath 1999; Johnston et al. 2001a).

Barriers to seafood consumption also appear to be fairly universal and pertain to a combination of personal perceptions of risk (as it applies to taste and cost), attitudes, norms and feelings of control (Altintzoglou et al. 2010; Leek, Maddock and Foxall 2000; Olsen 2004). These barriers have been used to segment consumers based upon their likelihood - or not - to consume seafood, on the basis of variables including trust in information sources; perceptions of the quality of the fish; degree of price sensitivity and perceptions about healthiness and taste (Vanhonacker, Pieniak and Verbeke 2010).

The second relatively recent addition to the literature stems from the growing awareness of the harmful environmental effects of fishing in general, and dwindling fish stocks in particular, and concerns itself with understanding how consumer behaviour can be influenced. These studies

largely relate to analysis of the effectiveness of various eco-labelling schemes, but also include consideration of wider behavioural change initiatives. There is significantly little consensus here on whether these approaches are effective and to be encouraged over, for example, supply-chain or regulatory initiatives (Jacquet et al 2010a; Iles 2007).

Mirroring the majority of the general consumer behaviour literature, however, seafood behaviour has typically been described using quantitative methods, such that understanding of *why* seafood behaviours present in the way that they do is extremely limited. Arguably, without this most basic of understandings, any subsequent behavioural change initiatives will be missing key pieces of data from which to develop effective interventions.

1.4 STATEMENT OF THE RESEARCH PROBLEM

The UK seafood market appears to be both out of balance and unsustainable - from an economic, social and environmental perspective. Consumers demand a very limited number of species that are largely unavailable locally, resulting in the over-exploitation of foreign fish stocks (Seafish 2013a; FAO 2014); the burning of large amounts of fuel through extended fishing effort (Tyedmers, Watson and Pauly 2005); the expansion of aquaculture projects which have the potential to result in environmental and social problems (Hodal, Kelly and Lawrence 2014; Pauly et al. 2002); and, the creation of complicated and long-distance distribution channels that add to the Industry's large carbon footprint (Sonesson, David and Ziegler 2010). At the same time, UK fishermen are throwing back significant amounts of dead fish from sustainable stocks because landing them, in the absence of strong markets, is not profitable (Revill Nation Ltd 2011).

It would seem reasonable to assume that a change in buying habits away from imported products towards currently under-utilised and locally-landed species, would have a positive impact from a sustainability perspective. Yet successive behavioural change initiatives, such as labelling, aimed at influencing seafood consumption have so far only had a limited impact upon overall buying behaviours (Jacquet et al. 2010a; Marine Stewardship Council 2013).

The Literature suggests that there are certain common demographic and attitudinal characteristics shared by regular seafood consumers, such as increased age, income and educational attainment and a general positive attitude towards seafood that has typically been fostered over time (Olsen 2004). Yet, the Literature has largely failed to address whether these characteristics in themselves determine seafood consumption patterns or if other (extrinsic) factors also play a part. In essence, the Literature is light on providing explanations for *why* the patterns of consumption seen in the UK exist.

In the absence of any academic clarity, the aim of the present study was to address the gap in the literature by asking:

- **Why are UK seafood consumption patterns the way that they are, i.e. Why the “Big 5” of Cod, Haddock, Tuna, Salmon and Prawns?**

1.5 OVERVIEW OF THE METHODOLOGY

The Research Problem is clearly one of depth, requiring the use of exploratory methods. Consequently, the methods used in this study were largely qualitative, although quantitative techniques were also utilised. The resulting mixed methodology, implemented across three phases of data collection and analysis, thus falls within the Critical paradigm – being interpretive in nature while also seeking to challenge existing patterns of societal behaviour.

Phase 1 consisted of an analysis of Tesco club card data to establish current sales of fresh fish across the UK and for the identification of sales patterns and deviations from these patterns. This analysis identified five Research Questions that informed the subsequent phases of the research (Figure 1, Table 1).

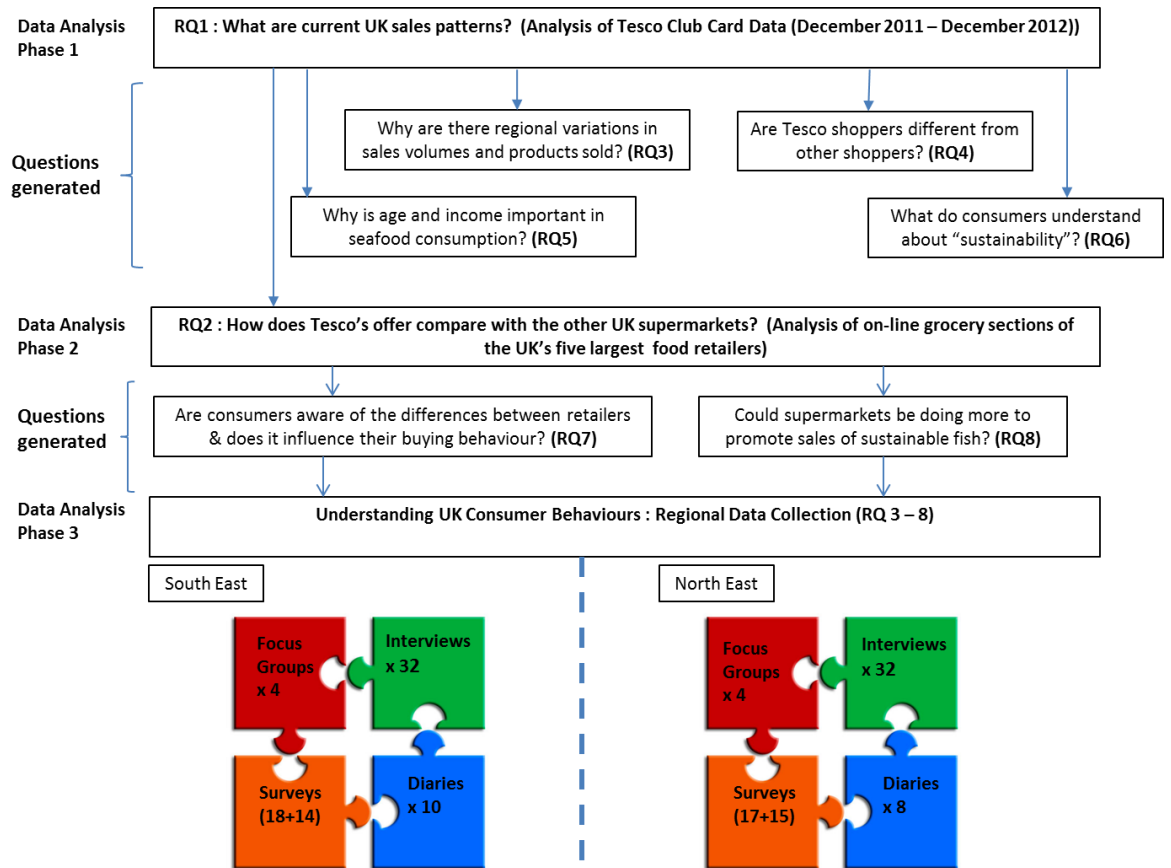
Phase 2 comprised an on-line review of the grocery sections of the UK’s five largest retailers by market share (Tesco, Sainsbury, Asda, Morrison’s and Waitrose). This analysis yielded two further Research Questions (Figure 1, Table 1).

Phase 3 was then designed to answer the Research Questions that remained unanswered, i.e. RQs 3 – 8 (Figure 1, Table 1) from the previous two phases. This phase consisted of a series of focus groups with existing seafood consumers in the North East (NE) and South East (SE) of England – regions that contrast on the basis of sales of fresh seafood through Tesco stores, with sales being higher in the SE than the NE. Focus group participants also maintained a shopping diary and completed a baseline survey which captured demographic as well as attitudinal and shopping behaviour information. Seafood shoppers were also recruited to participate in a semi-structured interview.

Analysis involved the use of both quantitative and qualitative approaches, including the use of coding to identify key themes from focus group and individual interviews; and, triangulation to enhance the reliability and credibility of the findings. Figure 1 represents the phased approach diagrammatically.

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Fig. 1 Diagrammatic Representation of the Research Design



1.6 THE RESEARCH QUESTIONS

Eight Research Questions were answered in order to answer the overarching Research Objective : Why the Big 5?

Table 1 describes which methods were used to answer each individual Research Question. All of the methods contributed to answering the overarching Research Objective. The table also indicates where these questions have been answered in the body of the Thesis.

Table 1 Summary Table Connecting the Research Questions to the Methods and Findings

Research Objective : Why the Big 5?		
Research Question	Method(s) Used	Where are Findings Discussed
RQ 1 : What are current UK Sales Patterns for Seafood?	<ul style="list-style-type: none"> Analysis of Tesco clubcard data held on the dunnhumby database 	<ul style="list-style-type: none"> 3.5
RQ 2 : How does Tesco’s offer compare with the other UK Supermarkets?	<ul style="list-style-type: none"> On-line review of the seafood for sale at the UK’s five largest supermarkets 	<ul style="list-style-type: none"> 3.4.2
RQ 3 : Why are there regional variations in seafood sales?	<ul style="list-style-type: none"> Survey – to capture information on place of residence and 	<ul style="list-style-type: none"> 5.5.1 6.2.4.3

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	<p>consumption frequency (recalled)</p> <ul style="list-style-type: none"> • Diaries – to capture information on place of residence and consumption (real-time) • Interviews – for consumer views on their consumption patterns 	<ul style="list-style-type: none"> • 6.2.4.4 • 6.2.4.5
RQ 4 : Are Tesco supermarket shoppers different from other shoppers?	<ul style="list-style-type: none"> • Survey – to compare the characteristics of the study participants with the average Tesco shopper • Diaries – to capture information on where the consumers are shopping and what they bought • Interviews – for consumers views on the different retailers and their offerings 	<ul style="list-style-type: none"> • 5.5 • 6.2.3.3
RQ 5 : Are age and income important in seafood consumption?	<ul style="list-style-type: none"> • Survey – to capture information on income, age and consumption • Interviews – for consumers' views of their own consumption behaviours 	<ul style="list-style-type: none"> • 5.5 • 6.2.2.1 • 6.2.4.1
RQ 6 : What do consumers understand about sustainability?	<ul style="list-style-type: none"> • Survey – to capture knowledge and awareness of sustainability issues relating to seafood • Workshops – to capture participants' knowledge of the sustainability status of 10 species • Interviews – for consumers views on what sustainability means and whether 	<ul style="list-style-type: none"> • 5.5.6 • 6.3

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	it affects their buying behaviour	
RQ7 : Are consumers aware of the differences in the sustainability of the seafood offered by retailers and does it influence their buying behaviours?	<ul style="list-style-type: none"> • Workshop – to explore consumer reactions to differing Supermarket offers • Interviews – for consumer views on why they shop where they do 	<ul style="list-style-type: none"> • 6.2.3.3 • 6.3.3.2.2
RQ 8 : Could supermarkets be doing more to promote sales of sustainable seafood?	<ul style="list-style-type: none"> • Interviews – for consumers' views on how supermarkets offer seafood 	<ul style="list-style-type: none"> • 6.2.3.2 • 6.2.3.4 • 6.2.4.2 • 6.2.4.4 • 6.4.2.2

1.7 STRUCTURE OF THE THESIS

This introductory chapter is followed by seven further chapters.

Chapter 2 discusses in more depth the sustainability challenges inherent in the worldwide seafood production industry. It sets the context for the research by describing the problems associated with the commercial wild-capture industry, including overfishing and the direct and indirect environmental impacts of modern commercial fishing techniques. The contribution of aquaculture (farmed seafood) is then discussed and sustainability concerns with this practice are highlighted. It concludes with an analysis of the responses made to these concerns by the seafood industry and by various (largely environmentally-motivated) non-governmental organisations.

Chapter 3 positions the UK fishing industry and UK consumer demand for seafood within this complex and contentious global context. It describes how the UK wild-capture industry is organised and regulated and the opportunities and challenges that this presents for sustainability. The status of UK fish stocks are discussed and there is an analysis of the extent to which UK-based fishing operations have been assessed as sustainable by the Marine Stewardship Council (the leading third-party accrediting body for sustainable wild-caught seafood (Gulbrandsen 2009).) The chapter then describes the UK retail landscape for seafood – where consumers are buying their seafood; what seafood they are buying; and how what is bought can vary greatly based upon the differing product offers of the Big 5 UK supermarket chains. The chapter presents an in depth analysis of actual sales data from the UK's largest Supermarket chain, Tesco, to illustrate current consumption patterns and how these vary across various dimensions; and compares Tesco's offer with the UK's other large Supermarket brands.

The chapter concludes with a stating of the Research Problem and the identification of the six research questions (RQ 3 – 8).

Chapter 4 reviews the academic literature with respect to consumer behaviour in general and the specifics of “ethical”, including sustainable seafood, consumer behaviour (the latter being an overarching term for behaviours, like sustainable seafood consumption, that are posited to have additional variables associated with them from generic consumption behaviours.) Differing theoretical models of behaviour are presented and critiqued and conclusions are drawn about the usefulness of model-based approaches to understanding behaviour. The results of empirical studies aimed at influencing seafood consumption are also discussed. The chapter uses the insights gained from the Literature review and the preceding chapters to present a conceptual framework of the full range of variables that might be driving unsustainable seafood consumer behaviour. By drawing on the Literature and the evidence that model-driven approaches are restricted in their ability to explain depth problems, the chapter concludes that an exploratory approach is needed to determine the influence of the multiple variables identified in the conceptual framework.

Chapter 5 describes the methodology chosen to address this complex problem. It begins by positioning the research within the critical paradigm and discusses. It then justifies the use of the differing data collection tools within this context (i.e. the mixed methods of focus groups, individual semi-structured interviews, diary-keeping and questionnaires); and relates the chosen methods to the Research Questions. The sampling and recruitment strategies and outcomes are discussed as are the logistical and ethical considerations that were taken into account in collecting the data. The characteristics of the study population are also described. It concludes by describing how the various data were analysed.

Chapter 6 describes the results from the third phase of data collection and analysis (i.e. the regional focus groups, interviews, questionnaires and diary-keeping.) The eight research questions can be grouped under three thematic headings:

- Why the Big 5? (RQ 1 – 8)
- Consumers and Retail (RQ 1, 3, 6)
- Consumers and Sustainability (RQ 5 & 7)

The analysis is therefore presented in these three sections, each section being further structured according to the variables identified in the conceptual framework.

Chapter 7 discusses the major findings from the analysis and presents the Thesis's most significant contribution to the Academic Literature - the Trifold Model of Unsustainable Consumer Behaviour. Chapter 8 describes the implications for Policy and Industry arising from the research. Areas for further research are suggested throughout Chapters 7 and 8. Chapter 8 concludes with an evaluation of the strengths and weaknesses of the study.

1.8 THE CONTRIBUTION OF THIS THESIS

The preservation of the world's wild fish stocks is one of the most pressing socio-economic and environmental problems that need to be addressed. Increasing demand for just a handful of species by UK consumers is contributing to the scale of the global problem as more and more fish are extracted from already depleted wild sources and unsustainable aquaculture practices threaten biodiversity and human welfare. Changing consumer behaviour would therefore seem to be of paramount importance. While many studies into consumer behaviour attempt to predict and or explain behaviour from a predetermined set of measurable variables, this research sets out to provide a deeper exploration of why consumers make the choices that they do, in the belief that this greater level of insight is necessary to develop truly effective behavioural change initiatives. **In doing so the study has cut through the complexity and ambiguity of previous academic studies in order to present a novel, simple (and yet comprehensive) statement of the solution**, i.e. that unsustainable consumer behaviour occurs as a consequence of three inter-connected and mutually-reinforcing factors:

- Consumer ignorance/apathy;
- Retail behaviour; and
- Habit.

These three factors are represented in a novel theoretical model, **The Trifold Model of Unsustainable Consumer Behaviour (Figure 44)**.

Chapters 7 and 8 discuss the full range of contributing factors and the wider contributions of this Thesis to three separate branches of the academic literature.

In summary, however, the contributions can be described as follows.

1.8.1 For Academia

The research contributes to knowledge in three areas of academic endeavour: Sustainable Consumption; Business Ethics; and Consumer Behavioural Theories. The key findings are that:

- There is clear evidence that the mainstream, market-based approach to encouraging sustainable consumption is failing with respect to seafood.

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- Celebrity Chefs have an important but previously under-researched role in communicating about sustainability.
- There is evidence both in favour of and against the use of eco-labels. The majority of consumers were oblivious to their presence and stated a preference, instead, for retailers to make choices easier on their behalf.
- There was, however, an interest amongst consumers for (eco)labelling that reflects the issues that *they* understand and care about, an under-researched area of consumer behaviour.
- Consumer concerns for overfishing and Tuna-bycatch have translated into new food taboos within contemporary UK society.
- There is strong support for “local” products and supporting local business but consumers’ definitions of “local” vary considerably from standard industry definitions.
- Consumers generally lack knowledge regarding the sustainability issues associated with seafood production and possess a one-dimensional, ecologically-based, view of what “sustainability” means that is at odds with policy and academic communications.
- There is a possible association between the term “sustainable” and “inferior” that may hinder future initiatives aimed at encouraging sustainable consumption.
- The UK’s largest retailers have taken varying degrees of responsibility for sustainable sourcing, with some implementing approaches that support the role of Business as a *driver* of sustainable consumption and others (the majority) seemingly as locked in to unsustainable practices as their consumers.
- Despite the varying, overt, commitments to sustainability, each of the UK’s largest retailers continues to stock the Big 5 and to promote them, encouraging their over-consumption and questioning the legitimacy of their sustainability commitments.
- Consumer distrust of large retail can be linked to a shift in their buying behaviours towards local and independently-run stores.
- The study confirmed the importance of several extant behavioural theories / variables, including Means-End-Chain theory and the Norm-Activation Model; Actual Behavioural Control; the virtuous circle effect; Neutralisation Theory; and Habit.
- There was clear evidence for the theorised orthogonal relationship between the ten human values; and for intra-societal values differences affecting food choices within the UK.
- Integrated models of consumer behaviour have higher degrees of validity with respect to actual patterns of consumer behaviour.

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- Unsustainable UK consumer behaviour is a result of three constructs: Consumer ignorance and / or apathy regarding sustainability; habitual consumer behaviours; and UK retail behaviour. These three factors reinforce the effect of one another such that consumers (and retailers to a degree) are locked into patterns of unsustainable behaviour. The resulting Trifold Model of Unsustainable Behaviour has the potential to be tested empirically across other areas of consumer activity.

1.8.2 For Industry

Recommendations for Industry are that:

- UK retailers should be choice editing to limit their ranges containing the Big 5 and to offer a wider variety of sustainable alternatives.
- UK Consumers appear to be willing and interested in trying new, sustainable, seafood products, provided they are palatable! There is an opportunity for retailers and restaurateurs to work collaboratively to increase the range of seafood species offered for sale – once tried and enjoyed in a restaurant, consumers are more likely to think about buying for the home.
- Consumers favoured the concept of “Local” suggesting a strong, currently untapped, market for British-branded seafood.
- Independent retailers garnered greater support and trust than large retailers, but independent seafood provision is currently patchy. Opportunities to address this, particularly through enhanced retail-supplier relationships, are suggested by this Study.

1.8.3 For Policy

The Study has found that:

- Behavioural interventions targeted at the individual consumer are likely to fail because of the dominance of retail, consumer ignorance and the persistence of habitual behaviours (the constructs in the Trifold Model.)
- Instead policy initiatives should focus at three levels in the production chain: how products are marketed as being “sustainable”; the ethical reputations of the firms promoting the products for sale (retail as well as processors); and, at the (inter)national level by challenging the practices of certain trading partners.
- Ethical labelling that already has a strong presence within the UK food sector (such as Fair Trade) might usefully be adopted by Seafood producers to distinguish their products.

CHAPTER 2 : THE WORLDWIDE TRADE IN SEAFOOD

2.1 INTRODUCTION

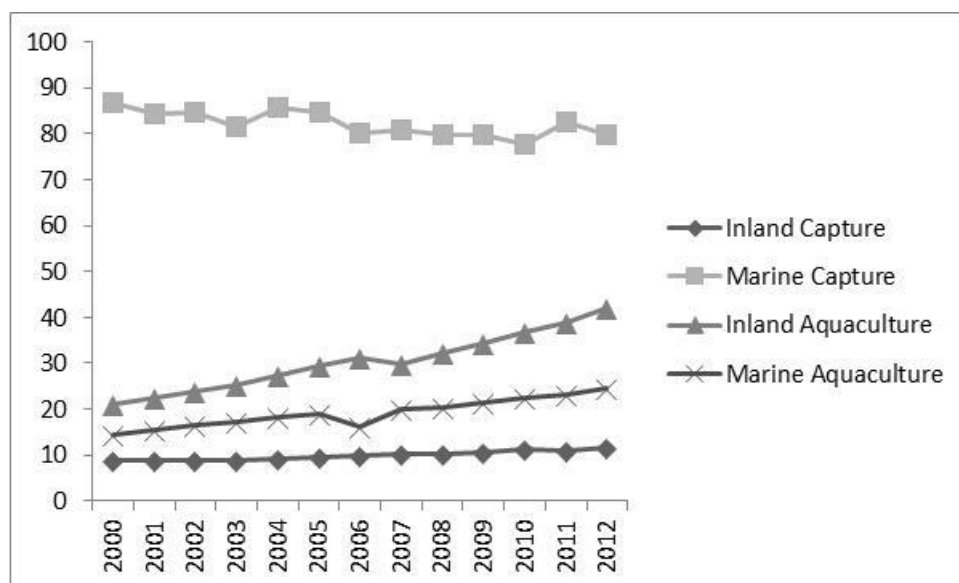
This chapter describes the global trade in seafood, commencing with an analysis of the growing rate of production of seafood through the combined efforts of wild capture and farming operations. Sustainability concerns surrounding the Industry are highlighted and the Industry’s response to these concerns are discussed. It thus provides the global context to the Research Problem.

2.2 WORLDWIDE TRENDS IN PRODUCTION

Global demand for seafood has increased five-fold since 1950 and shows no signs of abating (Pauly et al, 2002.) Supply has largely managed to keep pace – rising at an average of 3.2% every year in the period 1961 – 2009, through the combined effects of increased production and improved distribution channels. In 2010, total production was 148 million tonnes, with a value of \$217.5 bn. Data for 2011 indicates that the upwards trend has continued, with production exceeding 150 million tonnes for the first time (FAO 2012).

Total production is a combination of the landings made by capture fisheries – i.e. fishing vessels targeting wild species utilising a variety of techniques (nets, trawls, long-lines, pots etc); and, the contribution of aquaculture – farming in controlled environments, which, again, may take various forms. Both capture fisheries and aquaculture operate in marine and fresh water systems, although proportionately more fish are caught from marine systems and aquaculture remains a predominantly terrestrial activity (Figure 2, Table 2).

Fig. 2 Global landings and aquaculture output 2000 – 2012 (millions of tonnes)



(Source : FAO 2006; 2008; 2012; 2014)

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Table 2 World fisheries and aquaculture production and utilisation (million tonnes), 2000 – 2012

	-00	-01	-02	-03	-04	-05	-06	-07	-08	-09	-10	-11	-12
Production Method													
Capture													
Inland	8.8	8.9	8.8	9.0	9.2	9.7	9.8	10.1	10.3	10.5	11.3	11.1	11.6
Marine	86.8	84.2	84.5	81.5	85.8	84.5	80.2	80.7	79.9	79.6	77.8	82.6	79.7
Aquaculture													
Inland	21.2	22.5	23.9	25.4	27.2	29.6	31.3	29.9	32.4	34.3	36.8	38.7	41.9
Marine	14.3	15.4	16.5	17.3	18.3	18.9	16	20.0	20.5	21.4	22.3	23.3	24.7
Total Capture	95.6	93.1	93.3	90.5	95	94.2	90	90.8	90.1	90.1	89.1	93.7	91.3
Total Aquaculture	35.5	37.9	40.4	42.7	45.5	48.5	47.3	49.9	52.9	55.7	59.0	62.0	66.6
Total Production	132	131	134	133	141	143	137	141	143	146	148	156	158
Utilisation													
Human consumption	96.9	99.7	100	103	106	107	114	117	121	124	128	131	136
Non-food uses	34.2	31.3	33.5	30.5	34.8	35.6	23	23.4	22.2	22.1	19.9	24.5	21.7
Population (billions)	6.1	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	6.8	6.9	7.0	7.1
Per capita fish food supply (kg)	16	16.2	16.1	16.3	16.6	16.4	17.4	17.6	17.9	18.1	18.5	18.7	19.2

(NB Production figures equate to landings of fish in designated ports. Discards at sea are excluded.)

(Source : FAO 2006; 2008; 2012; 2014)

Growth in technological innovation at an average 9% per annum (Kirkley et al. 2004) has increased the intensity of activity in marine capture fisheries, such that total landings grew from 30 million tonnes in 1950 to over 86 million tonnes by the turn of the new millennium, where it subsequently plateaued for a number of years before beginning a gradual decline (wild catches have fallen by 8% since 2000). Aquaculture has more than offset the impact of these declines, with rapid growth in both the marine and inland sectors boosting overall world production to almost 160 million tonnes by 2012 (an increase of 20% since 2000) (FAO 2014).

This rise in effort has accompanied a doubling in human consumption. Of the 158 million tonnes of fish supplied through capture fisheries and aquaculture in 2012, over 136 million tonnes were destined for human consumption as opposed, for example, to conversion to animal feed or oils. Per capita, this equates to an average annual consumption of 19.2kg per person, compared to just 9.9kg in the 1960's. The developed nations in Oceania, North America and Europe are characterised by having higher per capita consumption rates than the global average (at 24.6, 24.1 and 22kgs respectively) while developing nations consume less than average and low-income food deficit countries have the lowest consumption levels overall (at 10.1kg) (FAO 2012; FAO 2014).

Much of the increase in global consumption is attributable to economic development in China coupled with the increasing demands of Chinese consumers. The rapid expansion of China's

aquaculture and fish processing industries, for example, have ensured that for the past decade China has been the single largest exporter of fish and fishery products in the world, accounting for almost 12% of global exports in 2010, with a value of \$13.3bn. Increased consumer demand for non-native fish species and low processing costs have also combined to make China the third largest importer of fish, behind USA and Japan in the world (FAO 2012). The relatively cheap labour costs in China have made it more profitable for fish producers to import filleted and otherwise processed fish products from China than from traditional sources – such as the UK. Consequently, fish landed in many parts of the UK, North America and Europe are now imported by China for processing before being exported back to the original home markets for onwards distribution (Clarke 2009).

In addition to China, the fishing industry – particularly aquaculture and reprocessing, is becoming increasingly important to the economies of developing nations in Asia and Africa which rely upon the strong export markets in the North for the generation of foreign currency (67% of fish products that are exported from developing nations are destined to developed ones); as well as for job creation and food security domestically. Vietnam, for example, has seen the value of its exports grow by over 300% since 2000 to \$6.2bn – largely because of the expansion of aquaculture in the country. Thailand has a flourishing, and well-respected, reprocessing industry as well as a buoyant aquaculture sector; and India, Indonesia, Bangladesh, Myanmar and the Phillipines are all benefitting from strong export markets for farmed species and re-processed wild-caught fish. Consequently, and in contrast to a reverse trend in Europe, employment opportunities within the African and Asian fishing industries have grown by 5.9% and 4.8%, respectively, since 2000 (FAO 2012).

These trade patterns therefore have important consequences for both economic prosperity and food security. It is estimated, for example, that between 680 and 820 million people (roughly 10-12% of the world's population) depend upon the industry to some extent for their livelihoods. Fish also represents a major and important source of dietary animal protein – particularly for many of the world's poor for whom other animal proteins are in scarce supply (FAO 2012).

2.3 THE (UN)SUSTAINABILITY OF MARINE FISHERIES

2.3.1 Over-exploitation

The socio-economic importance of the worldwide fishing industry is therefore undeniable but its sustainability is not. Over half of all of the fish consumed by humans still derive from wild-caught stocks in the World's oceans (FAO 2012). Yet cumulative yields from the large marine ecosystems have declined by 13.1% (equivalent to 10.6 metric tonnes) since 1994; and,

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according to the United Nations Food and Agriculture Organisation (FAO), the percentage of fish stocks assessed as being fully exploited or over exploited has risen to 57% and 30% respectively, meaning that there is little to no room for increased exploitation without incurring the risk of localised extinctions of fish species (FAO 2012).

Independent scientists have made bolder claims. Pauly (2008), for instance, calculated that 40% of stocks are collapsed, 30% over-exploited and the remaining 30% fully exploited, leaving no room for fishery expansion. Worm et al (2009) are more positive but still conclude that 63% of global fish stocks need rebuilding and that exploitation rates need to fall substantially to reverse the collapse of vulnerable species.

Crucially, however, the above stock estimates are derived from information on *legal* landings of wild fish (of which the exact population size may be over-or underestimated due to limited scientific knowledge.) When the effects of Illegal, unregulated and unreported (IUU) fishing are added to these dynamics, therefore, the picture for global stocks potentially worsens. IUU is a lucrative and highly problematic issue for the global fishing community (and the natural environment) and can take numerous forms, including lacking the required licenses to operate; fishing in closed areas; the use of banned gear or methods (poison and dynamite, for example); and, landing undersized fish (EUROPA 2013). Because of the nature of the problem, determining the exact scale of IUU fishing has been difficult to determine, but research suggests that as much as 30 million tonnes of additional fish may be being landed each year, with a value of over \$20bn (Pauly et al. 2002; Agnew et al. 2009); and the EU estimates that over a billion euro's worth of illegally-caught seafood enters its supply chains every year (EUROPA 2013).

High-value, commercially-important, species are the most vulnerable to illegal exploitation. Agnew et al (2009) calculated that as much as 60% of all Salmon-family catches could be illegal and unreported, for example, and that worldwide IUU landings for Cod could be as high as 40% of total catches. Importantly, however, they found no statistically-significant relationship between the market prices of fish and the degree of illegal fishing. Rather, IUU correlated most strongly with measures of governance and corruption – with developing nations, in particular, which have typically lacked the capacity to implement robust monitoring and enforcement regimes, most prone to illegal activities. Total estimated catches in West Africa, for example, were estimated as being 40% higher than reported catches - a factor linked to recent moves to increase vigilance around Tuna imports into the UK and other EU member states from this region (Undercurrent News 2013).

In its commitment to tackle IUU, in 2008 the European Union ratified an agreement to identify and make publically-available details of vessels engaged in illegal activities; and in naming countries assessed as failing to cooperate in combating IUU activities and upon whom sanctions might possibly be applied. Sixty nine vessels and eight third parties (Belize, Cambodia, Fiji, Guinea, Panama, Sri Lanka, Togo and Vanuatu) have subsequently been black-listed by the EU (European Commission 2012b; European Commission 2012a).

While differences of opinion may exist about the exact scale of the over-fishing problem, there is general agreement amongst academics, non-government organisations and governments that global fisheries are under severe threat from over-exploitation and that urgent action is needed to address declines in wild populations.

“The declining global marine catch over the last few years together with the increased percentage of overexploited fish stocks and decreased proportion of non-fully exploited species around the world convey the strong message that the state of world marine fisheries is worsening and has had a negative effect on fishery production...To increase the contribution of marine fisheries to the food security, economies and well-being of coastal communities, effective management plans must be put in place to rebuild overexploited stocks” (FAO 2012, pp. 12-13).

2.3.2 The Wider Environmental Impact of the Marine Capture Fishing Industry

In addition to overexploitation of target species, fisheries are both directly and indirectly responsible for a range of other environmental problems.

Perhaps the most prominent direct effect is bycatch - the unintended capture and killing of non-target species. The different fishing practices of trawling, long-lining, purse-seining, drift-and gill-netting have all been associated with the mass mortality of countless species (Goni 1998). Media and NGO attention has concentrated particularly upon highlighting the bycatch of charismatic marine megafauna such as sharks, turtles, seabirds, whales and dolphins (Greenpeace 2011a; WWF 2015). The annual global bycatch of marine mammals has been estimated at hundreds of thousands of individuals (Read, Drinker and Northridge 2006) - a factor assessed as presenting the single biggest risk to the persistence of cetacean species worldwide (Reeves et al. 2005). Within the UK, entanglement in fishing gear is the most frequent cause of death in populations of Harbour porpoise (*Phocoena phocoena*) and Common Dolphin (*Delphinus delphis*) (Kirkwood et al. 1997).

Bycatch of other marine organisms, however, is also widespread, particularly in the most indiscriminate of fishing practices - trawling and dredging. Collie et al (2000) found that just one

trawl removed an average of 55% of all individuals from across a range of taxa. Thrush et al (1998) explained up to 20% of variability in macrofaunal abundance by the presence of fishing pressure; and, in the North Sea, which is trawled in its entirety an average of 8 times a year (making full recovery impossible (Kaiser et al. 2002)), the quantity of (non-target) organisms living on and within the seabed has been calculated as being reduced by 56% compared with a non-trawled scenario (Hiddink et al. 2006). Bycatch (primarily of juvenile finfish) made up 84% of the total catch in the Gulf of Mexico trawler-shrimp fishery; and 28% of the catch in the Icelandic scallop dredging fishery was classed as bycatch (Garcia, Ragnarsson and Eiríksson 2006; Diamond 2004). Overall, the annual loss of marine life as a result of bycatch is calculated to be 27 million tonnes (Pauly 2008; Goni 1998), a substantial volume in its own right, the impact of which is magnified when one considers that much bycatch is of immature individuals who are then forever lost to the species' gene pool.

Further environmental consequences arise when this waste is then discarded at sea. Excessive organic loading in high-dump areas, for example, can reduce oxygen levels so significantly that species fail to survive. Conversely, highly mobile scavengers such as sharks, crabs, rays and seabirds have been shown to benefit from discards (Goni 1998). Garthe, Camphuysen and Furness (1996), for example, calculated that the amount of fishery waste discarded in the North Sea had the potential to sustain as many as 6 million individuals of species such as Fulmars, Black-legged Kittiwakes and Herring Gulls, with populations in the southern regions of the North Sea most likely to benefit (to the point that they could exclusively survive on discards.)

In addition to their impact on non-target species, trawling and dredging also substantially alter marine habitats, with some commentators arguing that it is as destructive as forest clear-cutting (Watling and Norse 1998). Effects include reduced habitat heterogeneity – with a concomitant reduction in species diversity; and, increases in suspended sediment, which can both affect oxygen levels in the water column, possibly leading to phytoplankton blooms and spreading previously-contained pollutants (Turner et al. 1999; Kaiser et al. 2002; Watling and Norse 1998). These effects are compounded by the removal of the ecosystem engineers, such as corals, kelps and burrowing fish that can recreate three-dimensional habitat (Coleman and Williams 2002). Recovery rates are also lengthy. Four years after a single trawl, for example, Maerl beds which had been trawled for scallops showed no signs of recovery (Hall-Spencer and Moore 2000).

In parts of Latin America and Asia, seabirds are routinely captured and killed to be used as fish-bait and predatory piscivorous birds, such as Cormorants, have been persecuted by fishermen who allege that they deplete their stocks (Tasker et al. 2000). Marine mammals are also targeted for attacking wild and farmed fish stocks in both illegal and legally-sanctioned operations. In

2011, for example, the Scottish government licensed eight Scottish fish farms to shoot seals it felt were responsible for depleting their stocks, resulting in over 300 deaths to date (Edwards 2012). As pressure on wild fish stocks grows and open-water fish farming expands to try and meet the gap between supply and demand for marine species such as Tuna, Salmon, Cod and Seabass, such conflicts are only likely to increase (DeMaster et al. 2001).

The indirect effects of commercial fishing include the disruption of natural predator-prey cycles and top-down, bottom-up and side-in effects (i.e. of over-exploitation, habitat destruction and pollution) that have induced “*shifts in food web composition and species interactions on every trophic level*” (Lotze and Milewski 2004, p. 1438). Loss of biodiversity has also been positively correlated with a decreased resilience of ecosystems to withstand and recover from disturbance (Worm et al. 2006). Jackson et al (2001), for example, were able to show that fishing-induced ecosystem changes often act as a precursor to the outbreak of disease and to excessive algal growth, which in turn can lead to the depletion of oxygen levels and the eventual suffocation of any remaining organisms.

Finally, and significantly in the context of climate change, the global wild-capture industry uses considerable amounts of fuel. Analysing data from over 250 marine fisheries for the year 2000, Tyedmers, Watson and Pauly (2005) found that in landing 80 million tonnes of fish, the combined fleets consumed over fifty billion litres of fuel – equivalent to the burning of 620 litres of fuel for every tonne of fish landed. This places the global fishing industry on the same level – in terms of oil consumption – as the Netherlands, which in turn is the 18th ranked oil-consuming nation in the world.

2.4 GLOBAL DEVELOPMENTS IN AQUACULTURE

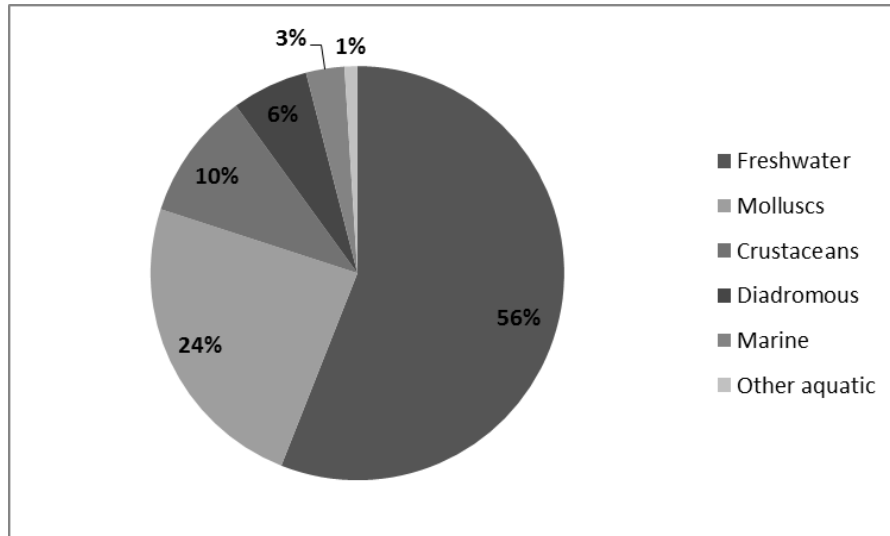
Aquaculture (the farming of fish and seafood products) has, and continues to be, heavily promoted as the answer to meeting the gap between supply and demand of fish products and, certainly, the last thirty years are noticeable for a boom in supply of farmed fish products. Production has grown at an annual average rate of 8.8% since 1980 such that by 2010, total production was 60m tonnes, with an estimated value of \$119 bn. Farmed fish now account for 47% of all the fish consumed annually (FAO 2012).

Hundreds of different species (from sea cucumbers to frogs) are now reared for human consumption utilizing a range of different technologies, farming intensities and water types (fresh, brackish and marine.) By 2010, freshwater species, such as carps, were being produced in the greatest quantities (33.7m tonnes, representing 56.4% of world production). Molluscs accounted for 23.6% at 14.2m tonnes while Crustaceans (of which by far the most numerous

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were the white-legged shrimp) made up 9.6% of total production. Diadromous fishes such as Atlantic Salmon made up the fourth largest component (6% and 3.6 m tonnes) with marine fishes (such as Tuna and Cod) accounting for just over 3% of total production (FAO 2012)(Figure 3)

Fig. 3 Global Aquaculture Production by Category in 2010 (as % of total Aquaculture production)



(Source : FAO 2012)

As with the world's capture fisheries, China dominates the aquaculture market, accounting for 61% of total production. As discussed above, however, other Asian and African nations have also benefitted from expanding their aquaculture operations, creating local employment opportunities in otherwise rural and isolated communities and helping to enhance the status of women in many developing nations (FAO 2012). In contrast, growth in developed countries has remained relatively static – the exception being Norway which has produced an average of 7.5% growth a year in its marine-caged, Atlantic Salmon industry (FAO 2012).

The rapid growth of the aquaculture sector has, however, come at some considerable cost. Exploitative workforce practices, including the use of child labour and gender discrimination, have been highlighted by the United Nations and the International Labour Organisation as being of great concern in fisheries and aquaculture worldwide (FAO 2012). Latterly, Thailand's prawn-farming industry has come under specific attention for human rights abuses, with the US Government and European Union both threatening trade restrictions unless significant progress is made to tackle the apparently widespread use of slave labour. Instances of gross physical abuses have recently been uncovered, including the torture and murder of migrant workers on Thai-owned shrimp-fishing vessels, many of the outputs from which end up as prawn products on UK supermarket shelves (Ramsden 2014; Hodal, Kelly and Lawrence 2014).

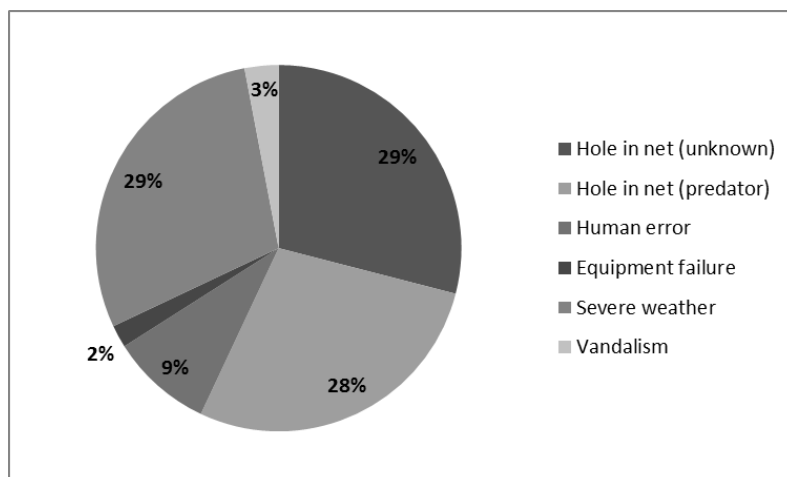
Most attention, however, has been given to the environmental impacts of the industry which, critics argue, severely limit aquaculture's potential to meet future patterns of demand (Pauly et al. 2002). Intensive farming techniques, for example, have left stocks vulnerable to pollution and disease outbreaks – China experienced losses of more than \$3.3bn in 2010 through a combination of disease, natural disasters and pollution; and disease outbreaks almost brought about the complete closure of the Mozambique marine shrimp (prawn) farming industry in 2011 (FAO 2012). Because of the dual threats of disease and natural disasters, many prawn farms, in particular, have been run as slash and burn operations which have resulted in the destruction of both coastal ecosystems and communities (Pauly et al. 2002). The indiscriminate (and in some cases illegal) use of antibiotics to prevent the spread of disease also presents serious human health implications. The drug chloramphenicol, for example, has been associated with human aplastic anemia and neurological problems and is therefore banned in the US shrimp farming industry but this does not extend to many parts of Asia. Such are the concerns about the concentrations of antibiotics in some frozen seafood, that the European Union's Directorate General for Health and Consumers issued a warning to 19 Vietnamese seafood producers in late 2014 urging them to address the excessive amounts of antibiotic residues in their products, or face the consequences of an import ban on the grounds of danger to human health (Coons 2014).

A further, much debated, criticism of intensive aquaculture practices concerns the practice of converting wild-caught fish (such as Anchovetta and Mackerel) into fish meals and oil which is then fed to carnivorous species such as Salmon and Prawns. Many intensive farming enterprises use as much as five times more protein to rear their stock than is provided by the finished product making the feeding of fish oil a wasteful use of an increasingly scarce wild resource (Naylor and Burke 2005; Naylor et al. 2000b). Further, its use is also implicated in the presence of higher levels of some chemical pollutants, such as the known-carcinogens, PCBs, within farmed populations of fish (GAAIA 2013). Although recent years have seen a decreased reliance overall upon fish-based feeds and a growth in the development and use of plant- and animal-based feeds, the continuing growth in consumer demand for Prawns and for finfish such as Salmon and Tuna, combined with outstanding issues regarding the suitability of plant-based feeds for such carnivorous fish (Grigorakis 2010), suggests that the long-term demand for fish-based feeds will grow (FAO 2012).

Accidental releases from farming operations and the close proximity of caged animals to their wild counterparts have also combined to threaten the viability of wild stocks. Hybridisation of wild and farmed species of Atlantic Salmon, for example, threatens genetic diversity and

genetically-driven breeding behaviours; and serious losses of wild Atlantic Salmon to disease have been linked to exposure to infected farmed fish (Naylor et al. 2000b). Within Scotland alone, nearly three million individuals – mainly Atlantic Salmon (*Salmo salar*) and Rainbow Trout (*Oncorhynchus mykiss*), have escaped in the past decade, with equipment failure (holes in nets), predators and severe weather accounting for over 90% of losses (Figure 4).

Fig. 4 Reasons for Farmed Salmon Losses from Scottish Aquaculture as a % of all Reported Losses (2009 – 2012)



(source : Scottish Government 2014)

2.5 TOWARDS SUSTAINABLE FISHERIES

The concerns about the negative environmental effects of (primarily) capture fisheries but also latterly of aquaculture, have compelled the industry, scientists, non-governmental organisations and consumers to increasingly demand changes to fishing practices, retail and consumer behaviour - in effect creating a sustainable seafood movement. The roots of this movement can be traced to the widespread public outcry in the USA and parts of Northern Europe, over the exposure of the bycatch of hundreds of thousands of dolphins by the Eastern Tropical Pacific Ocean Tuna fishery. Public opinion, NGO pressure and government legislation combined to require the industry to introduce gear modifications that subsequently reduced bycatch to minimal levels; and resulted in the creation and wide-spread adoption of the world's first fishery eco-label, the "dolphin-safe" label (Gulbrandsen 2009). From these beginnings sustainable seafood, which can broadly be defined as "*ecologically responsible fishing that minimises bycatch and brings acceptable levels of ecosystem and environmental impacts*" (Jacquet et al. 2010a, p. 45) has become a big, albeit highly controversial, business.

The industry's response to the call for increased sustainability has been to utilise a number of different management techniques in an effort to slow down exploitation and re-build wild populations. Worm et al (2009) grouped these initiatives as gear restrictions (such as those

used by the Tuna industry); reducing fleet capacity (which has been a feature of the EU fisheries programme, for example); reducing total allowable catches; reducing fishing effort; introducing closed areas (i.e. where fishing is prohibited); sharing catch quotas and fisheries certification. In evaluating the relative effectiveness of these approaches, they conclude that a blending of traditional operational approaches (such as capping quotas) with economic incentives (such as certification) produced the best hope for ecosystem restoration. Public awareness of these initiatives is low, however - a situation that frustrates industry officials who believe that the media downplay their efforts in order to propagate and perpetuate a myth of fishermen as being irresponsible and unconcerned with sustainability (Tetley 2010).

Certification has proven to be a reliable method for the industry to demonstrate its commitment to sustainability but it is a process rife with controversy. Although numerous fisheries certification schemes now exist, the Marine Stewardship Council (MSC) standard is widely accepted as being "*the only comprehensive certification programme for wild-caught fisheries*" (Gulbrandsen 2009, p. 657). Founded in 1996 as a joint initiative between Unilever (then the world's largest buyer and processor of frozen fish) and the World Wide Fund for Nature (WWF), the MSC became an independent non-profit organisation in 1999 and certified its first fishery in 2000 (Ponte 2012). Certification, which is a voluntary process, is conditional upon achieving a level of compliance in three broad areas: the status of the target fish stock; the impact of the fishery on the ecosystem; and, the performance of the fishery management system. A total of 23 criteria need to be met for a fishery to achieve certification, with the assessments undertaken by MSC-accredited third parties (Marine Stewardship Council 2010).

There are currently 200 MSC-certified fisheries and 103 undergoing assessment (MSC 2013). Between them, these fisheries land almost 10 million tonnes of fish every year, equivalent to more than 11% of the total worldwide catch which in turn appear in over 22,000 MSC-labelled products (MSC 2013).

Critics of the MSC standard (and dolphin-safe label) argue that certification has had no demonstrable impact on ecosystem health (Ponte 2012; Jacquet et al. 2010a; Gulbrandsen 2009; Ward 2008) and, indeed, that fishermen are using MSC-certification as a way of blocking the creation of marine protected areas, on the grounds that it is unnecessary (Jacquet et al. 2010a). Recent research has, however, found a positive link between certification and stock levels – with certified fisheries having higher overall abundance and greater year on year improvements in stock levels over the past decade, than uncertified fisheries (Gutiérrez et al. 2012). The scope of the standard has also been challenged on ecological and social grounds. Some argue, for instance, that fisheries should be unable to achieve certification if they are

targeting wild caught fish specifically for the fish-meal market (as opposed to being for human consumption) and / or that use bottom-trawling (Jacquet et al. 2010b; Jacquet et al. 2010a). It has also been challenged on the basis that it fails to consider the wider environmental impacts of a fishery -specifically its carbon footprint (Jacquet et al. 2010a). Socio-economically, critics argue that account should be taken of how a fishery manages its workforce and its impact, generally, upon communities (Ponte 2012). Further, while a process exists to challenge certification decisions, it comes at a cost (£5,000) and will only take account of objections relating to the process of accreditation itself, meaning that objections based upon conflicting scientific evidence, for example, have gone unaddressed (Jacquet et al 2010a).

An additional concern with the certification process is the perceived bias that it creates in favour of large scale, heavily regulated (and often heavily subsidised) fisheries operating in the developed world; and smaller-scale fishers in the developed (and developing) world that target very specific species (Gulbrandsen 2009). The accreditation process is labour and resource intensive – taking an average of twelve months from start to finish (although it can take considerably longer than this); and fisheries are often required to make costly changes to their practices in order to demonstrate compliance – an expense that may be beyond the capacity of smaller fisheries to bear, even though they may be operating more sustainably than their larger counterparts (Jacquet et al 2010). Further, the majority of the world’s fisheries exploit shared, open-access resources (i.e. wild fish populations that are not under the control of any one nation.) Consequently, even if a fishery were operating sustainably it can be prevented from achieving MSC certification if other fisheries targeting the same species in the same area of the sea, are not. Collaboration between fisheries may be an answer to this, but this is difficult to achieve in the absence of strong governmental intervention and support – facets that are lacking in many parts of the developing world (Gulbrandsen 2009). Presently, only five of the 200 certified fisheries are in developing nations¹, a weakness recognised by the MSC that is being addressed through its Developing World Programme (MSC 2013).

Fundamentally, however, the success of any labelling scheme rests with the consumer. Here, the evidence again is mixed, for while the MSC’s own research finds that recognition of their eco-label grew by 13% between 2010 and 2012, the same study found that nearly two thirds of people still failed to recognise it; and, only a third of those who *did* recognise it understood its purpose (AMR Marketing Research 2012). Further, penetration of the MSC brand is almost exclusively restricted to Western Europe, North America, Australia and Japan where consumers

¹ (Fiji albacore tuna longline; Maldives pole and line skipjack tuna; Sian Ka’an & Banco Chinchorro Biosphere Reserve (Mexico); Suriname atlantic seabob shrimp; and, Vietnam Ben Tre clam.)

have shown an interest in environmental issues. If consumers are unconcerned about sustainability in the World's largest seafood market (Asia), the effectiveness of an eco-label will inevitably be restricted (Jacquet and Pauly 2007).

Consumer confusion has also been reported with respect to the proliferation of seafood eco-labels - up to six different logos and wordings are used to define dolphin-safe-Tuna, for instance (Jones 2004); and, consumer confidence can be undermined by the wide-spread practice of mislabelling - both to make unattractive sounding species more marketable; and to fraudulently pass one species off as another (Jacquet and Pauly 2008). The former practice has meant that previously under-exploited species, such as the rock crab (*Cancer irroratus*), which was renamed the Peekytoe crab, have now become heavily sought after; and, consumers can end up paying substantially more for incorrectly labelled goods - the market prices for farmed and wild sea bass in 2013, for example, were £40/kg and £74/kg, respectively (thefishsociety 2013). Incorrect labelling also prevents eco-minded consumers from having an impact through their buying behaviours; and, for the less aware, it can perpetuate the attitude that "there are plenty of fish left in the sea". A 2014 study by the UK consumer organisation Which?, for example, found that one in six pieces of fish sold in fish and chip shops had been intentionally mislabelled – with Haddock being passed off as Cod and Whiting serving for Haddock (Lawrence 2014a). Why should a consumer be worried about supposed declines in Cod stocks, for example, when they can always get Cod wherever they go - not realising that their Cod is, in fact, an entirely different species or, worse, has been landed illegally from a threatened, wild stock (Jacquet & Pauly 2008).

Labelling therefore has its flaws. It may be a useful tool for raising awareness of environmental issues amongst an (already) interested audience but its impact upon maintaining and enhancing biodiversity is disputed; and consumer apathy (and/or disinterest in the issue of concern) may further limit its potential to alleviate pressures on wild fish stocks (Ward 2008).

Importantly, however, labelling is just one of a range of market-based techniques that have evolved in response to the call for more sustainable consumer behaviours. High profile, often celebrity-chef induced, boycotts such as "Give Swordfish a Break" and "FishFight" have been successful in securing (at least temporary) changes in consumer behaviour as well as in retail sourcing policies (Greenpeace 2011a). Consumer guides such as those produced by the Monterey Bay Aquarium in the US and the Marine Conservation Society in the UK have been developed in both hard and soft formats and have had a degree of impact. 81% of consumers with access to the Monterey Bay guides, for example, stated that they regularly checked labels for fishing method versus 54% without the guides; and, 55% had questioned restaurant staff about the status of the fish on the menu versus only 18% without the guides (Kemmerly and

Macfarlane 2009). Guides for retail and other distributors have also been developed by NGOs including Greenpeace and the Marine Conservation Society – the former’s “Recipe for Disaster” report being accompanied by a negative (and ultimately very successful) media campaign intended to shame the worst performing supermarkets into changing their sourcing policies (Dorey 2005; Greenpeace 2006). Retailers are also beginning to work together to share their experiences and develop industry-wide standards for sourcing and labelling (Sustainable Seafood Coalition 2013).

2.6 CONCLUSION

While socio-economically important, the global fishing industry (capture and aquaculture) faces a number of pressing sustainability challenges. Environmentally, over-fishing threatens the very existence of wild populations of commercially important fish, such as Bluefin Tuna (CITES 2010) and there is little to no room for expansion of fishing effort in the marine sector, limiting any real growth in this area of the Industry (FAO 2014). Aquaculture is increasingly meeting the gap between supply and demand for previously wild-caught species of seafood but environmental and increasingly social concerns have prompted debates about the costs of meeting consumer demand through intensive farming operations (Hodal, Kelly and Lawrence 2014; GAAIA 2013). NGO and media attention has sought to raise consumer awareness of some of these issues in an effort to force consumer-led changes in supply; and internationally, bodies with legislative powers have moved to impose production and trade restrictions in an attempt to address concerns surrounding overfishing, bycatch and threats to human health associated with farmed foods (Jacquet et al. 2010a; Jacquet and Pauly 2007). Retail is also playing an increasingly important role in driving up Industry standards with respect to sustainable sourcing, although, as will be discussed in the following chapter, the performance of the large supermarket chains, in particular, in this regard is very varied (Greenpeace 2006).

In short, the worldwide production of seafood is rife with problems and changes to global consumption patterns would seem to be essential if the sustainability of the Industry is to be preserved. Arguably, however, the continuous increases in consumer demand are outstripping the abilities of governments and the Industry to respond to this demand in a measured way, effectively enabling the entry of illegally produced seafood into the global supply chain and the persistence of socially and environmentally-harmful practices. The problems of unsustainable consumer behaviour are thus complex, challenging and, as shall be demonstrated in the following two chapters, are currently absent any agreed solution – be that in academic or policy circles. The following chapter considers the implications of this global context for the UK seafood market.

CHAPTER 3 : THE UK MARKET FOR SEAFOOD

3.1 INTRODUCTION

Chapter 2 discussed the global challenges associated with unsustainable seafood consumer behaviour. This chapter uses publically available data to describe the UK position. It commences with an analysis of demand by exploring current UK consumption patterns - what consumers buy, from where and the relative impact upon consumers of messages surrounding sustainable seafood consumption. This is then followed by an analysis of the supply-side, commencing with the retail landscape for seafood. A distinction is drawn between supermarkets and independent fishmongers and between the five largest UK supermarket chains in terms of product offering. Within-brand variations in sales patterns are also explored through an analysis of Tesco clubcard data. The chapter continues with a description of the UK fishing industry - how it is organised, the species of seafood landed by UK fishermen and the status of UK fish stocks.

The chapter concludes that UK seafood demand and supply are out of balance from a sustainability perspective. This leads to the statement of the central Research Problem addressed by this Thesis and of the Research Questions that will be answered.

3.2 UNDERSTANDING DEMAND : UK SEAFOOD CONSUMPTION PATTERNS

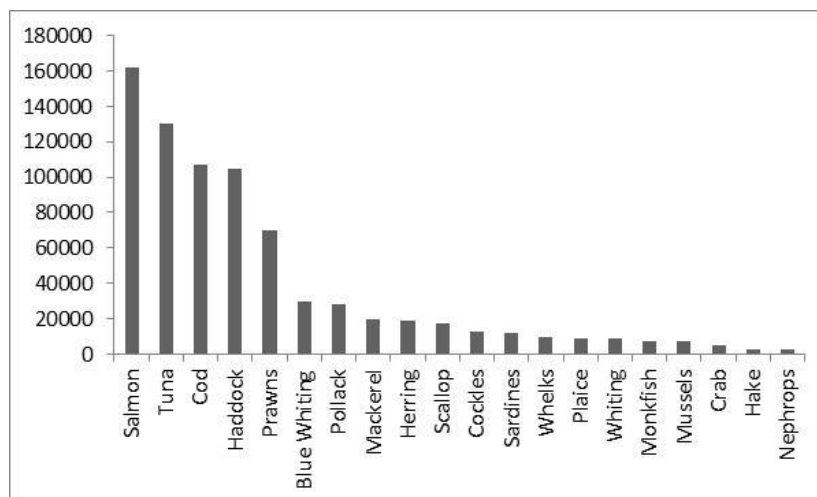
UK consumers bought just under five hundred thousand tonnes of seafood in 2010, at a cost of £3.8bn (MMO 2012). Even in the face of rising prices, consumption is on an upwards path - the average UK adult is now eating around 2% more fish than they would have a generation ago, with annual household consumption rising by 1.8% in the five years to 2012 and predicted to grow by a further 17% by 2030 (Future Foundation 2012). Annual household consumption in 2012 was 28.9 kg (up from 28.4kg in 2007) accounting for just over 5% of total household spend on food.

Despite the growing appetite for seafood, however, UK consumers have an increasingly narrow palate when it comes to the kinds of things they like to buy. 70% of the seafood bought for home consumption is pre-prepared, for example (Seafood Choices Alliance 2007); and just five species (Salmon, Tuna, Cod, Haddock and Prawns) dominate sales, accounting for 80% of all the seafood sold in the UK (Figure 5) - earning these species the industry-wide moniker of “The Big 5”.

NB “Species” is used loosely here to mean an animal of a particular type – thus, Salmon may include a number of different species of fish, such as Atlantic Salmon (*Salmo salar*), Keta (*Oncorhynchus keta*) and Sockeye (*Oncorhynchus nerka*). Tuna may be Skipjack (*Euthynnus pelamis*), Yellowfin (*Thunnus albacares*) or Albacore (*Thunnus alalunga*); and Prawns will

include the small, wild-caught coldwater Prawns (*Pandalus borealis*) and the larger, typically-farmed, warm-water Prawns such as King Prawns (*Panaeus monodon*) and Giant River Prawns (*Macrobrachium rosenbergii*). Official statistics for these products are, however, grouped together (see below) preventing any meaningful breakdown by actual species.

Fig. 5 Total UK Seafood Consumption (in tonnes) by Species in 2005



(Source : Seafood Choices Alliance 2007)

This narrow pattern of demand poses some challenges for the sustainable supply of seafood, as the following section explores.

3.2.1 Cod & Haddock

Despite small increases over recent years in the quantity of domestic landings of both Cod and Haddock, the UK is heavily dependent upon foreign imports to meet its needs. In 2013, Cod imports stood at 116 thousand tonnes (compared with domestic landings of just 12 thousand tonnes); and imports of Haddock totalled 45 thousand tonnes (Table 2). Just under a half of all the UK's Cod and Haddock was imported from the Icelandic and Norwegian fisheries (at 56 thousand tonnes and 20 thousand tonnes respectively. Whilst these fisheries are generally assessed as being well managed (and hence environmentally sustainable) the UK's reliance upon just two nations for its favourite fish does potentially increase the risk to the sustainability of the supply chain, in the event of diplomatic disagreements or unexpected environmental disasters, for example. By far a more salient risk, however, derives from the UK's reliance upon China as the next largest exporter of both Cod and Haddock. China now supplies 25% of the EU's entire whole whitefish supply and 38% of its frozen fillets. In 2013, it exported 20 thousand tonnes of Cod (equalling Norway) and 7 thousand tonnes of Haddock to the UK (Marine Management Organisation 2014). The sustainability challenges associated with this relationship are twofold.

Why the Big 5? Understanding UK Seafood Consumer Behaviour

Firstly, China relies heavily upon the fish caught by the fleet of the Russian Federation which it then processes before exporting. The rapid growth of China's reprocessing industry, coupled with Russian practices of supplying fish in non-species specific categories and complicated internal supply chains, have proven challenging for China's systems for traceability and import / export control. Products may change hands several times whilst still in China and there have been several instances of incorrect species identification and mislabelling of point of origin. Illegal, unreported and unregulated (IUU) fishing is also known to be a problem in Russian waters. While improvements to traceability systems are believed to be underway, the possibility of IUU fish entering China and thereby the UK's food supply chain is, therefore, not inconsiderable (Clarke 2009).

The second area of concern relates to the costs (in terms of greenhouse gas (GHG) emissions) associated with this trade relationship. Chapter 1 highlighted that the global fishing industry is a significant contributor of GHGs, the bulk of which derive from the burning of diesel fuel in fishing boats (Tyedmers, Watson and Pauly 2005) and the leakage of refrigerants used in on-board cooling systems (Sonesson, David and Ziegler 2010; Ziegler et al. 2013). The chapter also noted, however, that cheaper labour costs in China have driven a growth in the fish processing industry there, with the result that whole fish landed in the UK and other parts of Europe, such as Norway, is increasingly being transported to China for filleting before it is then exported back into Europe, a round trip of thousands of miles and a major source of additional GHGs. Transportation can be via air (around 5% of the global catch is currently transported this way and the growing demand for fresh fish is driving an increased reliance upon this form of transport), road, rail and ship (FAO 2015). Depending upon the method chosen, the GHGs can vary significantly, from 2 kg CO₂equiv/ton*km for air freight to 0.01 kgCO₂equiv/ton*km for a container ship (Sonesson, David and Ziegler 2010). The unit "ton*km" represents the energy required to move one ton of product one kilometre. Ziegler et al (2013) calculated the carbon footprints of 20 Norwegian seafood products, including Cod that had been transported to China for processing before being imported back into the EU by sea freight (Ziegler et al. 2013). The excessively long transport time, coupled with the need for the use of refrigeration throughout the journey, resulted in this product having a carbon footprint of almost 4 kg CO₂ equivalent per kg edible product, compared with 2.5kg CO₂ for fresh Cod fillets transported directly to Paris by road, for example. One can assume that the differences for similar UK products will be of the same order. Processing seafood products before export would reduce their Carbon footprint but would add to the costs of production - costs that consumers may be unwilling to pay.

3.2.2 Salmon

At 112 thousand tonnes, the UK was a net exporter of Salmon in 2013 – the vast majority of which derived from Salmon farms (Marine Management Organisation 2014). Despite this, the UK imported 75 thousand tonnes of Salmon in the same year - possibly as a result of products being processed in the UK (e.g. smoking) and also because of demand for wild-caught alternatives to farmed Atlantic Salmon. The primary concerns regarding supply of Salmon relate to the practices used in intensive aquaculture operations that were discussed in Chapter 1, notably the use of fish-based feeds which, as a consequence of their reliance upon wild-caught fish species, can significantly increase the carbon footprint of a farmed product, depending on the type of food being used (Ziegler et al. 2013); the transmission of disease and genetic material between wild and captive populations; and, the use of chemicals to control disease outbreaks (Naylor and Burke 2005; Naylor et al. 2000).

3.2.3 Tuna

The UK is almost wholly dependent upon imports for its supply of Tuna, with Asian fisheries dominating the market (Table 2). Demand is for fresh (chilled) Tuna loins as well as canned Tuna, for which the UK is the World's second largest market, behind only the United States of America. In 2008 alone, UK consumers bought nearly 800 million tins - the equivalent of 13 cans for every person in the country (Greenpeace 2011b).

This demand for Tuna is problematic, however, because of the seven commercially-important Tuna species in the world, a third are considered to be over-exploited and nearly 40% to be at full exploitation capacity. Catches of Bigeye, Atlantic Bluefin, Pacific Bluefin, Southern Bluefin and Yellowfin Tunas are all showing gradual declines (FAO 2012). Such was the concern over the status of Atlantic Bluefin Tuna that in 2010 an ultimately unsuccessful campaign was launched to ban its trade under Appendix 1 of the Convention on International Trade in Endangered Species (CITES). Instead of supporting a ban, CITES recommended that the fishery's own regulatory body, the International Commission for the Conservation of Atlantic Tunas (ICCAT) be responsible for improving stock management (CITES 2010). Significant concerns exist about the ICCAT's ability to do this, however, due in great part to historical non-compliance with its recommendations by its Members (Hurry, Hayashi and Maguire 2008).

The Tuna industry has also been heavily criticised for its use of purse-seine nets and fish-aggregating devices both of which contribute to increased levels of bycatch, the former of marine mammals and the latter of juvenile and smaller species of fish. High profile media campaigns such as Hugh's Fishfight have served to raise UK public awareness of the issues and, in the case of FishFight, led to the UK's largest retailer, Tesco, committing to only stocking pole

and line-caught Tuna by the end of 2012 (TheGuardian 2011). However, it is likely that this move on its own will make little difference to the over-exploitation rate.

3.2.4 Prawns

UK vessels landed a comparatively small amount of shrimps and Prawns into the UK in 2013, at just 900 tonnes (Table 3). This contrasts with an import volume of 85 thousand tonnes (Marine Management Organisation 2014). The majority of all the Prawns and shrimps consumed in the UK derive from Asia – Thailand exported fifteen thousand tonnes to the UK in 2013, for example; India exported ten thousand tonnes; and Bangladesh and China exported just over 7 thousand tonnes each. Canada and Iceland provided much of our cold water Prawns. Again, as discussed in Chapter 1, the issues here surround the use of intensive farming practices that can have implications for human health and the natural environment, as well as of concerns about the welfare of workers within the prawn farming industry (with Thailand, in particular, being criticised for its levels of human rights abuses (Hodal, Kelly and Lawrence 2014)).

Table 3 Imports of Cod, Haddock Tuna and Prawns into the UK in 2013 by exporting nation (thousands of tonnes)

	Cod	Haddock	Tuna	Prawns
Total Landings by UK Vessels (thousands of tonnes)	11.5	35.4	-	0.9
Total Imports (thousands of tonnes)	116.3	44.9	96.7	85.1
Exporting Country by Rank				
1	Iceland	Norway	Mauritius	Thailand
2	China	Iceland	Thailand	India
3	Norway	China	Seychelles	Canada

(source : MMO 2014)

The UK is thus a net importer of seafood, with imports exceeding exports in 2013 by 286 thousand tonnes and a growing reliance upon trade links with developing economies in Asia (Marine Management Organisation 2012), which, from a sustainability perspective, raise some environmental and social challenges.

The New Economics Forum’s (NEF) Fish Dependence study utilises EU import and export data to determine the point at which European nations become reliant upon imports to meet their particular consumption patterns (Balata and Devlin 2014). For the UK, reliance upon imports begins on the 12th September – later than the EU average (11 July) but considerably earlier than some other nations with comparable-sizeable fishing fleets such as Greece and Denmark (Table 4), suggestive that these nations are eating more of what has been landed by their own fishing fleets than UK consumers. (NB When domestic aquaculture is removed from this analysis, the UK’s position worsens quite significantly (to the 7th July) highlighting the important contribution that farmed Salmon, in particular, makes to UK food security.)

Table 4 European Fish Dependence (Balata and Devlin 2014)

Month	Fish Dependence Day
January	Slovakia (8 th) Austria (17 th)
February	Romania (14 th) Belgium (16 th) Slovenia (23 rd) Lithuania (24 th)
April	Germany (6 th) Italy (13 th)
May	Portugal (1 st) Cyprus (7 th) Poland (12 th) France (19 th)
June	Malta (1 st) Spain (11 th) Bulgaria (16 th)
July	Hungary (9 th) EU (11 th)
August	Netherlands (15 th)
September	UK (12 th)
October	Finland (23 rd)
November	Sweden (29 th)
December	Greece (8 th) Denmark (29 th)

The NEF’s analysis also examines the potential effects of rebuilding European fish stocks to below Maximum Sustainable Yield levels. Significantly, this finds that the UK has the potential to be totally self-sufficient with respect to seafood, *provided that fish stocks are restored and subsequently managed appropriately* – something that will take some years to achieve. What this analysis fails to take account of, however, is the 17% of UK fishing fleet catches that are currently being discarded at sea because of weak market demand for the species being caught (Revill Nation Ltd 2011). There is therefore the potential to add greater quantities of locally-sourced seafood to the UK diet and hence shift the UK’s fish dependence to later in the year even in the absence of significant local stock recovery of the most important commercial species available within UK waters, such as Cod and Haddock. Achieving this, however, will require consumers and retailers to shift their buying behaviours towards currently underutilised (and in some cases discarded) species such as Dab, Gurnard and Pouting in addition to reducing their reliance upon the currently, now largely imported, “Big 5” of Cod, Haddock, Salmon, Tuna and Prawns (at least until UK stocks of Cod and Haddock are back to safe and sustainable levels).

The following section discusses the extent to which consumers might be willing to shift their buying behaviours towards more sustainable alternatives

3.3 UK CONSUMER DEMAND FOR SUSTAINABLE SEAFOOD

Encouragingly, UK consumers do appear interested in the provenance of their food, with 64% reporting that they would buy more sustainable seafood if it was better labelled as such (Mintel, 2010). Over 50% of Asda customers cared strongly about sustainable fish (Asda 2012a); and, research conducted on behalf of the Marine Stewardship Council (MSC) found that 39% of UK consumers would also be willing to pay a little more for an eco-labelled product. Further, half of all consumers felt that urgent action was needed to tackle falling global fish stocks and that

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the supermarkets had a key role to play in making this happen (37% strongly agreed that retailers must make sure that they sell sustainably-caught seafood) (AMR 2012).

Research commissioned by Sainsbury's supports these findings, with consumers stating that they want retail to make life simpler for them by providing comprehensive, clear, product information; and that they also expect retailers to be responsible in their sourcing decisions (28% of Sainsbury's customers stated that their buying decisions were influenced by store information) (Future Foundation 2012). Interestingly, the report documents the emergence of a number of food taboos, including eating "Cod caught by drift net" – 29% of the survey respondents claiming not to buy and eat Cod caught in this way, and 7% refusing to eat Cod under any circumstance. The UK's changing attitude towards food is occurring at a relatively rapid speed – within the span of a generation, for example, the majority of UK consumers now prefer not to buy battery-farmed eggs (over 50% of eggs now sold in the UK are described as cage-free) (The Co-operative Group 2012). The authors contend that the observable changing attitudes towards fish production methods in the UK, will result in similar changes in buying behaviour – a development that would resonate with those who have stated that wild stock declines will only happen when whole scale shifts in consumer mindsets have taken place that cease the commodification of wild species (as happened with respect to whaling) (Jacquet and Pauly 2007).

Importantly, sales of sustainable seafood do seem to reflect this reported interest. The latest ethical consumer report produced by the Co-operative Group, highlights that spending on sustainable fish (defined as MSC-certified products + pole and line-caught Tuna (personal communication)) grew by 32% between 2010 and 2011, the same period that saw a 2% decrease in sales of organic foods and overall increases in spend on ethical food and drink of just 8% (The Co-operative Group 2012).

Sainsbury's week-long Switch the Fish campaign in 2011, which actively encouraged customers to try alternatives to one of the "Big 5" species, resulted in a 40% week-on-week increase in sales of sustainable species. Sales also remained high for the remainder of the year, indicative, perhaps, of a lasting shift in buyer behaviour (sales of sustainable alternatives in July to December were up by 21% compared to the same period in 2010) (Future Foundation 2012).

The Marine Stewardship Council reported a doubling in sales of its branded products across all UK supermarket chains in 2012 (MSC 2013) and a continued increase in the number of MSC-certified products available for sale in UK supermarkets. Research commissioned by Sainsbury's also found that amongst eco-label-aware consumers, the MSC logo above all others was most

likely to influence a consumer to buy a product (Future Foundation 2012). At total sales of £228m, however, MSC-labelled goods still only equate to 6% of the total consumer spend on seafood in the UK.

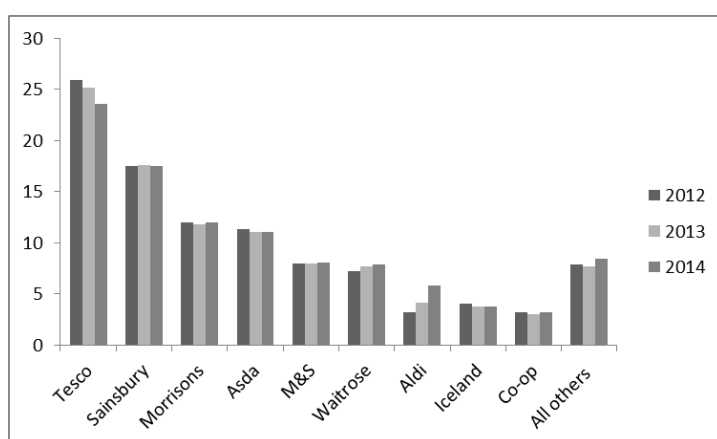
Consumers therefore appear interested in finding sustainable fish but sales are relatively slow, albeit that they are increasing as more products hit supermarket shelves. Could supermarkets do more to promote sustainable alternatives to the Big 5 and encourage a more rapid uptake of certified products? The following section explores the current UK retail sector in order to determine if such changes may be possible or, indeed, if they are already happening.

3.4 THE UK RETAIL LANDSCAPE FOR SEAFOOD

3.4.1 Market shares

Latest retail data on sales of seafood within the UK (Seafish 2015) confirms the dominance of the UK's large supermarkets, with five retailers holding just under 75% of the overall UK seafood market share (the five are Tesco, Sainsbury, Morrisons, Asda and Marks & Spencer.) Tesco, as the UK's largest retailer, also has the largest share of the seafood market, with Sainsbury in the number two position (Figure 6). Morrisons, Waitrose and Marks and Spencer all have a higher share of the seafood market than their overall retail share, a probable result of both proactive retail policy and consumer demographics. Morrisons, for example, has trained fishmongers in 97% of its UK stores; whilst each of these three supermarkets are more likely to be frequented by older shoppers – a factor known to be associated with increased fish consumption (Myrland et al. 2000a)

Fig. 6 Percentage Share of the UK Seafood Market by Retailer (Seafish 2015)



The dominance of the Supermarkets has occurred (in the most part) at the expense of the independent Fishmonger. Murray and Fofana (2002) plotted the steady increase in supermarket vs fishmonger sales from the late 1980's onwards, a rise they also associate with wider changes in the UK fish supply chain. Notably, they argue that the Supermarkets' increasing influence and

concern for product reliability and consistency has led to a concentration of the fish processing sector and a surge in retail demand for farmed, over wild-caught, products (supply of farmed Salmon increased by over 200% in the decade up to 2000).

Despite the prominence of the Supermarkets, however, a relatively small but thriving independent retail sector has persisted – valued at approximately £236m (in 2005), equivalent to 12% of the total seafood market and 21% of the total chilled market. Further, and in contrast with other independent retailers such as butchers, the seafood sector is seemingly buoyant, with customers reporting that greater product choice and perceptions of higher product quality steer them towards the independents and away from the multiple retailers (Seafish 2005). The perception is that the independent sector serves a relatively niche market of concerned consumers who value quality and personal service. Whether these same consumers also value sustainable fish is unknown although research by (Tetley 2010) found very high levels of concern about the environmental effects of fishing amongst this consumer group – concerns which had then translated into (self-reported) changes in buying behaviour.

3.4.2 What products are on offer in UK Supermarkets?

Every one of the Big 5 retailers has now made a public commitment to sustainable sourcing. Tesco has committed to increasing the supply of currently underutilised species and to stocking only pole and line-caught Tuna in its own-brand (Tesco 2013). Sainsbury's have set themselves the target of sourcing 100% of their fish from third-party-certified sustainable stocks by 2020 (Sainsbury's 2012). Asda's public commitments include selling only sustainable fish (they do not specify source, however, e.g. MSC-certified) and to only stocking pole and line or Fish Aggregating Device-free Tuna by the end of 2014 (Asda 2012b). Morrison's make a similar pledge with regards their own-brand Tuna but targeted end of 2013 for compliance. They also make general commitments to sustainability through publicising their involvement in the Sustainable Seafood Coalition and the British Retail Consortium Fish Sustainability Group (but, unlike Asda, make no firm pledges beyond working towards improved sustainability in their sourcing) (Wm Morrison Supermarkets PLC 2012). Waitrose's ambitions include only sourcing from third-party certified wild caught and aquaculture operations by 2016/17 (in 2011/12 32.3% of their products were independently certified); and to offer a greater variety of underutilised or discarded species for sale (John Lewis Partnership 2012).

To explore the differences across the UK's retailers, a review was carried out of the availability of fresh and chilled seafood products through the on-line grocery departments of Tesco, Sainsbury's, Morrisons, Asda and Waitrose. The focus was upon the availability of fresh, rather than processed, fish products such as fishfingers. This distinction was drawn to explore the

effect of individual consumer choice. Several of the UK's well-known seafood brands, such as Young's and Birdseye, for example, have effectively removed the need for active consumer choice for sustainable products, by using Marine Stewardship Council-accredited and other responsibly sourced fish in their products – in effect choice editing on behalf of the consumer (Maniates 2010). In such cases, consumers may not even be aware that the fish they think they are eating in their fish fingers is, in fact, Pollack from an MSC-certified fishery and not the traditional Cod. By excluding such products from the research, it was anticipated that the range of products on offer would reveal more about the strength of consumer appetite for the Big 5 of Cod, Haddock, Salmon, Tuna and Prawns as well as for the currently less popular alternatives.

Each website was visited on the same day in May 2013. Products were filtered to identify fresh and chilled products only – where fresh meant whole fish or fillets displayed on a wet fish counter; and chilled were filleted or whole products that had been packaged for sale and were displayed in chiller cabinets (but hadn't been breaded or otherwise added to.) A listing was then compiled of the total number of species available for sale and the different forms in which they were offered. In the case of packaged products, a record was also made of whether labels provided species and capture-method information. Sustainability ratings for each species were then obtained by referencing the Marine Conservation Society's on-line "Good Fish Guide", which gives a 1 – 5 point rating for most commonly-consumed fish and shellfish species, where scores of 1 and 2 indicate that a species should be eaten; and scores of 4 and 5 indicating that they should be avoided. Those scoring 3 may be eaten but should be done so sparingly (<http://www.fishonline.org>.) The findings were tabulated to enable comparison across retailers and for the development of an aggregate sustainability score for each retailer (Table 5).

The analysis found that Tesco had the most limited range – offering 15 different species, although it was the only retailer to stock swordfish. The largest range (26 species) was found at Morrison's. Unsurprisingly, all of the retailers stocked the "top 5" species of Cod, Haddock, Salmon, Tuna and Prawns; and all had multiple products within these species (e.g. fillets of Cod and Salmon of differing weights; farmed and wild Salmon from different stocks; and numerous varieties of prawn products – the majority of which featured warm-water and, hence, farmed, species.) Lemon sole, trout and Plaice were also stocked by each of the retailers. Beyond this, species availability became more fragmented and, apart from generalising that Morrison's and Waitrose appeared to appeal to more discerning customers, there was no obvious pattern to suggest why the differences in species availability exist.

It was notable that the variability in the strength of the Sustainable Sourcing commitments made by the Supermarkets was largely reflected in the species they offered for sale (Table 5). At the

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time of the on-line review, of the thirty four species on offer and for which the Marine Conservation Society provided a sustainability rating, two had a rating of “5” – wild Salmon (for sale in Waitrose and Sainsbury); and, ray, which was offered in every store with the exception of Sainsbury’s. Half of all the species scored a 3 or 4; the remainder scored 1 or 2. Overall, the mean score of species for sale in UK supermarkets was 2.03 – a healthy rating; but the mean scores for the individual retailers were higher. Sainsbury’s had the lowest mean score (2.08) and Tesco had the highest (3.06). The lower scores attained by Sainsbury’s and Waitrose reflect the fact that they stocked proportionately more species rated 1 or 2 than the other retailers (40% and 43% of stock, respectively, compared with just 20% in Tesco) in line with their stated sourcing policies.

Table 5 Species of Fish and Shellfish For Sale in UK Supermarkets as Either Whole Fish or Fillets on 1 May 2013 and their Sustainability Rating

Species	MCS Score*	Tesco	Sainsbury	Asda	Morrisons	Waitrose
Cod	4	✓	✓	✓	✓	✓
Haddock	3	✓	✓	✓	✓	✓
Salmon (farmed)	3	✓	✓	✓	✓	✓
Salmon (wild)	2-5		✓			✓
Tuna (species)	2-5	✓	✓	✓	✓	✓
Prawns (species)	2-4	✓	✓	✓	✓	✓
Swordfish	3	✓				
Monkfish	4	✓		✓	✓	✓
Lemon Sole	3	✓	✓	✓	✓	✓
Trout	2	✓	✓	✓	✓	✓
Ray	5	✓		✓	✓	✓
Plaice	4	✓	✓	✓	✓	✓
Coley	3	✓			✓	
Crab	2	✓	✓	✓		✓
Sea Bream	3	✓		✓		✓
Tilapia	1	✓				✓
River Cobbler	-		✓	✓		
Mussels	1		✓		✓	✓
Brown shrimp	-		✓			✓
Cockles	2		✓			✓
Mackerel	3		✓	✓	✓	✓
Seabass	4		✓	✓	✓	✓
Sardines	2			✓	✓	
Turbot	2-4			✓	✓	
Langoustines	3			✓		
King scallops	-			✓	✓	✓
Squid	-				✓	
Oysters	-				✓	
Herring	2				✓	
Hake (European)	4				✓	
Hake (Cape)	2					✓
John Dory	3				✓	

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Pollack	2				✓	
Dab	2				✓	
Whiting	3				✓	
Pouting	2				✓	
Red Mullet	3				✓	
Halibut	2					✓
Crayfish (red swamp)	2					✓
Mean MCS Score	2.3	3.07	2.8	3.06	3.0	2.9

(* Rating as at 3/6/13. Source : <http://www.goodfishguide.co.uk/>)

The better performance of Sainsbury's and Waitrose reflects previous research into retail performance on seafood sustainability. Greenpeace's "A recipe for Disaster : Supermarket's insatiable appetite for seafood" (Dorey 2005) commended Marks and Spencer and Waitrose for their strong commitment towards sustainability and the implementation of effective sourcing policies. Sainsbury's was ranked third and performed considerably better than its main competitors with Asda and Morrisons publically shamed for having no sustainable sourcing policy and continuing to stock endangered species. Encouragingly, in a follow-up report a year later, the big five supermarkets had all made significant improvements – Asda, Morrisons and Tesco now all "passed" – ranking joint 5th overall, behind The Co-operative (4th place), Sainsbury's (3rd), Waitrose (2nd) and Marks and Spencer (1st) (Greenpeace 2006.) Latest research by the Marine Conservation Society reveals a slight change in the rankings, with The Co-operative now occupying the number one position alongside Marks and Spencer; Sainsbury's was in second position with Waitrose very closely behind in 3rd place. Morrisons had climbed higher than Tesco but Asda appeared to have made negative progress, not qualifying for a rating at all (MCS 2011).

Improvements are particularly noticeable in the number of avoid species offered for sale. In 2005, Sainsbury's, Asda and Morrisons all stocked 13 species in the avoid list; Tesco stocked 11 and Waitrose 6. By 2011, Waitrose had reduced this to zero and all of the other supermarkets had made major improvements. The picture in 2013 was again positive, although it was surprising, at first glance, to see that both Waitrose and Sainsbury's stocked wild Salmon which the Marine Conservation Society gives a score of 5. This apparent anomaly highlights a significant problem with consumer awareness guides because while the majority of wild populations of *Atlantic* Salmon are assessed as being severely depleted (and hence the rating of 5), *Alaskan* Salmon (including Sockeye and Keta, which are two entirely different species to Atlantic Salmon) are certified as being harvested sustainably. Both Waitrose and Sainsbury's products are Alaskan and, hence, sustainable and not deserving of a score of 5. Arguably, however, most consumers will not make any distinction between the different species and as a search for Salmon on the MCS site previously brought up Atlantic Salmon as the default and the

advice to avoid it, it is highly likely that this is the message that will be taken away. (NB The latest version of the good fish guide has addressed this. Searching for Salmon will now bring up a listing of all edible Salmon species with their varying sustainability scores.)

Tuna was also affected in this way. With the possible exception of Bluefin, which has been the subject of considerable media attention since the unsuccessful attempt to ban its trade through CITES, few consumers are likely to make much distinction between the five different commercially-important species (Atlantic Bluefin; Bigeye; Skipjack; Yellowfin and Albacore) although the sustainability assessments for these vary greatly – from the critically endangered Southern and Western Atlantic Bluefins to sustainably harvested (and MSC-certified) pole and line-caught Yellowfin and Skipjack Tunas (MCS 2013).

Improved labelling on the part of the retailers could address this (giving species names, for example) – something that MCS and Greenpeace have repeatedly called for (MCS 2011; Dorey 2005; Greenpeace 2006) but, again with the exception of Sainsbury's and Waitrose, this information was absent from all packages of fresh and chilled Tuna. Species information is provided by all of the large retailers on their own-brand canned Tuna, which now also all feature some variation of a dolphin-friendly label. Ironically, however, virtually all canned Tuna in the UK is Skipjack – a species that has not been associated with dolphin bycatch (the Tuna-dolphin scandal concerned Yellowfin.) Consequently, some critics of labelling argue that the dolphin-friendly mark serves more to promote the Tuna industry and the green image of retailers, than it actually does in preserving dolphin populations (Ward 2008; Brown 2005).

Interestingly, the species profile in the Supermarkets was different from that found within the independent retail sector. In a survey of customers using independent fishmongers, Tetley (2010) recorded 35 different species for sale. Only three species featured across all of the shops and these were not the usual "Big 5" but were, instead, Cod, Seabass and Plaice. Salmon was only stocked by 4 of the 6 stores; Tiger Prawns were only stocked by 2 shops; and Tuna was only found in one shop. Several species that did not feature at all in the Supermarkets *were* found in the fishmongers. These included species with varying sustainability scores (as determined by the Marine Conservation Society), such as Ling (4), Gurnard (3), Tusk (5), Sea Trout (3), Grey Mullet (4) and Marlin (5). Conversely, several highly sustainable species that are available in the Supermarkets did not feature in the fishmongers, including River Cobbler or Basa (2) and Tilapia (2). The survey was admittedly very small scale (consisting of only six stores) and is a few years old, but the findings would suggest that the independent sector offers a wider variety of wild-caught UK species for sale relative to farmed and imported species than the Supermarkets but that this may not necessarily equate to a more sustainable offering overall.

This analysis compared the five biggest retailers of fresh seafood offer at a fixed point in 2013. To better understand trends in consumption over time, a further analysis was carried out of annual sales of fresh seafood in the UK's largest supermarket chain: Tesco. The results of this analysis are presented in the following section.

3.5 SALES OF SEAFOOD IN THE UK'S LARGEST SUPERMARKET CHAIN (TESCO)

3.5.1 Introduction

Tesco has the largest share of the UK Seafood market, as befitting its size as the second largest retailer in Europe (behind CarreFour) and the third largest retailer in the World. Operating in 14 countries, the bulk of its income is still derived from its UK activities which, in 2012, netted the company profits of £2.5bn. In the UK, it operates 2979 stores of varying capacities and specifications (ranging from the small, town-centre-located, Metros to the enormous out-of-town Extras); employs just over 300,000 people and owns the largest share of the UK supermarket sector (Tesco 2012).

Tesco launched its customer loyalty scheme – the Tesco ClubCard – in 1995, drawing upon insights gained from its own sales and analysed by a (Tesco-owned) analytical firm – dunnhumby. Today, the dunnhumby database provides a repository of 2 years-worth of weekly Tesco supermarket transactions, made by 1.7 million UK shoppers (representing 40% of UK households) and covering 30,000 different food products. Consequently, the data provides a rich resource for the exploration of UK shopper behaviours and for the performance of different food products over time.

The data is presented in terms of volumes of sales; as percentages of sales; and as an index – where 100 represents the average for all supermarket shoppers and scores higher or lower than 100 indicating over- or under-indexing, respectively. Over-indexers buy a disproportionately greater share of the product in question – i.e. they find them more appealing than those who under-index.

Data is also organised within five different consumer segments:- by Lifestage (young adults, young families, older families, older adults, pensioners); by geo-demographics; by Region; by Lifestyle (up market, mid-market, and less affluent shoppers); and by overall shopping habits (premium, standard, potential or gone away.)

To explore UK sales of seafood, reports were run from the dunnhumby database covering the twelve months from December 2011 to December 2012; and January 2012 – January 2013. Data was segmented according to Lifestage, demographics (CAMEO), region; and lifestyle. Data was analysed at the levels of total sales, %s of all sales; and as an Index, where a score over 100

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reflects an over-representation of a particular consumer segment; and scores under 100 reflect lower than expected levels of activity. Reports looked at sales of all *counter* fish – whether fresh or frozen; as well as pre-packed fish products that bore an Organic or MSC certification, grouped as “ethical” products. An additional grouping of “sustainable fish” was created by combining sales of fish species (whole or as fillets etc) that have been promoted as sustainable alternatives to over-fished species (Table 6).

Table 6 Fish species included in the “sustainable” grouping

Plaice	Mackerel	Sardine	Whiting	Herring	Sea Bream
Lemon Sole	Mirror Carp	River Cobbler	Megrim	Tilapia	Coley
Pouting	Dab	Gurnard	Brill	Sprat	Flounder
Grey Mullet	John Dory	Ling	Witch	Black Bream	Red Mullet
Dogfish	Anchovies	Hake	Octopus	Squid	Pollack

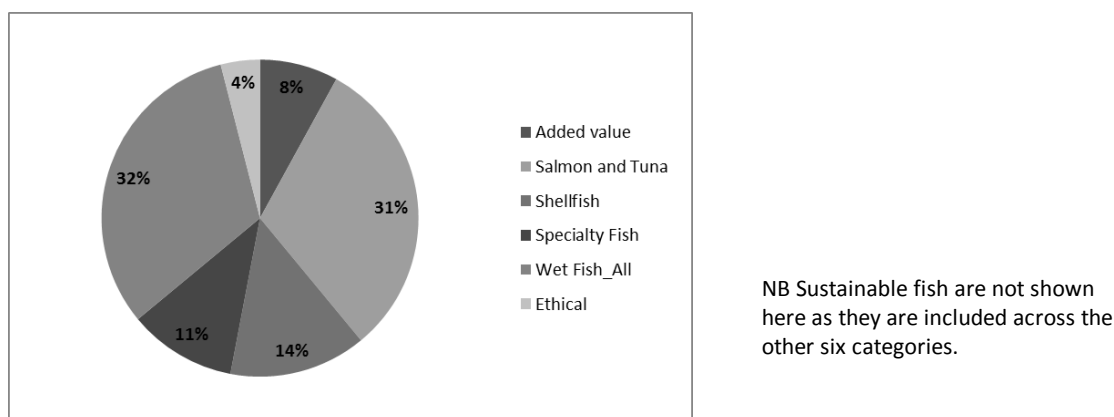
In total, patterns of trade in the following 7 categories of product were explored (equivalent to sales of 6.3 million units):

- Counter added value – includes items such as fishcakes and seafood sticks
- Counter Salmon and Tuna
- Counter shellfish
- Counter speciality fish – generally whole fish or fillets of less frequently sold species, such as Tilapia.
- Counter wet fish
- Pre-packed Organic fish (“ethical”)
- “Sustainable fish”.

3.5.2 Overall Sales Patterns

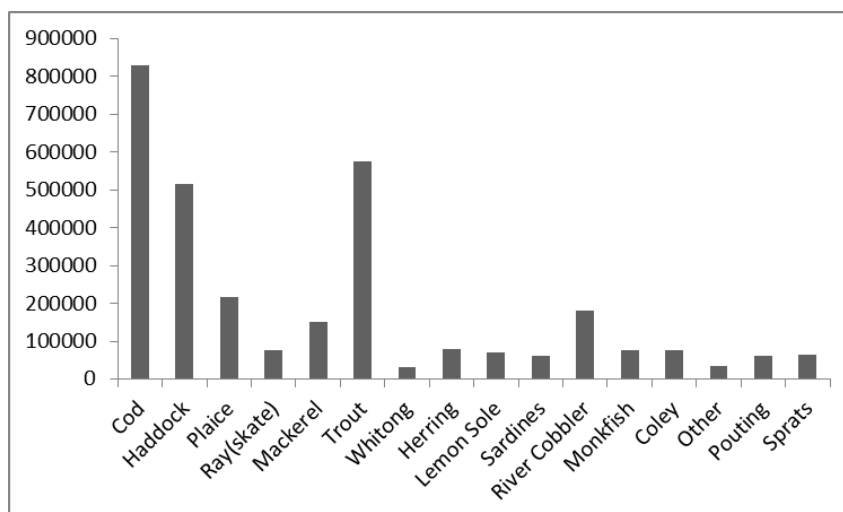
Consistent with historical, national, trends in consumption, the dunnhumby analysis confirmed a strong demand for Salmon and Tuna; with other wet fish and shellfish being the next preferred (Figure 7).

Fig. 7 Sales of Different Fish “Brands” within Tesco UK as % of all Seafood Sales (January 2012 – January 2013) (source : dunnhumby)



Breakdown of sales of the Wet Fish category revealed strong consumer demand for Cod, Haddock and Plaice; with farmed, freshwater fish (Trout and River Cobbler) dominating sales after these (Figure 8).

Fig. 8 Total Sales of Wet Fish in Tesco UK Stores (numbers of units sold, January 2012 – January 2013) (source : dunnhumby)



Consistent with national consumption trends for 2012 (MMO, 2013), year on year analysis revealed that sales of all brands declined in Tesco stores during 2012 but that sales values increased (Table 7). The exception to this was sales of Salmon and Tuna products which grew despite the number of stores selling them falling during the time period, indicative of a concentration of sales into fewer stores.

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Sales of ethical seafood contrasted sharply with the national trend of increased purchases (The Co-operative 2012) by declining over the period, although they were offered for sale across the highest number of stores of any of the product categories examined (Table 7). This potentially indicates a mismatch between corporate social responsibility (increasing supply of sustainable seafood) and customer values. It is unfortunate that equivalent data from the other retailers is unavailable to enable a comparison but the national data would suggest that sales elsewhere are soaring, suggesting that the Tesco shopper has somewhat different values to those who shop elsewhere.

Table 7 Comparison of sales of Fish Brands in Tesco UK Stores in the 52 weeks from 19/12/11-16/12/12; and 20/12/10 – 18/12/11 (source : dunnhumby)

Brand	Customers % Change	Sales Value % Change	Sales Units % Change	Stores selling	Stores % change
Added Value	-3.87	-3.35	-1.08	609	6.47
Salmon & Tuna	7.8	6.04	11.75	612	-7.27
Shellfish	-6.87	-5.4	-7.96	612	6.99
Speciality Fish	-10.56	-13.77	-15.26	611	5.16
Wet fish	-3.26	5.69	-3.94	612	5.70
Ethical	-38.05	-32.01	-39.19	750	0.4
Sustainable	-6.25	-0.58	-5.63	612	6.07

3.5.3 Seasonal Variations in Sales

Analysis of sales of all fish brands over time revealed varying degrees of fluctuation about the average, with peaks in consumer demand occurring in April; September; November and mid-December; and a large drop in demand taking place in the Christmas week. This variability (which is possibly indicative of fish not being considered as a core, family food item by the majority of consumers (Leek, Maddock and Foxall 2000)) is exaggerated at the product level – with sales of “sustainable” species subject to particularly extreme fluctuations (Figs 9,10,11 in Appendix 1).

3.5.4 Geographical Variations in Sales

Analysis at the level of individual stores revealed an enormous range in terms of the amount and value of fish products bought. The worst and best performing Tesco UK stores with respect to overall sales (units sold) are identified below. A North / South split is notable from the perspective of those stores selling the most fish; but is not absolute, as five southern UK stores also fall within the bottom ten stores for sales (Table 8).

Table 8 Top & Bottom Ten Tesco UK Stores for Seafood Sales (source : dunnhumby)

Store Name	Units Sold	Value of Sales (£)	Customer penetration*	County
Amersham	91830	£408,220	16.45%	Bucks
New Malden Extra	86470	£449,473	13.40%	Surrey
Horsham Extra	85650	£376,861	17.51%	W Sussex
Slough Wellington	84960	£394,241	12.66%	Berks
Sandhurst Extra	84530	£395,632	9.71%	Surrey
Cheshunt Extra	83520	£338,765	11.03%	Herts
Norwich Extra	82580	£315,652	15.70%	Norfolk
Pitsea Extra	78450	£307,492	10.96%	Essex
Poole Fleets Extra	74730	£326,704	12.64%	Dorset
Peterborough Extra	74120	£344,107	10.42%	Cambs
Leyton	10	40	0.02%	London
Newbury Metro	10	40	0.02%	Berks
Rotherham	10	40	0.02%	S Yorkshire
Selby	10	40	0.04%	N Yorkshire
Southsea	10	40	0.06%	Hampshire
Lurgan Carnegie	10	40	0.03%	Co. Armagh
Caerphilly Crossways	10	40	0.03%	Mid Glamorgan
Filey	10	40	0.02%	N Yorkshire
Oxford Magdalen	10	40	0.02%	Oxfordshire
Bedford Metro	10	40	0.02%	Beds

The measure of customer penetration included in this analysis gives an indication of the extent to which all potential customers are buying a particular product. Thus, as can be seen from Table 8, in the case of the top selling store, over 16% of all customers were buying fish. Penetration at the bottom end of the store rankings was minimal – with only 0.02 – 0.06% of the current customer base buying fish. In both cases, there is clearly room for expansion, although as the top performing stores reflect buying levels above the current UK average, overall increases in sales of fish might not be actively encouraged here, from a sustainability perspective. In the stores with the lower levels of penetration, however, questions could reasonably be asked about **why** the patterns of shopping behaviour are so different here.

Analysis at the individual product level offers up possible answers to the question of low penetration. For, again, there was considerable variation across stores in the range and amount of products that were stocked. This could be illustrated by looking at where certain sustainable and ethical fish products were sold (Table 9).

Table 9 Sales of Organic and Sustainably-farmed Fish in 2012 in Tesco UK Stores (source : [dunnhumby](#))

Product	No. Stores Selling	Stores selling as % of Total	Sold in Top 10 stores?	Sold in Bottom 10 stores?
Organic Salmon fillets	686	23	10/10	4 / 10
Organic smoked Salmon	584	20	10/10	2/10
Organic Prawns	277	9	9 / 10	1/10
Tilapia Fillets	555	19	10/10	1/10

The three organic products and the farmed Tilapia (a widely promoted sustainable alternative to wild-caught fish) were all – with one exception, for sale in the stores with the highest overall fish sales. In contrast, only five of the bottom ten performing stores stocked any of these products, with the remaining five stocking none at all. Store size and type could not explain this, as four of the bottom ten stores were large Superstores and might reasonably be expected to carry the stock that other, smaller stores, might not. The conclusion must be made that the stores are choice editing on their customers’ behalf by only choosing to stock certain items.

This was further illuminated when considering those stores that stocked proportionately more varieties of fish than their counterparts. Tesco branches in Kensington, Bishops Stortford, Goodmayes and Sandhurst Extra were all interesting in offering a substantially greater variety of whole, fresh, and locally-available fish such as Lemon sole, Dab, Flounder and Ling, than other stores. Questions could therefore reasonably be asked about the criteria Tesco uses to make its stocking decisions – are they solely based upon anticipated sales volumes (in which case why should these stores expect greater sales than others) or are other factors at play?

3.5.5 Describing the “Typical” (Tesco) UK seafood shopper

The Tesco data also allowed for a degree of customer profiling. Here, and consistent with previous studies exploring the characteristics of seafood consumers (Myrland et al. 2000; Wellman 1992; Burger 2008) the dunnhumby analysis found that consumers were typically reasonably well-off; older and / or retired; and were more likely to be living in London. Affluent home owners accounted for the majority of all sales (19.3%) – with young singles making up the least (2.5% of all sales). In terms of Lifestage, Pensioners bought more products overall and more Salmon and Tuna, wet fish and sustainable fish than any other group (Table 10). Affluent Home Owners bought more speciality and ethical items as well as more fish products overall (Tables 11 & 12); and, analysis at the Regional level, showed that the majority of purchases, across all brands (with the exception of added value products) were made in London and the South East (Table 13).

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Table 10 Who Buys Which Seafood Brands? (% of all sales analysed by Lifestage) (source : dunnhumby)

Product Type	Young adults	Young families	Older families	Older adults	Pensioners
Added Value	19.2	21.8	22.5	19.0	17.6
Salmon & Tuna	17.7	20.1	19.2	19.4	23.6
Shellfish	19.6	20.5	21.1	19.8	18.9
Speciality Fish	20.2	20.0	19.7	20.8	19.4
Wet fish	17.6	19.3	18.1	19.4	25.7
Ethical	23.8	20.4	18.6	20.2	17.1
Sustainable	17.9	19.1	17.9	19.4	25.7
All Fish	18.6	20.0	19.4	19.6	22.4

Table 11 Who Buys Which Seafood Brands? (% of all sales analysed geo-demographically*) (source : dunnhumby)

Product Type	YS	WR	AH	SF	C	LAF	LAS	PWBC	PFSP	PC
Added Value	1.4	5.0	18.5	18.0	10.1	15.4	4.5	12.3	8.5	6.0
Salmon & Tuna	2.4	6.6	20.0	19.1	9.7	14.4	4.8	10.9	7.1	4.7
Shellfish	2.4	6.0	18.6	18.6	9.2	14.7	4.8	11.9	7.9	5.5
Speciality Fish	3.2	7.3	19.1	18.9	8.8	14.1	5.5	11.2	7.1	4.5
Wet fish	2.2	6.2	19.0	18.1	10.1	14.1	4.7	11.3	8.2	5.9
Ethical	7.7	9.6	19.7	19.4	8.8	11.3	5.7	8.7	5.2	3.4
Sustainable	2.4	6.0	18.5	17.5	9.7	14.3	4.9	11.7	8.4	6.2
All Fish	2.5	6.5	19.3	18.7	9.7	14.3	4.8	11.3	7.6	5.2

(* Key to Groupings YS = Young Singles; WR =Wealthy Retired; AH =Affluent Homeowners; SM= Smaller Family; C = Comfortable; LAF = Less Affluent Families; LAS = Less Affluent Singles; PWBC= Poorer White and Blue Collar; PFSP= Poorer Family and Single Parent; PC = Poorer Council.)

Table 12 Who Buys Which Seafood Brands? (% of all sales analysed by Lifestyle) (source : dunnhumby)

Product Type	Up Market	Mid Market	Less Affluent
Added Value	33.7	33.3	33.0
Salmon & Tuna	37.2	31.8	31.0
Shellfish	38.8	27.4	33.8
Speciality Fish	42.5	27.0	30.6
Wet fish	34.6	28.6	36.8
Ethical	64.8	21.1	14.0
Sustainable	33.0	25.8	41.2
All Fish	36.9	29.1	34.0

There were, however, notable exceptions to this general trend. The first concerned the sales of ethical products (which included organic Prawns and Salmon), where analysis at the level of Lifestage revealed that these were more likely to be bought by Young Adults - the group that bought least seafood overall.

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The second concerned Lifestyle, for while the majority of purchases were being made by up market shoppers, less affluent shoppers made up the second largest chunk of activity – with the mid-market shoppers consuming substantially less overall and across four of the seven brands examined. These two factors suggest that age and household income may not always be safe predictors of seafood consumption.

Table 13 Sales of Fish Brands by Region as % of all sales in Tesco UK Stores (source : dunnhumby)

REGION	PRODUCT TYPE						
	Added Value	Salmon & Tuna	Shellfish	Speciality	Wet	Ethical	Sustainable
N Ireland	2.4	2.3	2.0	2.3	2.4	2.3	2.3
Borders	1.2	1.1	1.0	0.7	1.2	0.6	1.0
South & South East	11.1	10.9	12.2	11.0	10.8	12.6	11.0
Wales and West	10.0	9.4	9.2	9.2	9.2	8.1	9.6
Yorkshire	8.5	7.8	7.7	6.3	7.5	3.5	6.5
C Scotland	4.4	4.2	4.3	3.5	6.2	4.2	6.2
East England	11.1	10.8	11.2	10.6	10.3	8.9	10.9
N West	1.1	10.7	9.1	10.5	10.10	7.4	9.7
London	14.1	18.8	19.3	23.8	17.9	31.7	19.0
Midlands	16.1	15.3	14.6	14.3	15.0	12.2	14.8
N East	2.8	2.5	2.7	2.1	2.4	1.8	2.0
N Scotland	2.8	2.3	2.7	2.1	3.0	2.9	2.6
S West	4.3	3.8	4.1	3.7	4.0	4.0	4.3

3.5.6 Variations in Consumer Preferences

The sales volumes provided a picture of who bought what across all Tesco UK stores. The Indexing data, however, enabled a deeper exploration of differences between consumers based upon whether they were buying more or less than the average Tesco UK consumer (expressed as 100 in the data tables.) When the data was examined in this way, new insights emerged. While the most likely to buy remained the more affluent and older shoppers, a geographical component also emerged as being important, with consumers in the East of England buying proportionately more fish than any other region, with the exception of ethical goods, where

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Londoners were over-represented. In contrast, Londoners were the least likely to buy added value products (despite being the second largest market in terms of sales volumes).

Geodemographics, Lifestage and Region combined in different ways to reveal those least likely to buy different fish brands (Table 14). Interestingly, as was seen with the analysis of sales volumes, Lifestyle was consistently related to likelihood to buy but, contrary to expectations regarding the effects of income upon shopping behaviour, those on the lowest incomes were not underrepresented. Rather, it was the mid-range shoppers, the mainstream, who were tending to buy fewer fish products.

Table 14 Summary of those most and least likely to buy fish brands in Tesco UK Supermarkets

Product type	Most likely to buy	Least likely to buy
Added Value	Affluent home owners Older adults & families Live in East of England Up market shopper	Young and affluent singles Young adults Live in London Mid-market shopper
Salmon & Tuna	Wealthy retired neighbourhoods Pensioners Live in East of England Up market shopper	Poorer council tenants Young adults Live in N East Mid-market shopper
Shellfish	Wealthy retired neighbourhoods Older adults Live in East of England Up-market shopper	Poorer council tenants Young adults Live in N East / N Ireland Mid-market shopper
Speciality Fish	Wealthy retired neighbourhoods Older adults Live in East of England Up market shopper	Poorer council tenants Young adults Live in N East Mid-market shopper
Wet fish	Wealthy retired neighbourhoods Pensioners Live in East of England Up-market shopper	Young and affluent singles Young adults Live in N East Mid-market shopper
Ethical	Wealthy retired neighbourhoods Older adults Live in London Up-market shopper	Poorer council tenants Older families Live in Yorkshire Mid-market shopper
Sustainable	Wealthy retired neighbourhoods Pensioners Live in East of England Up-market shopper	Poorer council tenants Young adults Live in N East Mid-market shopper

To explore these insights further, two of the brands (“wet fish” and “ethical products”) were unpacked to examine differences in buyer patterns across individual product types. By analysing at this deeper level, additional insights were gained which suggest that – far from being a homogenous group, Tesco (*and by extrapolation*) UK seafood shoppers are incredibly varied in their make-up.

3.5.6.1 Who Buys Wet Fish?

62 individual items were included in this category which included whole fish (such as Plaice and Haddock) and fillets / loins. The Indexing data found that, again, Pensioners and Older adults were buying substantially more than any other lifestage - between them they over-indexed on 56 out of the 62 categories. Young adults, however, were more likely to buy slightly more unusual products, such as Monkfish tails, Red and Grey Mullet, Turbot and Squid. Overall, younger consumers were more likely to buy 11 of the 62 products on offer than their older counterparts, a finding that is inconsistent with much of the Literature on seafood consumption (Myrland et al. 2000; Wellman 1992).

Geodemographic analysis supported the overall trend of more affluent/older consumers buying more fish - but also confirmed that those in less affluent neighbourhoods were also buying substantially more of certain types of fish than the average. Less affluent families, for instance, were the greatest consumers of fresh whole Cod; Less affluent students and singles bought more whole Plaice and whole Squid; and, intriguingly, given its status and market price, whole Turbot was bought in much greater quantities by poorer white and blue collar workers than any other group.

The Lifestyle analysis also confirmed that income need not be a barrier to fish consumption. The less affluent bought more than average across half of all the products – in this case buying more even than those categorised as up market (who over-indexed on 27 / 62 products). In contrast, mid-market shoppers – with only two exceptions – bought either at the average or below average levels.

Regionally, shoppers in London and the East of England bought proportionately more fish than any other Region but, with the notable exception of Yorkshire and the Midlands, every region over-indexed on at least one product. Thus, in the South West, consumers bought considerably more whole lemon sole, pouting, sardine fillets and mackerel (interestingly, products that are landed in significant quantities in the Region) than those elsewhere. Consumers in Central Scotland were much more likely to buy value Cod fillets and Scottish Haddock and Scottish whiting blocks; and those in the Borders Region, which could be described as being an affluent retiree community, bought more squid, trout fillets, Haddock loin and river cobbler than the average.

Sales of wet fish therefore varied in, at first glance, seemingly unpredictable ways. On closer examination, however, these differences might be explained by the characteristics of the local

population and the ways in which the product has been presented for sale, e.g. Scottish Haddock for Scottish audiences.

3.5.6.2 Who Buys Ethical And / Or Sustainable Products ?

When sales of ethical goods were examined, further interesting variations emerged (Table 15). In terms of Lifestyle, for example, for the first time, the less affluent shoppers were *under*-buying relative to mid-market and up-market consumers – with the up market consumers buying significantly more than the other segments. Geodemographic analysis reveals that Young and Affluent Singles are buying more organic goods than the average consumer – buying only slightly less than the highest consuming sector (the wealthy retired); but the Lifestage analysis shows that only older adults are over-buying organic goods. (This slight contradiction can be explained by the different method of grouping the consumers. The geodemographic analysis takes account of typical community characteristics (types of home ownership, local facilities etc) whereas the lifestage data groups everyone (regardless of their residential area) solely on the basis of their age. Thus the Young Adult grouping in Lifestage will include young adults living in very different communities with contrastingly different lifestyles.) This difference – coupled with the findings from the lifestyle analysis, suggests that sales of organic goods may be income-related.

Regional analysis would also support this view – with consumers in the richest regions (London and the South East) buying the most organic products. The relationship is not a perfect one, however. Welsh and Northern Irish consumers, for example, though buying less than average, still bought proportionately more than consumers in the (richer) North West (Table 16.)

Table 15 Sales of Organic Fish Products in Tesco UK Stores (2012) : Index of Row (source: dunnhumby)

Product	Up Market	Mid Market	Less affluent
Organic Salmon Fillets	253	47	41
Organic Smoked Salmon	244	52	42
Organic Prawns	200	64	63

(scores over 100 signify buying more than the average consumer; scores lower than 100 indicate lower sales than average.)

Table 16 Sales of Organic Fish Products (index) in Tesco UK Stores (2012) by Regions Ranked according to Gross Disposable Household Income (source : ONS 2012*; dunnhumby)

	GDHI (ranking)*	Organic Salmon Fillets	Organic Smoked Salmon	Organic Prawns
London	1	148	171	163
S & S East	2	113	136	127
East England	3	102	108	121
S West	4	126	107	82
Scotland ¹	5	142	76	91
Midlands	6	82	78	79
N West	7	71	68	67
Wales	9	96	93	74
Yorks & Humber	10	45	36	45
N Ireland	11	92	78	66
N East	12	56	42	52

1 – data is for N Scotland only.

Labelled organic products tend, then, to be bought by those on higher incomes.

When this analysis is broadened out to a consideration of *non-labelled* wet fish products that can be assessed as being sustainable, income becomes less significant. Of the 43 products grouped together under the sustainable heading, for example, 22 were bought in greater quantities by the less affluent shoppers who over-indexed across all but 8 of the products. In contrast the mid-market shoppers only bought one product more than the average and even then the index was only just above the average.

Income, alone, then might not dictate whether a shopper buys fish or not...but real (or perceived) price differences in ethically-labelled products may. Possibly, too, the presence of an ethical label might be off-putting to some sections of society who may be cynical about their validity and / or appealing to those who might view them as inferring some kind of higher status. (The fact that young and affluent singles are buying more of the organically-labelled products hints at an element of wanting to show off, for instance.)

3.6 SUMMARY : DEMAND – SIDE ISSUES IN THE UK SEAFOOD MARKET

Demand for seafood in the UK may therefore be characterised as being *relatively* narrow in terms of the range of species being consumed, particularly locally-available species, but surprisingly varied in terms of the kinds of people buying it and the things that these different groups buy. Thus:

- Salmon, Cod and Haddock dominated sales of wet fish overall but significant regional variations in both overall sales volumes and the kinds of units sold, existed.
- Older people bought more fish overall but younger people were more likely to buy ethical products and less commonly eaten products such as squid.

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- Household income was associated with an increased tendency to buy seafood, but middle income households consumed less seafood than lower income households.

Critically, these findings contrast with previous research which has found immutable links between age, household income and seafood consumption levels (Olsen 2004; Myrland et al. 2000; Wessells, Johnston and Donath 1999).

The Clubcard analysis therefore answered one Research Question : “What are current UK sales patterns for seafood?” It also, however, raised a number of additional questions about the patterns of seafood consumption in the UK that warrant further study:

- Research Question 3 : Why are there regional variations in seafood sales?
- Research Question 4 : Are Tesco supermarket shoppers different from other shoppers?
- Research Question 5 : Are age and income important in seafood consumption?
- Research Question 6 : What do consumers understand about sustainability?

This Chapter has also shown that there appears to be a growing demand for sustainable seafood and increased consumer expectation that the seafood they buy will have been responsibly sourced. The on-line analysis described in 3.4.2 demonstrated that the UK retail sector (at least as far as the Supermarkets are concerned) has responded to this demand with varying degrees of responsibility – a finding that also leads to the asking of the following additional questions:

- Research Question 7 : Are consumers aware of the differences in the sustainability of the seafood offered by retailers and does it influence their buying behaviours ?; and,
- Research Question 8 : Could supermarkets be doing more to promote sales of sustainable seafood?

The following section moves on to discuss additional UK supply-side issues that may have a bearing upon current consumption patterns, focusing upon the structure and organisation of the UK fishing fleet and the status of commercial fish stocks in UK waters.

3.7 THE UK FISHING INDUSTRY

3.7.1 Composition of the UK Fishing Fleet

The UK fishing industry has been in gradual decline in terms of the numbers of people it employs since the early part of the 20th century. This is both a reflection of the increased use of technology that have reduced crew numbers; and of political initiatives that have set out to reduce the capacity of the fleet in an attempt to address levels of overfishing. Thus, in 1919, the Industry employed over 42,000 people on 9,845 boats representing an average fishing crew of

4 people. By 2011, employment had fallen by 70% to just over 12,000; with an average of just 2 people working each vessel (MMO 2012).


















Compared to other European nations, however, the UK Fleet is still relatively significant. It is the sixth largest overall (Greece has the biggest fleet); the 4th most powerful; and the second largest in terms of capacity (measured in gross tonnes) behind Spain (MMO 2012).

An important characteristic of the UK fishing fleet is that it is primarily comprised of small vessels measuring less than 10 meters in length. These boats typically fish on “day trips” travelling up to a maximum of 25 nautical miles from port and staying within the 6 -12 miles from shore that mark the extent of the UK’s Exclusive Economic Zone (EEZ). An EEZ is an area of the sea, as prescribed by the United Nations Conventions on the Law of the Sea, over which a State has exclusive exploitation rights (United Nations 2013). The majority of the English fleet (80%) are under 10 meters in length, compared with 70% in Scotland. This slight difference reflects the different fishing opportunities available to Scottish and English fishermen, with the latter mainly targeting higher value, low volume species and operating within inshore waters; and the former ranging further afield to target high volume but lower value species such as Herring (MMO 2012).

Consequently, at England’s busiest fishing port (Newlyn in Cornwall) 88% of boats are under 10 metres in length and 93% of boats in the Hastings, Sussex fleet, which target the fish in the English Channel, are under 10 meters in length (MMO 2012).

This fleet composition has implications for the sustainability of UK fishing practices. Smaller fishing enterprises have generally been found to have less of an environmental impact and a greater impact socio-economically than larger ones – consuming less fuel, having a much lower rate of bycatch, employing more people, receiving fewer subsidies and providing the same volume of fish to market for direct human consumption than large-scale operations (Jacquet and Pauly 2008) (Figure 9).

Fig. 9 Comparison of Global Large and Small-scale Fisheries (Jacquet & Pauly 2008)

FISHERY	LARGE SCALE 	SMALL SCALE 
BENEFITS		
Subsidies	\$\$\$\$\$ 25-27 billion	\$ 5-7 billion
Number of fishers employed	 about 1/2 million	 over 12 million
Annual catch for human consumption	 about 30 million t	 same: about 30 million t
Annual catch reduced to fishmeal and oils	  35 million t	 Almost none
Annual fuel oil consumption	 about 37 million t	 about 5 million t
Catch per tonne of fuel consumed	 =  1-2 t	 =  4-8 t
Fish and other sealife discarded at sea	 8-20 million tonnes	 Very little

3.7.2 Oversight and Control of the UK Fishing Industry

The 6444 fishing vessels operating within the UK Fleet are ultimately overseen by the UK's government and the devolved administrations in Scotland, Wales and Northern Ireland.

In England, the Government's duties are carried out by the Marine Management Organisation (MMO), an executive non-departmental public body established and given powers under the Marine and Coastal Access Act 2009. Its responsibilities include marine planning (including the identification and implementation of a network of marine protected areas); managing fishing fleet capacity and quotas; and the enforcement of national and European marine regulations (MMO 2013). Within Scotland, these responsibilities are carried out by Marine Scotland (a department within the Enterprise, Environment and Digital Directorate of the Scottish Government) (Scottish Government 2013); the Welsh Government took over the allocation of fishing quotas from Parliament in January 2013 (Welsh Government 2013); and in Northern Ireland, the functions are carried out by the government's Department for Agriculture and Rural Development (DARD 2013).

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An additional feature of the English administration is the existence of the Inshore Fisheries and Conservation Authorities (IFCAs). Funded by Local Authorities but accountable to the Department for the Environment and Rural Affairs (DEFRA), the ten IFCAs came into force in 2011, with the direction to *“lead, champion and manage a sustainable marine environment and inshore fisheries, by successfully securing the right balance between social, environmental and economic benefits to ensure healthy seas, sustainable fisheries and a viable industry”* (DEFRA 2015, p. 9). Their primary functions are to manage inshore fisheries (i.e. those operating within estuaries and up to 6 nautical miles from the coast); and the implementation and protection of marine protected areas. Prior to April 2011, management of the inshore fleet had been undertaken by the Sea Fisheries Committees which had primarily been responsible for the establishment and enforcement of local bylaws designed to regulate fishing activity. While such activities could be motivated from a need to ensure the preservation of the marine environment, the explicit sustainability remit given to the IFCAs is a positive development, raising the profile of the inshore fleet as a potential source of sustainable seafood for the UK.

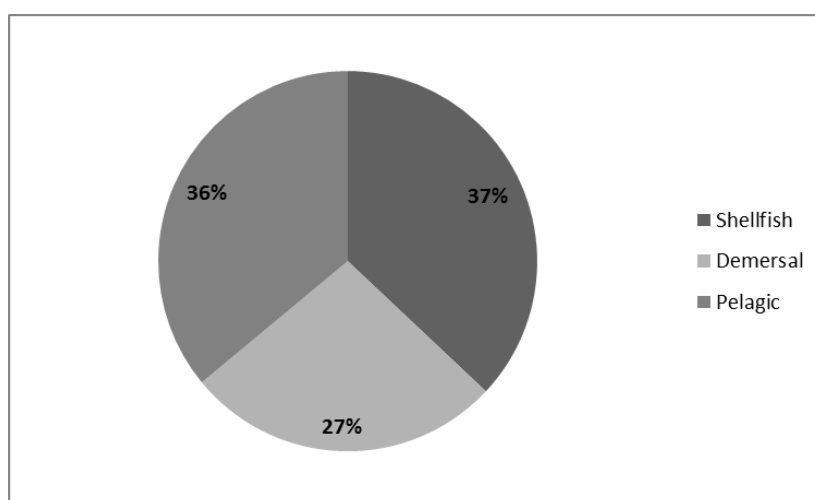
An historical and enduring weakness of the UK industry, however, has been its lack of a unifying voice, for in addition to the differing political structures identified above, at an operational level, the industry is further divided between those individual fishermen who belong to Producer Organisations (POs) and those who do not; and the kinds of activities that their PO engages with. Thus, two national federations represent the interests of 24 Producer Organisations (POs) – the members of which landed 84% of all of the fish from UK vessels in 2011. The Producer Organisations (which are run as cooperatives) all have three broad aims – to allocate and monitor the effective management of the fleet’s assigned fishing quota (for those species that are covered by a quota by the European Union); to represent the views of their members at national and regional level (including, for example, negotiations on quotas); and, promoting the work of their members and their products. In reality, however, most effort is devoted (necessarily) to managing the quotas, with few organisations having the capacity – or capability – to effectively promote their members’ activities or products (Marine Scotland 2012).

Consequently, and in contrast to other industries such as UK Farming and the French fishing industry, many British fishermen feel both under-valued and misunderstood by the Government, the media and, in turn, the general public, particularly when it comes to the sustainability of their practices which, they argue, are amongst the best in the world (Tetley 2010).

3.7.3 Landings of Commercial Species by the UK Fleet

Consistent with global patterns, landings by the UK fleet have fallen since reaching a peak in the mid 1990's. In 2011, UK vessels landed just over 400 thousand tonnes of fish and shellfish, representing 86% of all fish landed into the UK. Just over half of all the fish landed came from the fishing grounds in the Northern North Sea and the West of Scotland, with the English Channel, the Central North Sea and Irish Sea being the next most important fishing grounds. For the first time in the UK's history, shellfish made up the largest share of the catch, with open-water, or pelagic, species (such as mackerel) making up the second largest share and *demersal* (i.e. bottom-dwelling) species such as Cod being the least populous (Figure 10).

Fig. 10 Landings of Fish and Shellfish by UK vessels as a Percentage of Total Landings in 2011



(Source: MMO 2012)

Landings of the UK's most popular fish, Cod, have fallen by 71% since 1995 at 23 thousand tonnes; while at 30 thousand tonnes landings of Haddock are down by 65%. These landing patterns have contributed to the rising profile of shellfish, as fishermen have diversified into this sector to counter falling catches of pelagic and demersal species. They have also, as discussed in Chapter 1, fuelled an increasing reliance upon imported fish.

Despite these falling volumes, however, the value of the fish landed has grown, reflecting higher prices at market, particularly for pelagic fish - prices for which have risen by an average of 40% since 2010. Yet, contrary to the normal laws of economics, this rise in price has not yet been accompanied by a drop in demand. Indeed, average consumer spend has continued to rise steadily, even after the financial collapse in 2008, with seafood making an ever greater impression upon overall household finances (Table 17). In 2001, for example, seafood accounted for 4.3% of total food spend. By 2010, it made up 5.2%. During the same period, consumer spend increased by 33% but actual consumption only rose by 1.4% (although since 1990 it has grown by 13.7%).

Table 17 UK Landings, Imports, Exports and Consumption of Fish and Shellfish (1990 – 2011)

Year	Landings by UK Vessels (‘000 tonnes)	Imports (‘000 tonnes)	Exports (‘000 tonnes)	Household Consumption (‘000 tonnes)	RPI	Consumer spend (£m)	Consumer spend (% of total food spend)
1990	622	497	351	430	NA	NA	NA
1991	615	481	408	416	NA	NA	NA
1992	614	485	412	426	NA	NA	NA
1993	629	438	373	437	NA	NA	NA
1994	649	458	372	441	NA	NA	NA
1995	726	484	359	438	NA	NA	NA
1996	636	533	310	470	NA	NA	NA
1997	653	503	300	447	NA	NA	NA
1998	600	533	346	448	NA	NA	NA
1999	542	552	351	446	NA	NA	NA
2000	494	547	365	442	100	NA	NA
2001	483	626	385	482	101.6	2857	4.3
2002	445	620	388	479	104.6	2870	4.2
2003	429	631	479	485	103.5	2917	4.1
2004	445	672	467	492	101.7	3090	4.3
2005	475	717	458	523	102.3	3275	4.4
2006	401	753	416	537	108.5	3525	4.6
2007	425	672	431	525	115.7	3674	4.6
2008	397	781	416	515	124	3685	5.4
2009	355	720	479	508	130.3	3765	5.3
2010	381	703	516	489	138.3	3790	5.2
2011	376	720	437	NA	151	NA	NA

(Source : MMO 2012)







3.7.4 The Status of UK Fish Stocks

Stock assessments in the European Union (EU) are conducted by the International Council for the Exploration of the Seas (ICES) a global foundation that conducts research into the world’s oceans. Each year, the EU Member States with fishing fleets utilise the ICES assessments in order to agree catch limits for commercial fish species – Total Allowable Catches (TACS). Each EU fishing fleet then negotiates for its share of the TAC, i.e. its quota. These negotiations are, by their very nature, highly political and often result in TACs (and subsequent quotas) being set that substantially exceeds ICES recommendations (Villasante et al. 2011). Consequently, overfishing has been, and continues to be, an issue within the waters of the EU (Fioretti 2014).

For the UK, the stock picture is a complicated one, with commercially-important species faring better in certain fishing zones than others. Of all of the native fish species, however, Cod is the most problematic – being severely depleted in the North and Irish Seas and heavily over-exploited in the West of Scotland. Only Cod from the Celtic sea is currently assessed as being harvested sustainably (although recent years have seen a rebuilding of the North Sea stocks through implementation of the North Sea Cod Recovery Plan.) Haddock stocks in the North Sea are assessed as sustainable but those in the West of Scotland are considered to be at risk. Plaice stocks are relatively healthy as are stocks of Herring but the picture for Sole is more mixed (MMO 2012) (Table 18).

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Table 18 Status of Main UK Fish Stocks in 2011 (NB images not to scale)

Species	Fishing Area	Sustainable?
Cod (<i>Gadhus morhua</i>) 	North Sea West of Scotland Irish Sea Celtic Sea	X X X ✓
Haddock (<i>Melanogrammus aeglefinus</i>) 	North Sea West of Scotland	✓ Unclear
Plaice (<i>Pleuronectes platessa</i>) 	North Sea Irish Sea	✓ ✓
Sole (<i>Solea solea</i>) 	North Sea Irish Sea Eastern Channel Western Channel	✓ Unclear ✓ Unclear
Herring (<i>Clupea harengus</i>) 	North Sea	✓
Mackerel (<i>Scomber scombrus</i>) 	North East Atlantic	✓ (but see below)

(source : MMO 2012)

Although the 2011 ICES assessment identified Mackerel as being harvested sustainably its status as a sustainable fish deteriorated in 2012 in the face of an ongoing failure to agree catch levels between EU and non-EU states, the latter having set catch rates at higher than recommended levels. This has resulted in the Marine Stewardship Council (MSC) suspending its certification of the fisheries concerned until agreement can be reached. A collaboration of seven of the previously certified mackerel fisheries (the Mackerel Industry Northern Sustainability Alliance (MINSAs)), have submitted an action plan to the MSC in an attempt to reacquire certification. In the meantime, the Marine Conservation Society's Good Fish Guide advises that mackerel should be avoided unless it can be guaranteed as having been caught locally using traditional methods such as handlines; and / or it derives from a supplier who is a signatory to the MINSAs principles (MCS 2013).

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While the picture for the most commonly-consumed stocks, then, may appear concerning (and potentially confusing from a consumer perspective), the status of the other 40, or so, edible species landed by UK fishermen is generally more positive. In particular, currently underutilised species such as Dab, Pouting and Gurnard offer the possibility of a sustainable and cheaper alternative to whitefish such as Cod and Haddock; and, in the case of Gurnard a new source of fish high in Omega – 3 (Revill Nation 2011). Further, of the 194 fisheries world-wide currently certified by the Marine Stewardship Council (MSC) as being operated sustainably, 18 are operated by UK vessels working in UK (and adjacent) waters. These comprise a number of pelagic fisheries; various shellfish operations; and a handful of smaller fisheries targeting high-value demersal species including sole and Plaice (Figure 11.)

Fig. 11 MSC-certified fisheries involving UK fishing vessels operating in UK (and adjacent) waters (as at end April 2012)



(Source : Marine Stewardship Council, <http://www.msc.org/track-a-fishery/fisheries-in-the-program>)

It would appear, then, that there are both well developed and currently un-exploited sources of supply of sustainable fish within the UK. A question remains, however, as to whether these products are reaching UK consumers and whether consumers want to buy them. Certainly the analysis presented above would suggest that this is not the case and that more needs to be done to encourage UK consumers to opt for a wider range of products than they currently do.

3.8 CONCLUSION : THE UK SEAFOOD MARKET

The UK market for seafood in general, and sustainable seafood in particular, could be described as being relatively buoyant. Consumer demand is on the rise, even in the face of rising prices and there is evidence suggestive of a strong and growing demand for sustainable fish products within the UK that retail appears to be responding to – at least with respect to increased sales and availability of MSC-labelled goods.

On the supply-side, there are well-managed stocks of commercially-important fish and shellfish within UK waters and new governance systems in place to promote the sustainability of inshore fisheries. There is also significant potential to increase the uptake of currently under-utilised (and therefore under exploited) species.

Yet retail and consumer behaviour still reflects a dependence upon imported and farmed products – this, in turn, being a reflection (and combination of) the effects of increasingly narrow consumer tastes and retail demand for a consistent supply of high quality products which the wild-capture fishing industry cannot as easily respond to.

It has been argued that these consumption patterns are not sustainable in the long (or even, medium)-term and that change needs to happen. This chapter has highlighted that the need for change is not confined to the individual consumer but to all aspects of the supply chain. Arguably, however, it is at the intersection of consumer and retail behaviour that change most needs to happen if consumption patterns are to become more sustainable, i.e. if consumers are going to move away from their reliance upon the Big 5. This is reflected in the following research questions that were generated from the Tesco Clubcard and on-line grocery analysis:

- Research Question 3 : Why are there regional variations in seafood sales?
- Research Question 4 : Are Tesco supermarket shoppers different from other shoppers?
- Research Question 5 : Are age and income important in seafood consumption?
- Research Question 6 : What do consumers understand about sustainability?
- Research Question 7 : Are consumers aware of the differences in the sustainability of the seafood offered by retailers and does it influence their buying behaviours ?; and,
- Research Question 8 : Could supermarkets be doing more to promote sales of sustainable seafood?

These questions need addressing in order to gain a genuinely deep understanding of why consumers currently make the choices that they do.

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The following chapter explores the academic literature on consumer behaviour, sustainability and seafood consumption in order to generate further insights that might be applicable to this research problem.

CHAPTER 4 : UNDERSTANDING SUSTAINABILITY AND SUSTAINABLE CONSUMER BEHAVIOUR

4.1 INTRODUCTION

The previous chapters have provided the context to the research by demonstrating the overall unsustainability of current UK seafood behaviours. At the same time, however, certain consumers are expressing their concerns about the status of wild fish stocks – concerns that, as far as sales of Marine Stewardship Council-certified products go, appear to be backed up by changes in purchasing behaviour. Yet it has also been argued that the reach of the MSC is limited, and that, in the absence of any other form of recognisable eco-labelling, the possibility (indeed, probability) of consumer confusion and / or apathy occurring with respect to seafood choices, is high. Retailers have been tasked by Consumers with making these choices easier for them (Future Foundation 2012) but Chapter 3 demonstrated that the practices of the UK's largest retailers vary considerably meaning that, for the 14% or so of UK consumers who limit their purchases to just one supermarket, the extent of the retail offering will significantly impact upon their ability to make sustainable choices (Freedman 2011).

Further and fundamentally for the focus of this research, the previous chapters have identified that, despite the rise in awareness campaigns and the associated reported high levels of consumer concern about the environmental effects of fishing, UK consumer demand for seafood in general, and the “Big 5” in particular (with all of their associated negative environmental effects) is growing - a situation that the UK's largest retailers are helping to maintain through their variable sourcing decisions. It would appear, therefore, that strong forces are at work in the UK that significantly influence consumer behaviour in favour of the “Big 5” and away from other, more sustainable, alternatives, in other words that are driving unsustainable consumer behaviour.

This chapter reviews the academic literature on sustainable consumption and consumer behaviour in order to gain insight into what those forces might be and how they might interact with one another to influence the sustainability of UK consumer decision-making.

The chapter begins with an overview of the Literature on sustainable consumption, defining the term and discussing the characteristics of those consumers who have been found to be more or less likely to engage in sustainable consumption behaviours. The literature on sustainable seafood consumption is then explored. This leads in to a discussion of the oft-observed (but poorly understood) phenomenon in consumer research - the attitude / intention – behaviour gap. The Chapter continues with an overview of the Literature on consumer-behaviour, its characteristics, strengths and weaknesses before describing some of the more prominent theories that have emerged with respect to pro-environmental behaviours. The individual

constructs of these theories are identified and their effectiveness, or otherwise, in predicting pro-environmental behaviour are then discussed.

4.2 SUSTAINABLE CONSUMPTION AND SUSTAINABLE / ETHICAL CONSUMER BEHAVIOUR

4.2.1 Defining Sustainable Consumption

The preceding chapters have highlighted how *unsustainable* current consumption patterns are. Indeed, the latest analysis published by the World Wide Fund for Nature (WWF) finds that for the last forty years natural resources have been consumed at a rate that exceeds the Earth's capacity to replenish itself, such that 1.5 Earth's are required to meet all of mankind's needs at today's levels. This consumption is heavily skewed, however, with consumers in high-income countries such as the USA and much of Europe, having an ecological footprint five times higher than those in low – income countries. This puts significant pressure upon the other species with whom we share the planet (vertebrate population sizes have declined by 52% since 1970) and upon low-income (but biodiverse-rich) nations who depend upon exporting their natural resources in order to survive (WWF 2014).

Positioned within this context, the production and consumption of food presents significant sustainability challenges. 92% of the global water footprint, for example, is consumed by agriculture (compared to 3.6% for domestic use) (WWF 2014); and 16% of all greenhouse gas emissions are attributable to food production (Reisch, Scholl and Eberle 2010). Moving beyond this limited, ecologically-based view of sustainability (Schaefer and Crane 2005), social and economic concerns relating to food security, food safety and the impact of food production processes upon human and animal welfare, also abound (Reisch, Scholl and Eberle 2010). Modern-day British consumers are presented with a bewildering array of food products from which to choose but (conversely) a reduced range of food retailers from whom to choose from. The emergence of mega retail in the 1980's and their investment in logistics and centralised distribution models have significantly reduced regional food supply networks (Probyn 2011).

Despite the scale and urgency of these issues, however, there is no commonly agreed definition of "sustainable consumption", with some even debating it as an oxymoron (Dolan 2002). The version developed by the United Nations Environmental Programme (UNEP) is perhaps both the most widely accepted and comprehensive. Here, sustainable consumption consists of...*"a number of key issues, such as meeting needs, enhancing quality of life, improving efficiency, minimising waste, taking a lifecycle perspective and taking into account the equity dimension, for both current and future generations, while continually reducing environmental damage and the risk to human health"* (Peattie and Collins 2009, p. 109).

Similarly, sustainable *food* consumption has yet to be defined within a single unifying statement, rather “sustainable food” is argued as encompassing each of the following characteristics: safe, healthy and nutritious; meets the needs of the poor; provides a viable livelihood; respects biological/environmental limits and reduces energy consumption and improves the wider environment; meets the highest standards of animal welfare and health; and, supports rural economies by keeping food local (Reisch, Scholl and Eberle 2010; Reisch, Eberle and Lorek 2013).

Perhaps the lack of a unanimous definition is understandable given that consumption, itself, also has various interpretations, depending upon the theoretical paradigm within which it is viewed. Thus, theories of individual choice; social theories; and cultural theories all render a different view of what consumption is (and therefore what unsustainable consumption might be) such that any discussion of the problem of unsustainable consumption can generate very different solutions and beliefs about where responsibility for delivering these solutions should reside (i.e. at the level of the individual consumer or the State) (Wilk 2002; Seyfang 2009).

Fundamentally different philosophies also exist regarding the value of (over)consumption – is it a good thing or something to be discouraged? Those who have argued in favour of increased, or conspicuous consumption (a phenomenon that was observed as early as the 17th Century (Jackson 2005a)) argue that it leads to development for all, through trickle down effects to the poorer in society. Thus, to argue against consumption would be to argue against the reduction of poverty (Schaefer and Crane 2005; Shaw, Newholm and Dickinson 2006). Those arguing against, point out the imperfect relationship between consumption and well-being, in addition to the adverse effects such patterns can have upon the environment (Jackson 2005a; O’Hara and Stagl 2002). There has therefore been a call for more pluralistic and pragmatic approaches to understanding consumption that cross the contrasting disciplines of Anthropology, Sociology and the (more traditional disciplines of) Economics and Marketing (Andorfer and Liebe 2012; Peattie 2010).

The academic literature with respect to understanding and enabling sustainable consumption reflects this duality, with scholars invariably considering sustainable consumption from two, sometimes three, perspectives (Peattie and Collins 2009). The first, referred to as the reform or mainstream approach, focuses upon maintaining the status quo with respect to institutional infrastructure and the pre-eminence of the free market (Hopwood, Mellor and O’Brien 2005). The objective here is to deliver “*incremental improvements in resource efficiency, and continual economic growth through consuming differently*” (Seyfang 2009, p.21). Problems are deemed to be as a result of inequity and a lack of knowledge and awareness on the part of consumers. Technological and market-based initiatives are viewed as the solution with consumers as the

key players in enabling these initiatives to succeed (Schaefer and Crane 2005; Hopwood, Mellor and O'Brien 2005).

4.2.2 Policy Approaches to Sustainable Consumption

Requiring as it does little to no structural upheaval, it is perhaps unsurprising that this mainstream approach is by far the most popular from a policy perspective (Seyfang 2009; Hopwood, Mellor and O'Brien 2005). In the context of sustainable food, for example, the market has responded through a plethora of new products identifiable by labelling initiatives that alert consumers attention towards the sustainability credentials of any given product (typically, these encompass three broad areas of concern - human rights (e.g. Fair Trade), animal welfare (e.g. Freedom Food) and the conservation of the natural environment (e.g. Marine Stewardship Councils, Soil Association) (Browne et al. 2000). Technological innovations (such as genetic modification) have also been developed to try and increase the availability of food supply and offer consumers greater choice. In their wake, academics have devoted much time and attention to questioning the effectiveness of labelling schemes, whether they measure the right things, and the extent to which consumers are willing to pay for labelled goods (Wessels, Johnston and Donath 1999; Schrader and Thøgersen 2011; Johnston et al. 2001). However, this mainstream approach to sustainable consumption has been criticised for its over-reliance on the individual consumer as opposed to institutional consumption behaviour and the relationships between the two; and for the concentration upon a narrow range of (usually environmental) issues, such as recycling and reducing carbon emissions, rather than encouraging a more holistic approach to behaviour, that would encompass changes in multiple aspects of peoples' everyday lives (Peattie and Collins 2009; Wilk 2002) and the empowerment of "Consumer-Citizens" (Prothero et al. 2011). Lorek and Fuchs thus describe such policy initiatives as "weak sustainable consumption" (Lorek and Fuchs 2013).

In contrast, the alternative, or transformation approach, argues for a radical shifting of individual and institutional behaviours such that overall patterns of consumption are reduced and alternative measures of national prosperity are developed that place a greater emphasis upon well-being than upon growth (Chatzidakis, Maclaran and Bradshaw 2012; Seyfang 2005). The academic literature here has tended to focus upon describing differential consumer responses to this agenda, through the practices of voluntary simplification, including downshifting and the embracing of alternative lifestyles (Hopwood, Mellor and O'Brien 2005; Lorek and Fuchs 2013; Shaw and Newholm 2002). Care needs to be given to understanding the exact motivations behind such actions, however. Shaw & Newholm, for example, argue for two groupings of voluntary simplifiers - those who are motivated to consume less and/or differently by their

ethical concerns and those who are motivated by a (more selfish) desire to disengage from the pressures of modern society (Shaw and Newholm 2002). Seyfang also cites the bottom-up emergence of new forms of food distribution (such as farmers markets) as evidence of a desire from “ecological citizens” to consume differently (Seyfang 2004). Arguably, however, consumer motivations here could be said to be driven less by ecological concerns and more by hedonistic, pleasure-related goals and a desire to assert one’s Identity (Schaefer and Crane 2005).

Despite contentions that this approach represents strong sustainable consumption (and is therefore more likely to succeed (Lorek and Fuchs 2013)) the reform agenda remains dominant and, arguably, in the short term legislative and market measures have the power to enact the most change. Over time, however, it is generally accepted that the attention must shift towards attitudinal and institutional change which will, in turn, require some degree of investment. As Lang & Gabriel comment, *“If humanity wants a decent society it has to be paid for. If it doesn’t, or enough don’t, society and the biosphere will pay anyway”* (Lang and Gabriel 2005, p. 53).

Michaelis and others (e.g. Seyfang) are confident that there are signs that this is already beginning to happen, with individualism being tempered by a growing interest in physical and virtual communities; market institutions changing their behaviour by involving and recognising stakeholder views and seeking to respond to their green concerns by providing more ethical choices; and globally-connected communities being encouraged to act locally to achieve global solutions (Michaelis 2003b). He argues that these early developments need to be encouraged through providing opportunities for community discourse, for the benefits that such group discussions can bring in terms of creativity, the sharing of practical skills and enabling changes in perceptions of others (versus individual reflection.) Others, additionally, point out the need to enable individuals to better enact their intentions, to enable them to break out from “locked-in” patterns of consumption that only serve to benefit the interests of big business and the sole pursuit of economic growth (Sanne 2002). Having alternative products and services (e.g. local food networks vs supermarket chains) available and giving consumers information so that they can make sense of their options and decide accordingly, are suggested as being key (Hertwich 2003), although others caution against the provision of too much information for fear that it can leave consumers feeling overwhelmed about the scale of the challenges and their personal ability to have any impact (Seyfang 2009).

Equally, however, there is a growing debate within the Literature (which is not fully reflected in most policy) that action at the level of the consumer, alone, is unlikely to yield the kinds of changes necessary in order to ensure sustainable levels of consumption (Sanne 2002). Instead, there is a call for “individualised collective action” or “virtuous globalisation” (Leitch 2003)

through consumer movements. Sebastiani, Montagnini and Dalli (2013) suggest four spheres of activity:- shareholder activism; political consumerism; social alliances and alternative business systems, and illustrate their argument with the case of the Slow Food movement, which began in Italy in 1989 with the aim of promoting “*good, clean and fair food*” and has subsequently grown to encompass over 100,000 members over 153 countries.

Political consumerism (PC), the concept of consuming (or not consuming) as a political act, has received considerable attention in the Literature (Berlin, 2011; Baek, 2010; Neilson, 2010a; Neilson 2010b). The advantage of PC as a form of democratic expression (as opposed to voting in an election or at an Annual General Meeting) is that it can be done every day, potentially many times a day, and can be applied to everyday activities, to the kinds of ordinary consumption (such as food stuffs) that are frequently overlooked in the Literature (Jackson 2005a; Lewis and Potter 2011). As an individual act of political action, PC implies that ethical, environmental and societal concerns can be brought to bear in consumer decision-making processes. Further, there are various forms that it can take – boycotting and buycotting (consciously choosing an alternative product) are perhaps the most direct approaches but switching to alternative lifestyles (such as deciding to become a vegetarian) can also be deemed a political act (depending upon the genuine motivations of the consumer – see above, regarding the motivations of voluntary simplifiers)(Berlin 2011).

Research into the prevalence of boy/buy-cotting reveals an interesting picture of a growing group of consumers who choose to express their opinions in this way, rather than through more traditional avenues of expression, such as donating to a political party. Interestingly, it also appears to be more popular amongst women than men, reversing the usual gender gap seen with traditional political engagement (Stolle, Hooghe and Micheletti 2005; Dalton 2008; Halkier 1999).

Baek (2010), for example, used two rounds of US consumer survey data to identify that up to 15% of consumers claimed to have boycotted products; 12% to have buycotted; and 23% of consumers had done both. The figures for European activism are higher. Using data collected as part of the European Social Survey, Neilson (2010) found that 35% of Europeans identified as “political consumers”, with 13% boycotting, 46% buycotting and 41% doing both. Stolle, Hooghe and Micheletti (2005) found even higher levels of activism amongst student populations in Canada, Sweden and Belgium, with 72% claiming to have buycotted and 63% boycotted. Importantly, however, both Neilson and Paxton (2010) and Stolle, Hooghe and Micheletti (2005) found a link between a person’s propensity to engage in political consumerism with their perceptions of their own effectiveness and measures of social capital. Consequently, because

social capital, like wealth, is unevenly distributed, regional differences in political consumerism also exist, suggesting that PC, as a tactic, is unfairly weighted in favour of those with the education and means to engage with (and benefit most from) it. Lockie (2002) articulates this in *“The Invisible Mouth”*. Here, he contends that the market has listened disproportionately to the views of a minority of concerned (and wealthy) consumers such that the supply of (less expensive) raw, organic fruit and vegetables, is being reduced in favour of providing (more expensive) added-value organic products, effectively reducing the chances for those on lower incomes to consume organic foods (Chapter 3 also demonstrated that similar differences in provision existed within Tesco stores with respect to organic seafood.) Nevertheless, political consumerism, through boycotting, boycotting and engaging in other forms of social movements, facilitated particularly now by the use of social media, is suggested as a genuine additional form of political engagement which has the potential to enable citizens to more directly shape policy and influence how it is enacted on the ground, reflecting a shift from citizen participation to citizen influence (Dalton 2008; Rokka and Moisander 2009).

4.2.3 Characteristics of Ethical / Sustainable Consumers

Set against this context of groups in society who may be predisposed to act in particular ways, such as boycotting, a further branch of the sustainable consumption literature has been concerned with identifying clusters within society who are more or less disposed to behaving ethically. NB Some authors draw a distinction between “ethical consumption” and “sustainable consumption” with ethical consumption conceptualised as *“an individual and collective project relocated in the cultural ethics of consumption”* (Newholm and Shaw 2007, p.264). Generally, however, the two terms are used interchangeably, with ethical consumption deemed to be borne out of a concern for one or more of the three pillars of sustainability (environmental, social and economic). Thus, Chatzidakis and Mitussis (2007) define ethical consumer behaviour as *“decision making, purchases and other consumption experiences that are affected by the consumers’ ethical concerns”* p. 306. For the purposes of this study, the terms are considered as equivalent.

Typically, three societal groupings of ethical, or sustainable, consumer emerge, although up to six distinct categories have been suggested, some of which have been quantified from data on actual consumer behaviour, as opposed to being theorised (Table 19).

Table 19 Ethical / Sustainable Consumer Segments Identified in the Literature

Author & study population	Identified consumer groupings
Hartmann (1996), year-long study of American consumers	<ul style="list-style-type: none"> • The True naturals (7%) – already buying organics etc – typically female, highly educated and for whom income is not an issue. • The New Green Mainstream (23%) – Interested and want an opportunity to put their environmental ideals into practice. • The Affluent Healers (12%) – higher income, better educated, family and goal-oriented. Are more influenced by health and nutrition but they are also a highly-influential, if small, segment of society. If they change their behaviour, others may follow • Young recyclers (10%) – younger, haven’t thought through environmental issues holistically – may recycle but don’t think about food consequences beyond, for example, packaging. • The Overwhelmed (30%) – too busy trying to survive to worry about the environment. • The Unconcerned (18%) – don’t care and / or don’t believe the hype about environmental damage.
Bird and Hughes (1997) comparative study of ethical purchases made by UK consumers between 1990 and 1994	<ul style="list-style-type: none"> • Ethical (23% of the UK population) • Semi-ethical (56% of the UK population) • Selfish (17% of the UK population)
Arnot, Boxall and Cash (2006) American study exploring effects of price variation upon Fair Trade coffee consumption in a campus setting.	<ul style="list-style-type: none"> • Morally-motivated • Semi-ethical • Selfish
McDonald et al (2006) Theoretical groupings not tested empirically	<ul style="list-style-type: none"> • Voluntary simplifiers • Beginner voluntary simplifiers • Non-voluntary simplifiers
Szmigin, Carrigan and McEachern (2009) build on McDonald et al (2006) to identify an alternative third category of consumer - the “conscious consumer”. Drawing on in depth interviews with self-declared ethical consumers, they identify a “conscious consumer” as someone who is ethically-aware and already making choices but who also demonstrates flexibility such that other factors – price, time constraints, family wants/needs etc. – can result in non-ethical decisions being made at times.	<ul style="list-style-type: none"> • Voluntary simplifiers • Non-voluntary simplifiers • Conscious consumers
De Barcellos et al (2011) survey of Brazilian consumers. Area of residence (rural or urban) and marital status were significant predictors of cluster type.	<ul style="list-style-type: none"> • The indifferent (71.6%) • Environmentally-conscious (16%); and, • Sustainably-oriented citizens (12.4%).
Carrigan and Attalla (2001) UK student sample, grouped consumers into one of four categories,	<ul style="list-style-type: none"> • Caring and ethical • Confused and uncertain • Cynical and disinterested

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depending upon their level of ethical awareness and ethical intent.	<ul style="list-style-type: none">• Oblivious
---------------------------------------------------------------------	-------------------------------------------------------------

What stands out from this aspect of the Literature, and that indicates that there is the potential to realise the kinds of changes required for Strong Sustainable Consumption (SSC), is the finding that there is a large group of people in the middle (the second of the three categories), e.g. the semi-ethical consumers, or “flexitarians”. If these consumers were enabled to move into the ethical category, the vision of SSC might become reality – the key questions to be asked are what would be needed to achieve this?

Continuing with this theme of consumer segmentation and how sustainable behaviour might be encouraged, another branch of the literature explores how consumers’ ethical priorities differ. Thus, McDonald et al (2009) found that consumers use different ethical criteria for different goods and that they apply those criteria at different points in the decision-making process. When it came to food purchases, for example, environmental criteria were the most frequently used and, in this case, were least likely to be sacrificed in favour of brand or price. The same could not be said, however, for other product sectors. In exploring younger peoples’ attitudes towards green brands, Hein (2008) found that the so-called Generation Y’s, the 21 – 29 year olds, liked brands that were both green and stylish. Importantly, for this segment, they were willing to pay more for things that weren’t going to do *them* any harm. They were also making trade-offs between differing ethical issues, in this case between buying plastic over glass containers, because of the claims made by the manufacturer that plastic consumed less energy in its transport than glass.

Carrigan and Attalla (2001) also exposed this hierarchy of ethics in their focus groups with young consumers, finding that the participants showed greater concern for animal, as opposed to human, welfare issues; and, that they expressed a willingness to pay more for animal-friendly products, given the choice and opportunity. Wheale and Hinton (2007) also evaluated the ethical hierarchies of (self-declared) ethical consumers, finding that concern for the environment came in top; with human rights and animal rights coming in second and third in terms of importance. Echoing the results of Carrigan and Attalla (2001) and McDonald et al. (2009) they too found evidence of variability in the hierarchy depending upon the shopping scenario. Chatszidakis and Mitussis (2007) also uncovered the ethical hierarchy when they highlight that the same consumers who choose to buy Fair Trade also feel comfortable in buying pirate software!

Such varying degrees of ethical concern are perhaps unsurprising in the context of another significant branch of the academic literature which points to the presence of distinct groups in society that can be distinguished by their personal values. Drawing on the environmental literature, Stern and Dietz (1994) identified 3 value orientations, which, they argued, explained why some people were more – or less – inclined to pro-environmental behaviour. People with a “Social Altruistic” orientation are characterised as being mostly concerned with protecting human welfare – be that at the local, ethnic, national or global scale. Those with “Biospheric” values are most concerned with the effects of human activities upon the natural environment. Finally, an “Egoistic” value orientation predisposes someone to be primarily concerned with effects upon themselves.

In common with Schwartz (1992) (see section 4.4.4.2.1. below), they also theorised that values varied within individuals and across societies and cultures; that it was possible for an individual to have more than one value orientation, depending upon the issue under examination; and, that, ultimately, *“values may also act as filters for information, influencing beliefs by leading people to accept information selectively when it seems consonant with their values”* (Stern and Dietz 1994, p. 68.)

Their empirical work found that values did, indeed, affect behavioural intention both directly and indirectly, by shaping beliefs. They found strong positive inter-correlations between the three value orientations – supporting the idea that individuals can possess and exhibit all value types – but that this is likely to be context-specific, i.e. confronted with a specific example of human-rights abuses, an Egoist may become an Altruist. Value preferences were also found to vary demographically, with gender (femaleness) being strongly associated with possessing a Biospheric value orientation.

Axelrod (1994) developed an alternative, but similar in its emphasis, values taxonomy drawing from the general literature on human behaviour. He hypothesised that an individual’s dominant value type would most influence their behaviour, such that those with an “Economic” preference would be motivated by perceptions of personal costs; “Social” individuals would be concerned most about the effects of their choices upon their sense of belongingness within society; and “Universals” would be most concerned with how their choices affected the wider world. His student-based investigation bore this out empirically. Interestingly, however, nearly half of the study population were excluded for not having a clearly dominant value preference – which is, again, suggestive of Stern et al’s (1994) findings that preferences can vary in different contexts; and Schwartz’s work on individual values that finds that the degree of differentiation between value types may be a reflection of the relative comfort of the individual and their place

in their society, i.e. in a relatively young, homogenous student population, one might expect less overall differences between value scores than if the study participants had comprised older participants with more life experience and varying degrees of income and feelings of personal security, for example.

Merchant (1992) has also described three, so-called, grounds for environmental ethics. More recently, Lee et al (2011) identified four value clusters in both the US and China that aligned with the higher-order value types described by Schwartz (1992). Table 20 summarises the different value clusters that have been identified to date.

Table 20 Comparable Value Orientations / Clusters in Society Described in the Literature

Stern & Dietz (1994)	Merchant (1992)	Axelrod (1994)	Schwartz (1992)	Lee et al (2011)
Altruistic Biospheric Egoistic	Homocentric Ecocentric Egocentric	Social Universal Economic	Self-transcendence Self-transcendence Self-enhancement Conservation Openness to change	Self-transcendence Self-enhancement In group Openness to change

The motivations driving ethical consumption are therefore varied and variable within individuals - such that what matters most to one person may be very different to what motivates another; and that these motivations can change in their importance depending upon the product being consumed. Most behavioural change campaigns, however, including eco-labels, tend to focus upon just one ethical issue, such that there is raised potential for failing to appeal to consumers' most strongly felt motivations (and therefore being unsuccessful). Creating a simple, consumer-focused, solution to this will not be easy. As Crane observes, an "ethical product" will have addressed "*..a whole set of issues and considerations that might impinge upon the purchase decision, such as product safety, environmental impacts, consumer privacy, employee welfare, discrimination, fair pricing, community action, charitable donations etc. The list is extensive and almost certainly growing...*"(Crane 2001, p. 362). In conceptualising these issues, he draws on the work of Smith (1990), to suggest four levels at which products can be differentiated on ethical grounds : at the level of the product itself – does the product (and the production chain) cause harm or generate good?; at the marketing level – is the way in which the product is marketed misleading to the consumer?; at the corporate level – does the company have a positive or negative ethical reputation; and at the national level – are there benefits or dis-benefits from supporting trade with particular nations? (Crane 2001).

Consumers will almost certainly have opinion on all of these issues, but can they realistically be expected to possess the relevant information to distinguish between products on these grounds? Understanding UK consumers' perspectives on (and understanding of) these issues could help determine which factors matter most for consumers when it comes to choosing sustainable seafood. Yet, as the following section demonstrates, little research has actively explored these factors with respect to seafood, with most studies instead focusing upon the effectiveness, or otherwise, of schemes designed to encourage sustainable consumption, particularly labelling (absent, it would appear, any real analysis of whether or not these issues really matter to consumers).

4.2.4 Sustainable Seafood Consumption

Jacquet et al (2010a) define sustainable seafood as "*ecologically responsible fishing that minimises bycatch and brings acceptable levels of ecosystem and environmental impacts*" p.45. The previous chapters have indicated that the UK's consumption patterns are clearly not sustainable in this context because demand is growing for fewer species and the species UK consumers prefer are beset by environmental and social problems including overfishing – both legally and illegally; bycatch and environmental degradation through fishing methods such as trawling and dredging; air and water pollution; the spread of disease from farmed to wild stocks; and human rights abuses (Tyedmers, Watson and Pauly 2005; FAO 2012; Agnew et al. 2009; Read, Drinker and Northridge 2006; Watling and Norse 1998; Naylor et al. 2000).

Unsurprisingly, approaches to encouraging the sustainable consumption of seafood fall within the dominant, mainstream paradigm of encouraging individual consumers to switch to alternative, more sustainable, fish products, rather than reducing their consumption patterns, with web-based guides and eco-labels proliferating to guide their choices (Jacquet et al. 2010a). Faced with this information, consumers appear, on the surface, to be making more sustainable choices - the latest ethical consumer report produced by the Co-operative Group, for example, highlights that spending on MSC-labelled fish grew by 16% between 2009 and 2010, the same period that saw a 10% decrease in sales of organic foods and overall increases in spend on ethical food and drink of just 5% (The Cooperative Group 2011). In 2012, the Marine Stewardship Council reported a doubling of sales of its branded products across all UK supermarket chains (MSC 2013) and a continued increase in the number of MSC-certified products available for sale in UK supermarkets; and, research commissioned by Sainsbury's found that, amongst eco-label-aware consumers, the MSC logo - above all others, was most likely to influence a consumer to buy a product (Future Foundation 2012).

Critics of the MSC label, however, argue that the certification standards are too narrow - excluding consideration of the fishery's carbon emissions, fishing method and standards of welfare for its workers, for example, (Jacquet et al. 2010a; Ponte 2012) issues that have been found to have varying degrees of importance for ethical consumers in the UK and elsewhere (Carrigan and Attalla 2001; Browne et al. 2000; Zander and Hamm 2010).

UK consumers have, however, been shown to have higher levels of concern for the ethical impacts of their shopping decisions than many comparable nations (Schrader and Thogersen 2011); and research into attitudes towards sustainable fish would support the notion that they care about where the food on their plate is coming from, with 64% reporting that they would buy sustainable seafood if it was better labelled as such (Mintel 2010) and 39% being willing to pay a little more for an eco-labelled product (AMR 2012). Research conducted by Asda found that over 50% of their customers cared strongly about sustainable fish (Asda 2012a); and, half of all consumers questioned by the MSC felt that urgent action was needed to tackle falling global fish stocks. The emergence of new, seafood food taboos has also been reported, with 29% of consumers claiming to refuse eating Cod caught by drift net, and 7% refusing to eat Cod under any circumstance (Future Foundation 2012).

Despite the apparently high levels of concern, however, UK consumer demand for seafood is continuing to grow; and consumer preferences for the Top Five species (Cod, Haddock, Salmon, Tuna and Prawns) remain relatively unchanged, despite some prominent campaigns attempting to alert consumers to the high environmental and social costs associated with their production (Dorey 2005).

One possible clue for the continued growth in sales is provided by the statements consumers made about the role of retail in ensuring sustainable supplies of seafood. The MSC's research, for example, found that 37% of consumers strongly agreed that retailers must make sure that they sell sustainably-caught seafood (AMR 2012); and, research commissioned by Sainsbury's found consumers stating that they wanted retail to make life simpler for them by providing comprehensive, clear, product information, with 28% of customers stated that their buying decisions were influenced by store information (Future Foundation 2012). It is possible that consumers are placing too much emphasis upon retail responsibility over their own, with the growing availability of eco-labelled products acting as an incentive to buy more, rather than less, product. (In the context of long-standing research which finds that consumer decision-making is predominantly influenced by their ideas about the values of suppliers (Crane 2001), it would be interesting to determine if seafood sales are affected by consumer confidence in the ethical sourcing policies of their seafood suppliers).

Equally, the complexity of the seafood production process introduces a myriad of ethical dilemmas that labels and consumer guides are unable to adequately address. Grigorakis identified 45 distinct ethical issues relating to aquaculture, for example, that it would be impossible for even the most ethically-minded consumer to be knowledgeable about and mindful of in their buying behaviours (Grigorakis 2010). Iles therefore suggests that NGO attention be redirected away from consumer-based campaigns and towards a better understanding of, and communication of, the currently very complex and not particularly transparent, seafood supply chain (Iles 2004; Iles 2007). By providing differentiation on the grounds of the production process, he proposes that consumers will be in a better position to make informed choices. Following this line of thought, it would be interesting to explore consumer reaction to the recent emergence of labelling emphasising that products have been line-caught versus netted. In a UK context, this particularly applies to fresh and tinned Tuna but is also notable for species such as Cod, Haddock and Mackerel.

Thus consumers' (misplaced) confidence in their retailers sustainable sourcing; and consumer confusion in the face of varying ethical issues may explain continued sales in the face of messages aimed at shifting seafood consumption to alternative species. It is just as possible, however, that when it comes to the act of actually buying seafood to eat, UK consumers just don't really care enough about the sustainability of their seafood to change their behaviours (despite their claims to the contrary). This phenomenon of a mismatch between what consumers say and what they actually do, in terms of sales, is not confined to seafood consumption. Rather, it is a prominent theme within the overall Literature on sustainable consumption and it is the subject of the following section of this Chapter.

4.3 THE ATTITUDE/INTENTION-BEHAVIOUR GAP

Despite years of theorising and empirical testing, no single behavioural model has ever been found that can accurately (i.e. 100%) predict a consumer's behaviour from their stated intentions. The Theory of Planned Behaviour (TPB) comes closest at 71% (Ajzen 1991), although meta-analyses of the psychosocial constructs of behaviour have produced wildly different results with respect to the efficacy of this model (Guillaumie, Godin and Vezina-Im 2010; Armitage and Conner 2001; Bamberg and Möser 2007).

Importantly, the vast majority of these studies make use of reported measures of behaviour. When *actual* measures, in the form of sales are considered, there is often an even greater discrepancy between what people say and what they actually do – the so-called attitude/intention-behaviour gap.

Thus, Halkier (1999) reported that while 30% of the Danish population professed to always or often buy organic, the market share was only 4-5%. Bird and Hughes (1997) found that 23% of UK consumers declared themselves as being ethical in that they would always or as far as possible try and buy ethical products yet market share for Café Direct (the leading fair trade coffee brand) was only 2.8%. Hartmann (1996) found that while 55% of Americans agreed that the use of antibiotics was an unnecessary feature of meat production, only 17% reported actually buying drug-free meat; and O'Rourke (2004) highlighted that the US market share for ethically-produced goods was only 2-5%, despite an apparent high demand amongst the population, 86% of whom stated that they would be willing to pay \$1 more for a product not made in a sweatshop, for example.

Such discrepancies have prompted some authors to question whether “ethical consumers” even exist (Carrigan and Attalla 2001). The majority, however, have focussed, instead, upon seeking to understand what lies behind the gap – the findings from which may be grouped under the headings of “methodological” or “behavioural complexity.”

4.3.1 Methodological explanations for the intention-behaviour gap

The most fundamental argument for the intention-behaviour gap is that, quite simply, asked one thing by a researcher, respondents will give the answer that they believe the researcher wants to hear – responder bias. Investigating this, Auger and Devinney (2007) compared respondents' answers to survey instruments with those given in choice experiments and found that the answers did indeed differ, necessitating, they argue, the use of a greater range of methodological tools to understand consumer behaviour.

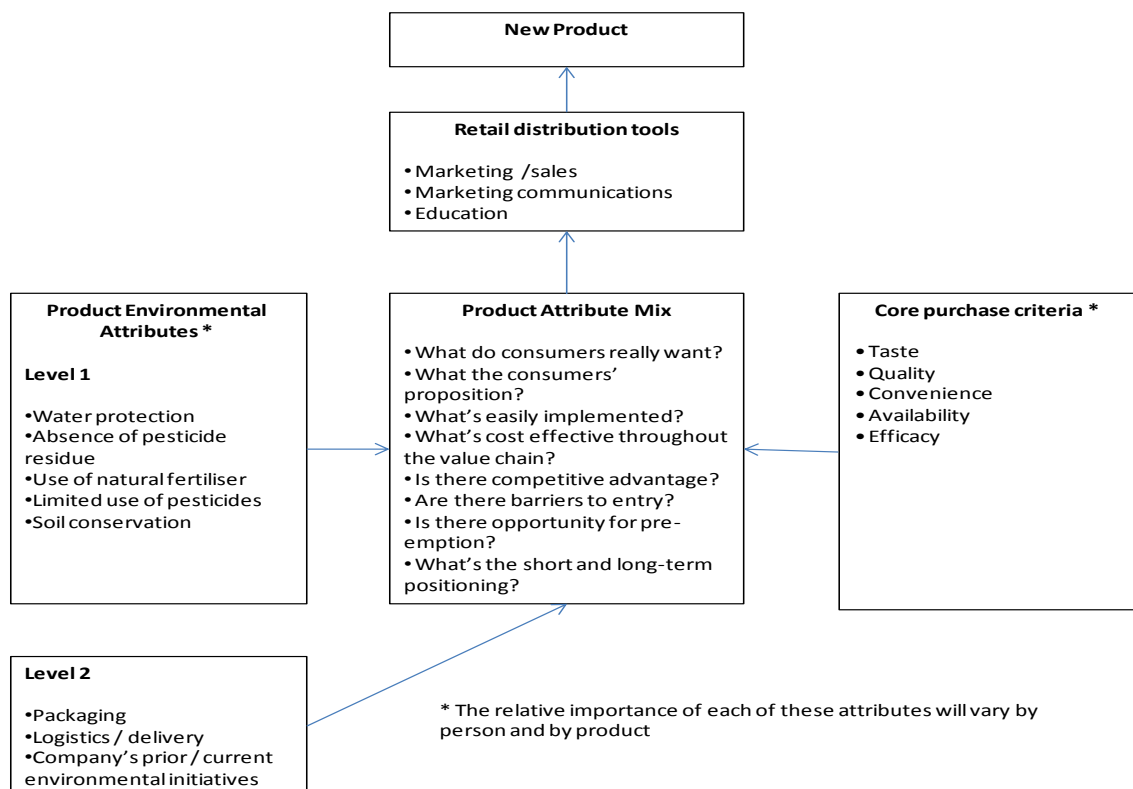
Zander and Hamm (2010) demonstrated the use of one such tool when they compared consumers' responses to various dairy products, using different research instruments – direct enquiry and an Information Display Matrix (IDM). IDM is a computer-based, two dimensional matrix that provides respondents with rows of information about the product itself (its attributes) and (in the columns) information on product alternatives. Hidden additional information is behind each choice so that the person has the ability to access more information as they open up various fields. It is therefore possible to track a person's decision-making process and not just the end point. Using IDM, the product attributes of greatest importance to shoppers were animal welfare, regional production and price – across the entire study population. Comparing IDM with direct enquiry produced a different result – with, this time, price ranking lowest in terms of priority – an unlikely outcome and one, the authors conclude, that confirms the presence of social desirability bias within surveys.

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IDM, as a methodological tool, has some critiques (the primary one being that it doesn't replicate real-world decision-making) but – in the context of the rise in on-line shopping and the ready access to additional sources of information that this implies, this may no longer be a fair criticism. Additionally, it might provide a measure of what shoppers would actually do *if only* they had access to all the right information. It would therefore be interesting to try and apply the IDM method – or another method that replicates it (i.e. in providing a lot of information), at point of sale to determine if actual product purchases could be influenced in this way.

A further methodological basis for the intention-behaviour gap may be the effect of retail decision-making upon the consumer, in that the consumer can only buy what the retailer decides it will stock. Hartman (1996) developed a model that demonstrated how personal, product and “industry” factors all combine to determine which products hit the shelves and, therefore, which products people buy (Figure 12). It is an interesting model that combines individual shopper behaviour with attributes of the wider production chain; and, it's a powerful one – highlighting, as it does, the relative insignificance of the individual consumer in the overall product development and supply chain.

Fig. 12 Hartman's “New World Products Methodology”(1996)



4.3.2 Behavioural complexity as the reason for the attitude– behaviour gap

In considering non-methodological bases for the gap, Carrigan and Attalla (2001) found that confidence in their subjects' ability to effect change, was a key factor influencing their behaviour. While this may be a reflection of the demographics of the study population (who were all undergraduate students) it nevertheless resonates with other studies that have demonstrated the importance of consumer confidence in ethical decision-making (Vermeir and Verbeke 2008). Social norms were also implicated in their decision-making in that, although the group had awareness of certain ethical concerns (i.e. Gap and low wages; McDonalds and rainforest clearances), issues of image and branding seemed more influential. Further, while they found little real evidence for behavioural change in response to awareness of ethical concerns amongst the group, the authors did uncover the previously-mentioned hierarchy of ethics – with the participants showing more concern for animal, rather than human welfare. This and other studies (McDonald et al. 2009; Wheale and Hinton 2007), suggest an additional possible methodological basis of the intention-behaviour gap, namely the lack of specificity in discussing ethical issues. Arguably, if discussions had focused explicitly on those ethical issues held most dear to the study participants, different responses may have been generated – suggesting, again, the need for research that better understands the full range of ethical dimensions underpinning consumer decision-making, and how these interact with one another.

In investigating the concept of “flexibility”, Szmigin, Carrigan and McEachern (2009) drew on the psychological theory of dissonance and concluded that, in their study, the trade-offs being made weren't large enough to create the level of dissonance needed to create discomfort and thereby prompt the individuals to make different choices. In this instance, then, even though individuals professed a belief in one thing, it was too easy for them to make a conflicting choice, and so they did – exposing the intention – behaviour gap.

Verbeke et al (2007) looked at the attitudes and behaviours of Belgian women with respect to the consumption of seafood and found high levels of concern amongst the study population for sustainability and ethical issues related to capture and production methods. Age, perceived effectiveness, personal interest in the capture area and in the source of origin of the fish and expected benefit from having more decision-making information, were all positively correlated with higher measures of concern. Those who declared refusing wild –caught fish had higher scores on the sustainability and ethical measures as well as for perceived effectiveness and benefit from information than those who did eat wild-caught fish. They also ate less, overall, than any other group. Nevertheless, the authors contend that an attitude-behaviour gap existed

because despite giving sustainability issues high scores respondents still ate a lot of fish and the correlation between sustainability concern and wild fish consumption was only weak (but *was* significant). The conclusion here was that lack of knowledge and awareness may explain the gap (as scores here were low) and that – as consumer interest was high, there should be opportunity to tap into this interest via well-designed information, in order to result in changed behaviour.

As a phenomenon, then, the attitude/intention-behaviour gap has been well documented in a range of consumer decision-making scenarios, including for seafood. It would appear that some consumers are genuinely concerned about sustainability and intend to make sustainable choices but that a combination of factors can influence their behaviours in favour of less sustainable choices. As Shaw & Newholm argue, *“The range of ethical issues with which ethical consumers identify mean that they do indeed hold these concerns as survey research would suggest. However, the need to prioritise concerns when faced with conflict between issues and limited ethical product alternatives, means that concern for an ethical issue may result in the selection of a number of behavioural approaches”* (Shaw and Newholm 2002, p. 182.)

The following section reviews the Literature on consumer behaviour in order to determine what factors drive behaviour in general and which of these may be influential when it comes to consumers acting upon their ethical intentions.

4.4 OVERVIEW OF THE LITERATURE ON CONSUMER BEHAVIOUR

4.4.1 Introduction

The literature on consumer behaviour is both large and diverse, having been considered through a variety of different lenses – from the micro to the macro; and, from the different philosophical and theoretical perspectives embraced by the academic disciplines of sociology, economics, psychology, anthropology and political science (Macinnis and Folkes 2010; Joy and Li 2012). These studies have yielded compelling evidence for the effect of both internal and external factors shaping behaviour. Internal forces may be grouped as either biological or cognitive. External forces can be tangible – such as the cost of goods and services, for example; or intangible – such as societal and personal norms, or values. The focus upon either intrinsic *or* extrinsic variables indicates differing ontological positions about the locus of control for behavioural change, i.e. whether that be within the self or through wider society. While some attempts have been made to develop models that combine both dimensions, they are rare (Jackson 2005b). Consequently, over 100 different theories (with accompanying models) have been proposed that seek to explore, predict and explain why people make the choices that they do (McGregor 2007).

The majority of the Literature falls firmly within the Positivist paradigm (Burrell and Morgan 1979) and the discipline of Marketing. As a result, it is largely quantitative and reductionist in nature and tends to be concerned with the development of theoretical models that can predict and explain specific behaviours based upon the interplay of a small number of, largely psycho-social and demographic variables such as attitudes and beliefs, gender, age and education (Ajzen 1991; Verbeke et al. 2007; Ajzen 2001; Carrington, Neville and Whitwell 2010). While these models have been useful in providing the framework for detailed empirical studies, they must, by necessity, not be too complex, meaning that there is always a trade-off between comprehensiveness (wanting to try and capture as many variables as possible) and simplicity (Peattie 2010). As a result, at best, only 71% of *intention to behave* has been explained by the field's most popular model (Ajzen's Theory of Planned Behaviour) and when *actual* behaviours are examined the model's predictive power reduces significantly to between 23% and 27% (Guillaumie, Godin and Vezina-Im 2010; Armitage and Conner 2001; Bamberg and Möser 2007). Causal effects have also been difficult to ascertain, for while all of the models tend to find correlations between the various variables under study, the possibility that other (un-investigated) factors are also contributing to the behaviours under examination, can never entirely be ruled out (Jackson 2005b). Perhaps most damaging of all about this reductionist approach, is the fact that, while the focus upon specific behaviours may contribute towards small, incremental improvements in sustainability, very little research has been conducted that challenges the dominant consumption paradigm (Peattie 2010).

Qualitative studies do exist and in some cases they have also been highly influential. Carrigan and Attalla (2001), for example, used focus groups to substantiate earlier claims that a gap was evident between the claims by consumers that they sought to make ethical choices and actual purchase behaviour – work that has subsequently underpinned the branch of the Literature that explores why this intention-behaviour gap exists - although, again, these typically use quantitative methods (Szmigin, Carrigan and McEachern 2009; Wheale and Hinton 2007; Auger and Devinney 2007; Carrington, Neville and Whitwell 2010; Chatzidakis, Hibbert and Smith 2007; Bakker and Dagevos 2011). Shaw's research into the importance of values in the process of consumption is also of note (Shaw et al. 2005). Such studies remain in the minority, however (Andorfer and Liebe 2012). Consequently, while the (predominantly positivist) Literature may be expansive concerning the "*what, when, where and who*" of consumer behaviour, less attention has been given to really understanding *why* certain choices are made - a perceived weakness in an academic arena that could be using participatory techniques to engage more directly and fully with consumers in order to develop practical solutions to reduce unsustainable consumption practices (Peattie 2010; Prothero et al. 2011). To quote Bagozzi, "*To rely on*

expected utility schemes is to focus on prediction without understanding and to forgo any hope of explaining how and why consumers consume the way they do and provide policy guidelines on how to better adapt to, or change, consumer behaviour” (Bagozzi 2000, p. 106).

A further limitation of the literature is its frequent reliance upon student populations (which may be un-representative of wider society) and the use of participant recollections of previous behaviours instead of using real-time observations of actual behaviour (Verbeke et al. 2007; Stolle, Hooghe and Micheletti 2005; Kaiser, Hübner and Bogner 2005; Andorfer and Liebe 2012; Jaffry et al. 2004; Kemmerly and Macfarlane 2009). This was certainly the case in the study by Carrigan and Attalla (2001) which was based upon the recalled experiences of just ten UK undergraduates. The problem with relying upon recall is that it is known that study participants often make errors in their responses, either unconsciously or consciously, such that as much as 56% of what is said may be inaccurate (Bernard 2011). Further, and as discussed above, when *actual* measures, in the form of sales, are considered there is often a significant discrepancy between what people report they do and what the sales data confirms that they actually do - the attitude/intention – behaviour gap (Halkier 1999; Bird and Hughes 1997; O'Rourke 2004).

These distinctions of the generic consumer behaviour are also reflected to a large extent in the Seafood consumer behaviour literature. The largest body of work concerns itself with identifying the unique characteristics of seafood consumers, their motivations for consuming seafood in the first place, the implications of these factors upon demand and exploring the intention-behaviour gap. Typically, these studies focus upon comparing consumers with non-consumers and are frequently driven from a health-perspective of wanting to encourage greater consumption of oily fish (Clonan et al. 2012; Leek, Maddock and Foxall 2000; Vanhonacker, Pieniak and Verbeke 2010; Pieniak, Verbeke and Scholderer 2010), although, latterly, the rise in awareness of the negative environmental effects of commercial fishing has also prompted research into the effects of certification schemes and awareness campaigns upon buyer behaviours (Jacquet and Pauly 2007; Jacquet et al. 2010a; Wessels, Johnston and Donath 1999). Crucially in neither Literature has a single theory emerged that accurately predicts and explains behaviour; nor is it likely that this will ever be achieved. The field is just too diverse (some have argued that it is almost unmanageable (Gabriel & Lang 1995) and “*human motivations are so multi-faceted that about the only thing one can say with absolute certainty is that it is virtually impossible to derive causal models....(for behavioural change)*” (Jackson 2005b, p. 6).

Accepting that behavioural models only provide part of the answer, the following section describes some of the more important theoretical frameworks that have been linked with understanding *pro-environmental* behaviour (although only a few of the theories have actually

been developed in this specific context, the majority being general theories that have then been applied in the environmental and ethical consumption domain). In this way it is possible to identify some recurring variables that appear particularly influential in shaping consumer behavioural intentions.

4.4.2 Theories and Models of Pro-Environmental Consumer Behaviour

Jackson (2005b) identified twenty-two psycho-social theories that he felt had the potential to assist in the development of policies for behavioural change in the context of encouraging sustainable consumption. (Many more models are acknowledged but, in the context of the “unmanageability” of the field, it is argued that to address them all would be nigh-on impossible). In contrast (and going beyond Jackson’s more limited remit of examining models with a pro-environmental application), Darnton (2008) identified over forty different theories and models related to behavioural change at the level of both the individual and society. Table 21 attempts to combine Jackson and Darnton’s analysis into a single listing.

Table 21 Theories of Behaviour and Behavioural Change (Jackson 2005b; Darnton 2008)

Attitude–Behaviour-Context (ABC) Theory	Bounded Rationality	Cognitive Dissonance Theory
Control Theory	Cultural Theory	Elaboration Likelihood Model
Expectancy–value theory	Expected Utility Theory	(theory of) Fear Appeals
Field Theory	Focus Theory of Normative Conduct	Health Belief Model
Interpersonal behaviour	Kolmuss & Agyeman’s Model of pro-Environmental Behaviour	Motivation-Ability-Opportunity model
Means End Chain Theory	MODE Model	Needs Opportunities Abilities Model
Norm Activation Theory	Normative Social Behaviour	Norm Neutralisation Theory
Persuasion Theory	Protection Motivation Theory	Prototype / Willingness Model
Rational Choice Theory	Risk as Feelings Model	Self-Categorisation Theory
Self-Discrepancy Theory	Self-Efficacy Theory	Self-Perception Theory
Social Identify Theory	Social Cognitive Theory of Self-Regulation	Spaagaren & Van Vliet’s Theory of Consumption as Social Practices
Structuration Theory	Subjective Expected Utility	Symbolic Interactionism
Symbolic Self-Completion Theory	Theory of Planned Behaviour	Theory of Reasoned Action
Values-Beliefs-Norms Theory		

These theories (and the resulting models) can be grouped under one of two headings that reflect the academic debate about where responsibility rightly (and most effectively) lies for sustainable consumption. Thus, a number of theories ascribe responsibility to the individual and assume that changing internal dimensions (such as attitudes and beliefs) are key to achieving behavioural change. Schwartz’s Norm Activation Theory and Stern’s Values-Beliefs-Norms

Theory fall firmly within this paradigm (Stern 2000; Schwartz 1977). These could be considered to be “Theories of the Heart”.

Others take the view that consumer behaviour is largely dictated by external forces such as social norms, product availability and economic constraints. Rational-choice approaches embodied in the Theory of Reasoned Action and Theory of Planned Behaviour are good examples (Ajzen and Fishbein 1980; Ajzen 1991). As such, these might be distinguished as being “Theories of the Head”. A few theories exist that seek to bring together both dimensions. Triandis’ Theory of Interpersonal Behaviour and Olander & Thøgersen’s Motivation-Ability-Opportunity theory are notable in their different approach (Thøgersen 1995; Triandis 1977). Such integrated models of behaviour are, however, still rare in the academic literature (Jackson 2005b).

The following sections describe the features of some of the more prominent “head” “heart” and “integrated” theories and models. Consideration is given to those variables that seem to have the most impact with respect to encouraging pro-environmental behaviours.

4.4.3 Models of the Head : The Rational Consumer

The most prominent behavioural theory (in Western Society at least) is the theory and model of Rational Choice. Derived from classical economics, the basic assumption behind the model is that human beings will behave in ways that maximise the benefits to themselves, *as individuals*. This theory underpins most current attempts to influence behavioural change and is evident in appeals to consumers to cut energy consumption in order to save on their fuel bills, for example.

Criticisms of this rational choice model (which have been extensively debated (Scott 2000)) centre upon the three basic tenets of the approach – namely, that choice is always rational; that choice is solely a function of the individual; and, that choices must always be self-serving.

In a heavily time pressured or information-short context, consumers may not be able to make a rational choice, instead they will make the choice that is the most satisfactory one for them, given the constraints they are operating under at that particular point in time; and they will often make use of previously learned behaviours, or “rules of thumb” in doing so. This default into previous patterns of behaviour is a particularly important aspect of habitual and routine behaviours – such as food shopping, wherein a consumer will often buy the same things week in, week out, without much conscious thought as to their behaviours. Even when the consumer has been given some theoretically influential information (such as a seafood awareness guide, for example), the previous section provided evidence that consumers are still failing to significantly change their buying habits and are instead continuing to buy old favourites. Almost certainly, incomplete and / or conflicting information about what seafood to buy and where to

buy it renders the concept of rational choice in sustainable seafood consumption as moot. Rational choice also implies the absence of any kind of emotional response in the consumer – something that Marketers have long-since recognised as being influential in consumer choices (Jackson 2005b; Laros and Steenkamp 2005).

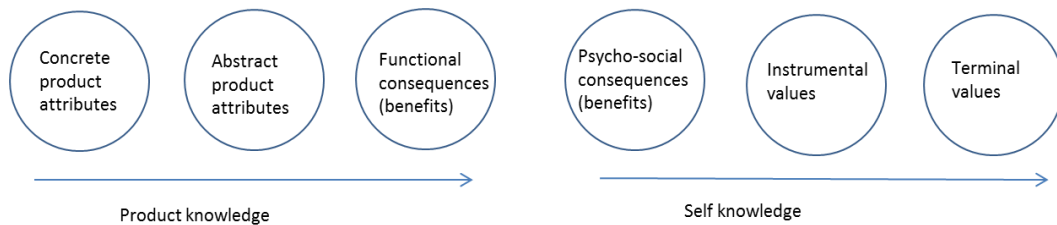
The second major critique of rational choice concerns its contention that the individual is wholly responsible for their decision, absent any kind of outside influence. Social psychologists from Mead to Burr have long since argued that individual identity is a manifestation of social interaction - effectively, that the self is a social construct. The notion that an individual can make a decision in isolation of societal pressures (when they themselves are a construct of that wider society) becomes difficult to defend. Further, evidence from the psychology of group behaviours points to individuals adopting different roles within groups based upon the context and the challenges they are faced with, i.e. that they will adapt their choices based upon the group dynamics and the need to maintain order within the group. This behaviour can clearly be observed in family shopping behaviours, with one partner (typically a woman) subverting their own wishes in order to fulfil the desires of their family (Verbeke and Vackier 2005). Yet, as one can also possess multiple identities at any point in time (wife, mother, sister, friend etc.) behaviours can vary strongly depending upon whichever is salient at that time (Stets and Biga 2003).

The final critique concerns the assumption that individuals always act in their own self-interests – absent of moral considerations. If humans were solely self-interested, why do acts of altruism, such as donating to charity and helping others, persist across all cultures? Evolutionary psychologists posit a genetic basis for these phenomena that is inherently selfish; and others argue that all altruistic actions are ultimately self-serving (because they may make a person feel good about themselves) and, hence, rational. There are enough examples in the literature of morally-influenced behaviours, however, to support the notion that moral obligations can override rational thought.

In response, adjusted models of (rational choice) behaviour have been developed that seek to address these criticisms. Means-End Chain Theory (Figure 13), for example, addresses the emotional and moral arguments by asserting that consumer choices are affected by the relationships between a consumers perception of the unique characteristics (or attributes) of a product, the consequences arising from these attributes and the effect these consequences have upon fulfilment of the consumers' own personal values (Gutman 1982). Importantly, the theory holds that, over time, the consumer will learn to distinguish between different products based upon their attributes (what they like and what they don't like) and the context in which

they find themselves in (would they use this product now or not?) This suggests that consumers can both develop habitual behaviours *and* retain the capacity for making choices that differ from their habitual ones if they are given sufficient contextual change (such as may be offered by eating in a restaurant versus cooking a meal at home, for example.)

Fig. 13 Means-End Chain Theory



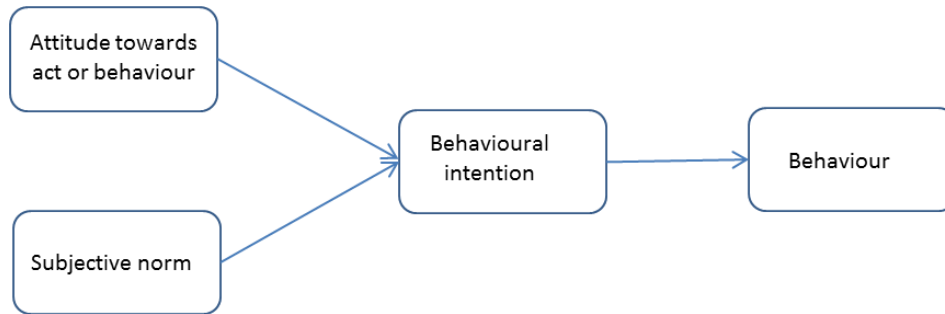
Empirically, means end chain theory has been applied using laddering – an interview technique that encourages the respondent to identify increasingly abstract connections between product attributes, the outcomes associated with these and their connection to their personal values. De Ferran & Grunert (2007) used means-end chain analysis to explore the motivations of French fair trade coffee consumers. Their two-stage process firstly elicited – from a small sample of consumers, a list of attributes, consequences and values, which were then presented to a larger group of consumers to rank in terms of their importance in their buying decisions. This revealed that consumer motives and values were complex and even potentially contradictory – with consumers both valuing the pleasure afforded by consuming a luxury good, as well as wanting to protect the environment and to enhance human welfare by supporting an alternative (non-mainstream) economy.

The means-end chain model of behaviour and the associated methodological tools of laddering and soft laddering, the latter giving respondents a greater degree of freedom in expressing attributes and consequences in their own words (Grunert and Grunert 1995), is therefore a useful way of identifying the myriad potential motivators underlying individual consumer choices. However, it is resource-intensive, which limits its application at a large scale (and consequently lowers the external validity of data generated (De Ferran and Grunert 2007)); and, as with all interviewing techniques, care needs to be given to ensuring that the possibilities for responder bias are reduced (Grunert and Grunert 1995). As an exploratory tool it has merit but noticeably absent from the means-end-chain theory is any consideration of barriers (external or internal) that might prevent an individual from acting on their motivations. Consequently its usefulness as a predictive model is extremely limited (Grunert et al. 1995)

The Theory of Reasoned Action (TRA) (Figure 14) (Ajzen and Fishbein 1980) asserts that individual beliefs determine attitude formation which, in turn, shape intention to act. Here,

however, consideration is also given to the wider effects of society upon the individual, for *subjective norm* (beliefs about what others think) is incorporated as an additional antecedent of intention. The interaction of attitude and subjective norm moderates the strength of the intention to act and, hence, it is theorised, the likelihood that the behaviour will take place.

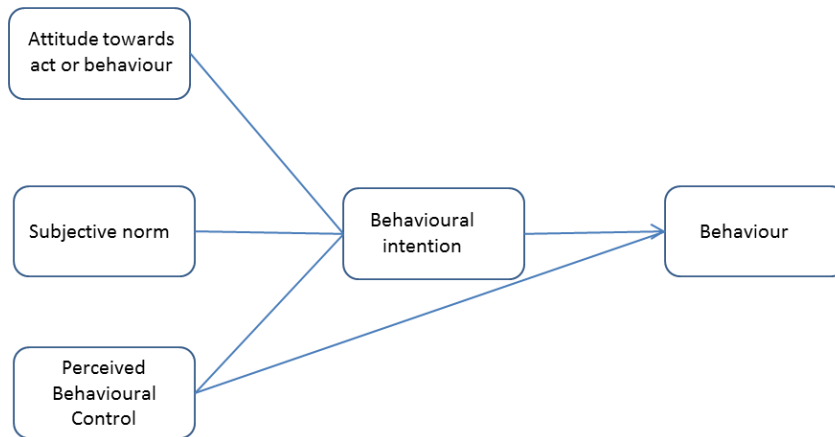
Fig. 14 Theory of Reasoned Action



While empirical studies utilising the TRA have found strong positive correlations between attitudes, subjective norms and intentions, few have measured actual behaviours, instead assuming (incorrectly, as the literature on the intention-behaviour gap demonstrates) that intentions will always be followed through upon (see below) (Jackson 2005b).

Recognising that consumers do not always have complete volitional control over their actions, the Theory of Planned Behaviour (TPB) (Figure 15) extends the TRA by incorporating a third variable – Perceived Behavioural Control (PBC). PBC is defined as “*the perceived ease or difficulty of performing the behaviour*” (Ajzen 1988, p. 132) and is assumed to reflect *actual* control (and therefore be a measure of rationality in decision-making.) In addition to moderating intention, Ajzen also theorised that PBC could directly predict behaviours, particularly when it was high and the individual is therefore confident in their abilities to achieve the desired outcome. In situations where the individual has little or no information with which to make their decision, however, PBC is theorised to have little overall effect upon either intention or subsequent behaviours (Ajzen 1988).

Fig. 15 Theory of Planned Behaviour



The Theory of Planned Behaviour is arguably the most well developed and researched behavioural model, having been applied in over 150 different contexts, including public health programmes for smoking cessation and breast cancer self-exams; blood donation; gift-buying and internet use (Jackson 2005b). It has also been found to be one of the better ones at predicting intentions to act. Ajzen, for example, reported that 71% of variations in intention could be explained by the interplay of individual attitudes, perceived behavioural control (PBC) and social norms, although subsequent meta-analysis have produced conflicting results. Thus Armitage and Conner (2001) reviewed 185 studies and found that the TPB explained only 39% of the variation in intention. In reviewing studies pertaining to environmental behaviour, Bamberg and Möser (2007) found that the TPB predicted intention in 52% of cases; and, Guillaumie, Godin and Vezina-Im (2010) found that intention to consume fruit and vegetables could only be predicted by the TPB in 34% of instances. When actual behaviours were then reported, however, the model was even less robust, varying between 23% (Guillaumie, Godin and Vezina-Im 2010) and 27% (Bamberg & Moser 2007; Armitage and Conner 2011) in predictive power.

In an attempt to increase the predictive power of the TPB, attempts have been made to incorporate additional variables, to varying effect (Ajzen 2001).

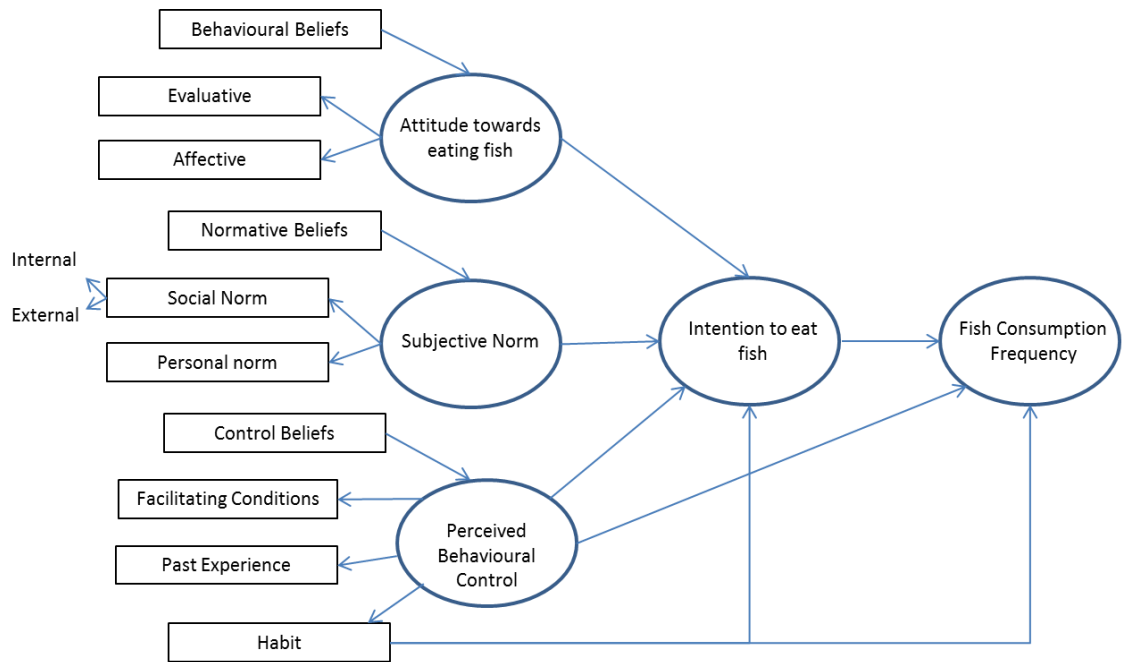
In the context of pro-environmental behaviour, Harland, Staats and Wilke (1999) argued for the inclusion of personal norms, for example, noting in doing so that environmentally-friendly behaviours “do not constitute a homogenous set” (Harland, Staats and Wilke 1999, p. 2510) such that individuals may possess different norms depending upon the issue under examination. They illustrated this by exploring the effect of norms within the TPB upon four different behaviours (use of unbleached paper; low energy light bulbs; use of alternative transport; and turning off taps). Addition of personal norm to the TPB increased the prediction of intention by between 1% and 10%. It should be noted that the study group were, however, already involved

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in pro-environmental activities and might be concluded to have their norms already “activated” – for those who were less aware, the author worries over how personal norms can be activated in isolation of prevailing social norms.

Verbeke and Vackier (2005) also incorporated personal norms in addition to situational factors, previous experience and habit, into their conceptual framework which they subsequently applied to attitudes towards fish consumption amongst Belgium women (Figure 16).

Fig. 16 Verbeke & Vackier’s Conceptual Framework (2005)



They found that positive attitudes towards fish related most strongly to taste and healthiness with price and bones being negatively associated. 53.6% of the variation in attitudes could be explained by eight factors (implying that there were other things unexplored that shaped attitudes). Subjective norm was shaped by the effects of government, food industry and advertising; by personal norms and by the effects of partner, family and friends (internal social norms). Together these explained 69.5% of the variation. Mean scores on the moral and internal social norms were much higher than for the external social norms – suggesting that, with respect to seafood consumption at least, these consumers rated the opinions and needs of those closest to them more highly than the views of the Government, for example. PBC was also strongly correlated with an increased intention to eat fish – but interestingly issues of habit also came into effect here. PBC was associated with familiarity in preparing fish and in having the fish available, yet the same consumers were relatively unadventurous in their choices – suggesting that, while they may be confident consumers, they were stuck in their ways. When habit was built into the model as a separate regressor, the effects of PBC and Attitude became

negligible and only social norm and habit became significant predictors of intention. Further, habit remained a significant predictor when actual behaviours were examined (in the form of self-reported frequency of purchases.)

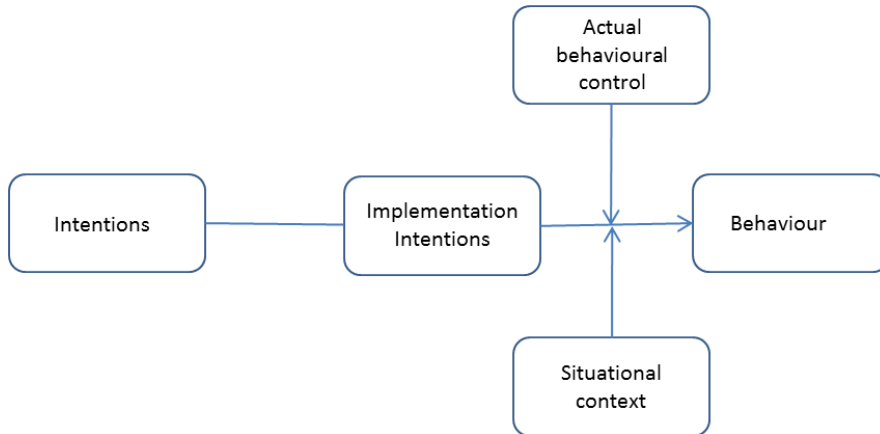
Shaw, Shiu and Clarke (2000) argued for the inclusion of two additional components into the TPB for their exploration of the behaviour of ethical consumers in the UK. The first, “ethical obligations”, was included on the assertion that ethical issues can add such complexity to a decision-making process that they warrant examination as a separate construct in their own right. The second element, “self-identity” was intended to reflect the importance that self-declared ethical consumers place upon their purchase decisions. In their survey of readers of the UK’s Ethical Consumer magazine, they found unsurprisingly high scores on statements of concern and obligation but an interesting variation emerged between attitudes towards Fair Trade goods and feelings of obligation to actually buy those goods. 79% said they held a positive attitude toward Fair Trade yet 96% felt an obligation to buy. The authors argue that higher ethical obligations overrode negative attitudes – such that “obligations” deserved to be treated as a separate construct.

Further, the insertion, individually and in combination, of ethical obligation and self-identity into the TPB also significantly reduced the effect of social norms on intention. This is perhaps indicative of ethical consumers believing that they occupy the moral high ground and that the opinions of the social majority have little weight.

Responding to Ajzen’s original assertion that contextual challenges can affect PBC (and hence the predictive ability of the model), Carrington, Neville and Whitwell (2010) developed a conceptual model combining the elements of *actual* behavioural control, implementation intentions and situational context, to predict behaviour (Figure 17). By focusing upon actual control, the authors acknowledge that perception and reality can be quite different. In the context of consumer behaviour, for example, a shopper who sets out with an idea of purchasing product X and then finds it not available will have their own control diminished. The notion of implementation intentions draws upon evidence that individuals with well thought out plans for achieving a particular action are more likely to succeed than those without them. Again, then, in the context of a shopping trip, this suggests that those who have thought through alternative scenarios if their product of choice were not available are more likely to retain a stronger sense of control and, ultimately, to make a choice closer to their original intention. Further, if this pattern of planning / behaviour is repeated they have a higher chance of moving to a state of “automacity”, wherein the behaviour becomes natural and unconscious. Importantly, this

suggests that long-standing habits may be changed by encouraging consumers to plan their activities in this way.

Fig. 17 Carrington et al's "Intention-behaviour mediation and moderation model of the ethically-minded consumer" (Carrington, Neville and Whitwell 2010)



Despite its prominence in the behavioural literature, the TPB is not without its detractors. Two main concerns arise. The first is that the majority of studies fail to look at the relationship between intention and actual behaviour, focusing instead upon solely examining the strength of the relationships between intention, PBC and attitudes. In this way, it is argued that the efficacy of the overall model is being over-inflated (Guillaumi et al 2010; Bamberg & Moser 2007; Armitage and Conner 2011).

In all fairness, Ajzen was very clear that three conditions must be met for the correct application of the Theory. The first states that the measurement of Intention and Behavioural Control must correspond to the *behaviour that is being assessed*. As most studies of consumer behaviour only use stated *intention to buy* and not actual purchase data, it could be argued that this condition is not met, in that no real behaviour is being observed. The measurement of intention and control are being undertaken in a vacuum. Consequently, studies that use the TPB with respect to purchase intention, alone, could be argued as being flawed. Secondly, intention and PBC must remain unchanged in the interval between their measurement and the measurement of behaviour, reflective of the theoretical assertion that behaviours can change with changes in PBC (and, indeed, with any of the other constructs in the model). As above, most consumer behaviour studies use intention only with no actual behavioural data included. Further, those studies that do use real purchase data often use retrospective data (i.e. they will ask a person to recall previous behaviours, e.g. Kaiser, Hübner and Bogner (2005)). The third and final condition requires that PBC is accurately measured – otherwise predicting behaviour from someone who over or under-estimates their level of control will be compromised.

An additional flaw with the TPB, and all other rational choice models, is the assumption that the consumer is making a conscious, deliberate, cognitive effort – absent automatic decision-making that can be so frequently observed in habitual buying behaviours.

The psychological literature concludes that mental processes are either controlled or automatic, wherein controlled responses require an awareness and assimilation of information that takes conscious cognitive effort, in contrast to automatic responses that are unconscious and require little or no effort. Controlled responses can become automatic ones over time (such as learning to swim or to ride a bike). Automatic responses can also become (more) controlled (and hence requiring of more cognitive effort) depending upon the importance of the decision. Thus, a food shopper buying for an everyday meal for their family may automatically buy the same products but would choose to spend more time and effort over their buying decisions for a special occasion meal. The degree of cognitive effort involved in making these decisions, however, can be critical to a person's likelihood to make a habitual or different purchase. In the context of sustainable seafood consumption, which may be characterised as suffering from a plethora of competing messages (from both a health and ethical standpoint) it can be theorised that this effort may be so great that consumers routinely fall back upon their habitual behaviours rather than attempting to try new products. The challenge for policy makers, then (and academics researching sustainable consumption) must be to develop approaches that can bring these unconscious behaviours into the light for debate and challenge (Wilk 2002).

Finally, and rather fundamentally, the TPB is challenged for its assumption that emotions and moral beliefs can somehow be transmuted into logical units that can subsequently be measured (in the form of attitudes towards particular objects, for example.) Other theoretical models therefore exist that give a much more central role to values, morals and personal emotions such as regret. Such "models of the heart" are discussed in the following section.

4.4.4 The Non-Rational Consumer : Models of the Heart

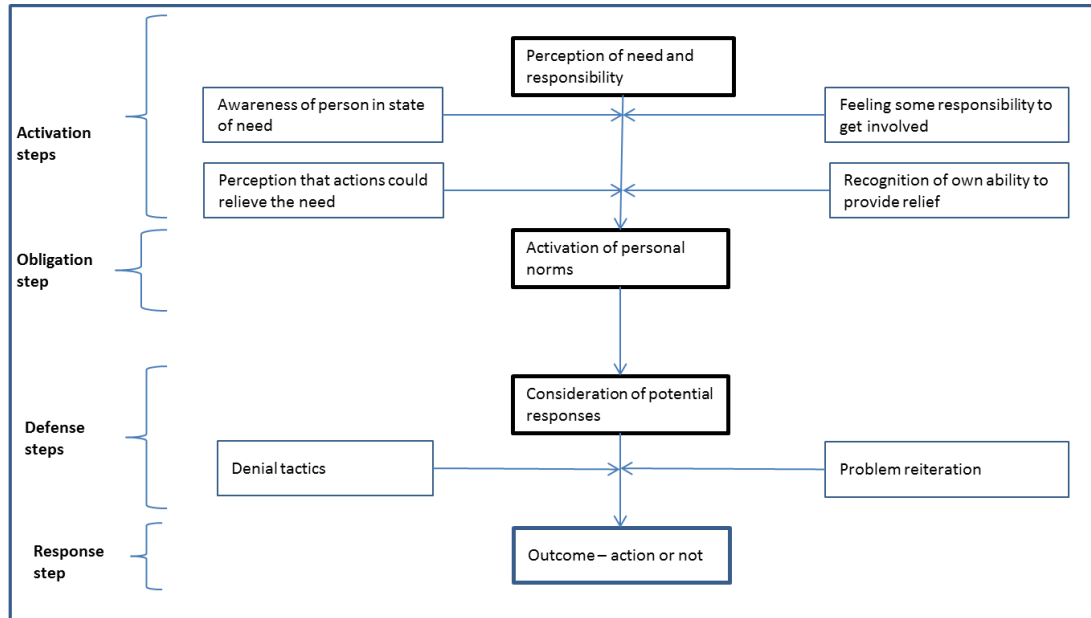
Departing from models that assume all decision-making can be rationalised and driven solely by individual self-interest, are Normative and Moral conduct models that place a much greater emphasis upon the importance of personal norms, morals and values.

4.4.4.1 The Power of Personal Norms

One of the earliest and most widely-regarded (and empirically tested) norms-based model is Schwartz's Norm-Activated Model of pro-social behaviour (NAM), which was developed with the express intention of explaining why, in the context of rational choice, altruism exists (Schwartz 1977) (Figure 18). Schwartz theorised that there were three factors at play: emotional

/ empathetic arousal; and the activation of social *and* self-expectations. His resulting theoretical model therefore has three components : activation, obligation and defence. Here, the interplay of personal norms; awareness of potential negative consequences; and feelings of responsibility combine to create intentions and, ultimately, it is theorised, pro-social behaviours.

Fig. 18 Schwartz’s Norm Activation Theory (1977)



In the NAM, altruistic behaviour is influenced by the intensity of the moral (personal) obligation that an individual feels towards helping another. These feelings of moral obligation are generated by the activation of an individual’s norms and values. Such feelings of moral obligation may, however, be neutralised prior to action by defences against the relevance or appropriateness of the obligation. The model also theorises that the process of norm activation is affected by ones’ awareness of the consequences (AC) of ones’ behaviour on others, if action is taken. Thus, if AC is high, it is theorised that an individual is more likely to attend to the values and norms pertinent to these consequences and therefore to take action. In theory then, if someone is made aware that through their actions they can make a benefit to someone else, they should be motivated to take action – supporting behavioural change campaigns that rely on information provision. Although Schwartz also theorised that if the external pressure creating the sense of obligation is too great, it can have a boomerang effect resulting in those who were willing to engage in the altruistic behaviour, changing their minds and acting in the opposite direction. Further, at times, the moral benefits may be outweighed by non-moral costs (social, psychological, material etc.) such that a person begins to neutralise (of which Schwartz offered two forms – denial of need; and denial of responsibility) and / or to reframe and redefine the problem such that a different set of moral obligations are activated and the behavioural outcome is altered. In this way the NAM therefore also provides a theoretical framework

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through which to explore the intention-behaviour gap, something that has subsequently been built upon by extending the concept of “neutralisation” to the following *five* kinds of excuses for why people may say one thing but then do another (Chatzidakis, Hibbert and Smith 2007). Here, the authors looked at Fair Trade but the statements below have been adapted to seafood-buying behaviour to fit the theme of this research:

- Denial of responsibility – I have no choice about what to buy, I just buy whatever is on the shelves...
- Denial of injury – what’s the problem...there’s plenty more fish in the sea!
- Denial of victim – the fishermen should have tried harder to market their goods...
- Condemning the condemners - if the fishermen hadn’t fished all the fish out of the sea there wouldn’t be a problem...
- Appeal to high loyalties - I just do what makes my family happy...

There is a shortage of empirical studies exploring neutralisation effects and qualitative research that explores when (and if) neutralisation occurs in decision-making processes, and the relative weight this has on the eventual decision, would be valuable. This is particularly the case in the context of seafood buying behaviour which depends upon consumers taking account of multiple and, in many cases, competing messages which, it may therefore be supposed, has the effect of turning off even the more interested and engaged consumers. Research by Evans (2011) offers some insight into how seafood consumers might react. Here, Conventions Theory was applied to semi-structured interview data with ethical consumers. This theory posits that (when faced with conflicting emotions, such as might be faced by price-conscious but ethical consumers), consumers will “*ground their stances in a legitimate worth*” pp 110, of which six orders of worth are identified (market; civic; domestic; opinion; inspired; industrial). Conventions Theory might be compared to Neutralisation Theory in that both provide a framework within which a (conflicted) consumer can justify their decisions. Thus, Evans found that when the consumers’ intentions to consume unsustainably (because of price concerns) were pointed out, they fell back on “*more concrete concerns and agendas*” (2011, p. 111) – of which being a parent was key, a finding he suggests support’s Miller’s contention that consumption is a critical component in demonstrating affection for one’s family (Evans 2011). It might therefore be expected that seafood consumers will also make purchasing decisions at odds with their stated ethical beliefs, provided they can offer a reasonable explanation for their actions; and, further, that we might expect these justifications to vary depending upon the consumers’ personal circumstances (e.g. single, married with young children, married with children living away from home etc.)

Meta-analyses have concluded that there is a strong positive correlation between feelings of moral obligation to behave in a pro-environmental way and actual behaviour ($r = .33$ to $r = .39$) (Bamberg and Möser 2007). The extent to which personal norms mediate or moderate intentions, however, is still the subject of some debate – with empirical studies supporting both interpretations (Harland, Staats and Wilke 2007; Nilsson, von Borgstede and Biel 2004; De Groot and Steg 2009). There is strong support, however, for the sequential, step-wise model of the NAM, such that problem awareness leads to the activation of personal norms and an increased intention to act (Steg and de Groot 2010).

Thøgersen and Ölander (2002) for example, found that intention to consume organic wine increased with the strength of personal norms and, further, that as the behaviour was *repeated*, past behaviour became as significant a predictor of behaviour as attitude. He concludes that *“personal norms have a stronger influence on behaviour when they have previously been followed”* pp 891. From a behavioural change perspective, this suggests that interventions that specifically encourage consumers to try sustainable alternatives must ensure that these alternatives represent a positive experience, otherwise the chances of the behaviour being repeated are slim.

The authors continued their investigations with a panel study with Danish consumers to determine their attitudes and behaviours with respect to organic food. Personal norms were found to be the single biggest predictor of behaviour, for their effect upon attitudes - 80% of the buying behaviour was explained by attitudinal variables, 90% of which were influenced by personal norms. They also found evidence for the virtuous circle effect wherein attitudes both guide and, in turn, are a consequence of behaviour, such that behaviours become reinforced the more they are undertaken and the more the person holds a positive attitude towards them. The authors argue that (pro-environmental) behavioural change firstly requires the activation of Self-Transcendent values (see section 4.4.4.2 below) which become converted into personal norms and subsequently lead to the development of new attitudes, beliefs and behaviours. They suggest that the key to activating the values is improved information provision for consumers, alongside better signposting within the retail environment (through labelling, displays etc) (Thøgersen and Ölander 2006). If this is the case, a starting point for influencing consumer behaviour might be to engage consumers in a specific discussion about their buying behaviours and the impact of those behaviours upon the environment.

Schultz (1999) used individual and group feedback to activate both personal and descriptive norms, that is, *“making norms salient in a particular setting”*, (1999, p. 26). Through the planned

feedback, which enabled the study participants to know how well they were doing individually but also how they compared with others, greater recycling behaviours were encouraged.

Cialdini, Reno and Kallgren (1990) also theorised that norms needed to be activated in order for them to have any effect upon behaviour; that an individual needs to be consciously focused upon that norm; and that different kinds of norms can have a differential effect once activated. Thus, in the context of social norms, they argued for the separate analysis of Injunctive versus Descriptive norms, with the former referring to the behaviours society *expects*, as opposed to the behaviours that are actually practiced or observed. Their resulting Focus Theory of Normative Conduct was empirically tested through an experiment on littering (Cialdini, Kallgren and Reno 1991). They found that in a littered environment, people were more likely to litter themselves (i.e. to be conscious of and enact the descriptive norm) as opposed to exposure to a swept environment (which had the effect of reducing littering behaviour.) The authors argue that appeal to injunctive norms has the power to transcend specific situations because it depends upon what wider society thinks (rather than just the local context) but conclude that all three norms (injunctive, descriptive and personal) have an important role to play – the interplay between them, however, they felt, needed more research, as did the use of methods to stimulate the norms differentially. This is especially pertinent in scenarios where the norms contradict one another. Taking the example of UK seafood behaviours, and the consumption of Cod in fish and chip shops, how might an aware and concerned consumer decide when faced with three conflicting norms, i.e. the descriptive norm (everyone is choosing Cod) versus the injunctive (the media and NGOs say that eating Cod is a bad thing) versus the personal norm (I don't personally want to contribute towards overfishing)? Additionally, given that much food shopping is highly habitualised (and therefore requires little conscious effort), it is possible that norms will not be activated, such that other more rational predictors of behaviour, such as those encapsulated in the TPB, become more salient (Bamberg and Schmidt (2003) found this with respect to car use amongst student populations, for example).

White et al (2009) also discuss the effects of both social (descriptive and injunctive) and personal norms on different personality types. They theorise that those who are under “attitudinal control” (AC) will be less affected by the activation of norms than those who are under “normative control” (NC). Further, the extent to which a person is governed by AC or NC is connected to their sense of identity (Individual versus collective self) and the extent to which they are aware of and respond to external cues. Thus, someone living in an information rich, collective, society might be supposed to be more highly influenced by the activation of norms, as opposed to someone in an individualistic culture. The vast majority of research into pro-

environmental behaviour has been conducted in western cultures that are characterised as being highly individualistic, but there is evidence from studies within these cultures that support this concept. Nilsson, von Borgstede and Biel (2004) for example, looked at European public sector workers (who might be supposed as having a more collectivist outlook than those working in private business) and concluded that the higher importance given to the so-called Self-Transcendence Values (see below) by this group in turn generated stronger feelings of obligation to act which directly lead to an increased likelihood to adopt environmentally friendly policies.

4.4.4.2 The Role of Values

The role of individual and cultural values in shaping norms, attitudes and behaviours has received considerable attention. At its simplest, Ecological Value Theory predicts that a person's likelihood to engage in pro-environmental behaviours is as a direct result of their holding positive pro – environmental value orientations; and that distinct value orientations can be found within any given society (as discussed in 4.2.3 above.)

Dietz, Fitzgerald and Shwom (2005) define values as “..*concepts or beliefs about desirable end states or behaviours that transcend specific situations, guide selection or evaluation of behaviour and events and are ordered by relative importance*” (2005, pp. 345-6). Schwartz (1999) identified six identifying features of values – which, taken, together, sum up current thinking regarding their function and operation. Thus, values:

- Are beliefs linked to effects;
- Are desirable goals that motivate action;
- Transcend specific actions and situations;
- Serve as standards / criteria;
- Are ordered by importance, relative to one another; and,
- The relative importance of *multiple* values guides action (author's italics.)

Theoretically, then, values *should* strongly influence behaviour and a sizeable body of research has emerged that attempts to demonstrate this. Typically, values research falls into one of two fields of enquiry - those that consider the effect of individual values upon individual decision-making; and those that look at aggregated / cultural values and their subsequent effect upon behaviour (Schwartz 2011).

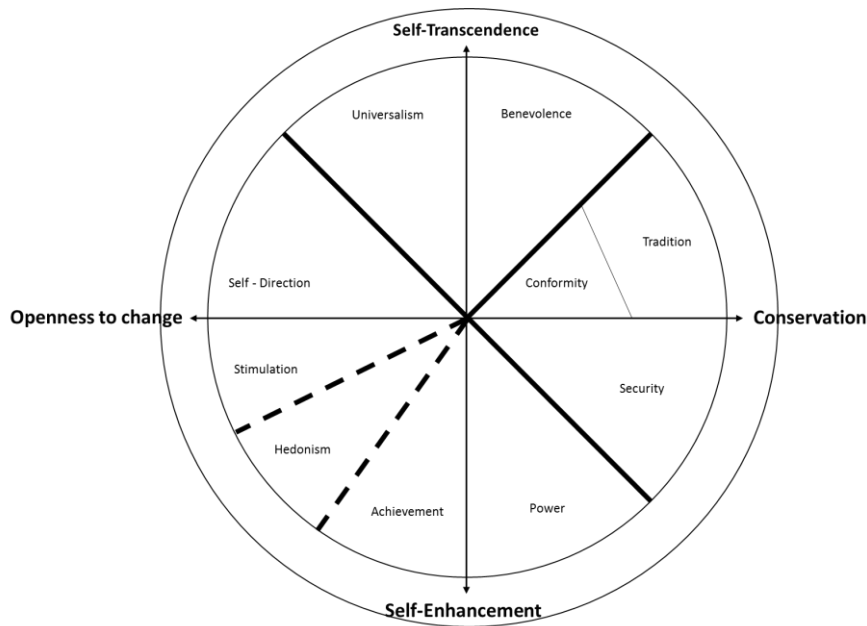
4.4.4.2 Individual values

Individual values have been measured in an attempt to quantify which values might predict certain kinds of behaviour, such as pro-environmentalism. While numerous measurement

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approaches have been developed, the Rokeach/Schwartz approach is arguably the most dominant (Schwartz built on the Rokeach value system.) The Schwartz Values Survey (SVS) comprises 56 statements that are scored on a 9-point scale. Empirically, the statements tend to group into 10 value types: power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity and security. They can also be clustered along a two-dimensional axis representing degrees of self-interest / altruism; and, openness to change / traditionalism. The resulting four, higher order value types are “Self-Transcendence”, “Conservation”, “Self-enhancement” and “Openness to change” (Figure 19).

Fig. 19 Schwartz’s Universal Values (from Schwartz 1992)



The ten values and their defining motivational goals are described in Table 22.

Table 22 Ten Universal Human Values (after Schwartz and Rubel-Lifschitz 2009)

Value	Motivational goal
Power	Social status and prestige; control or dominance over people and resources
Achievement	Personal success through demonstrating competence according to social standards
Hedonism	Pleasure, sensuous gratification
Stimulation	Excitement, novelty and challenge in life
Self-direction	Independent thought and action – choosing, creating, exploring
Universalism	Understanding, appreciation, tolerance and protection for the welfare of all people and nature
Benevolence	Preservation and enhancement of the welfare of people with whom one is close
Tradition	Respect, commitment and acceptance of traditional and religious customs and ideas
Conformity	Restraint of actions, inclinations and impulses likely to upset or harm others or violate social norms
Security	Safety, harmony and stability of society, relationships and self.

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Schwartz and Bardi (2001) examined three data sets from 47 countries and found very high (almost 100%) consensus on the order of importance of the 10 value types across all of the samples, with Benevolence consistently appearing as the most important value. Self-direction and Universalism tied for 2nd place; and Power came at the bottom of the importance list.

Schwartz argues that this consistent finding is as a result of three universal behavioural drivers:

- The need to maintain positive and cooperative relationships in order to maintain family / other group dynamics;
- Need for some sense of achievement / productivity / task completion; and,
- Desire / need for personal gratification.

Highly similar value profiles have now been found in over 70 multi-national and multi-cultural sample groupings, indicative of the relative stability of the values across humankind (Maio et al. 2009). Consistent patterns of association have also been found between demographics (age / life course; gender; income; and education) and values preferences (Schwartz 1999). Gender, in particular, has been found to be an important predictor of the importance placed upon the opposing values of Universalism / Benevolence and Power / Achievement (Schwartz and Rubel-Lifschitz 2009), with women consistently scoring higher on Benevolence and Universalism than men. In turn, men rate Power, Achievement and Stimulation more highly. Interestingly, as societal structures for gender equality have strengthened, these differences between the sexes become greater – evidence, Schwartz argues, for people feeling freer to prioritise their preferred values.

In a UK context, with (arguably) a fairly equal society, we might therefore reasonably expect supermarket shoppers (who are mainly female) to be more inclined towards messages appealing to Benevolence and Universalism than their counterparts in other – less equal – societies. Equally, we might expect the men to favour Power and Achievement messages more highly. Importantly, this suggests the need for a careful tailoring of consumer messaging that reflects these variations in the strength and importance of values; as well as the recognition that values are just one of a myriad of potential motivators of consumer decision-making, rendering tailored messaging an ever more complex (but necessary) challenge for behavioural change (Pelletier and Sharp 2008).

The relationship between age / life stage and values has also been well researched. Martin and Prince (2009) examined the ethical values of Generation X's (those born between 1965 and 1978) and found, as predicted, that Gen Xs have high(er) ethical consumer values than other generations but that this also varied within the group, with those born in 1968 having the lowest

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concern. Danis, Liu and Vacek (2011) also found evidence for generational value differences – even when controlling for age. Exploring the influencing tactics used by individuals in the Czech republic, the authors were able to find distinct and significant differences between the approaches used by those who had worked under the Communist regime (which was characterised by bureaucracy, corruption etc.) and those who had only been working since the collapse of Communist rule.

Both studies are interesting in the context of population-level consumer behaviour, as they imply that values will vary considerably within populations on the basis of the range of birth years within the sample; and, that the external environment – the political, social and cultural events that happen as the individual grows up, have a profound effect upon individual Values. This has two important consequences. Firstly, it raises questions about the reliability and generalizability of (much of the) consumer behaviour literature that makes use of student populations as its study group. If values can vary so significantly by age and life-stage, the responses given by (typically) 18-21 years olds cannot be representative of the rest of society. When educational achievement and gender are also factored in, a student group may reflect grossly different values to the majority of people in society.

Secondly, it suggests that dominant cultural values – as expressed through the *modus operandi* of large institutions (such as national supermarket chains), will also have a powerful effect upon individual behaviours. Arguably, then, a marketing approach that consciously blends both individual *and* cultural values might be more successful than approaches that appeal to cultural or individual values alone.

Despite these generic similarities, the scores to the values statements vary considerably by nationality – at both an aggregate level and across common cultural groupings (Schwartz compared the values of Teachers, as a specific professional group, and found that their value scores varied significantly by nationality) (Table 23).

Table 23 National Differences in Value Scores (from Schwartz 2007)

	UK	USA	GER	FRA	DEN	Highest
Power	2.18	2.20	2.06	2.10	2.06	2.29 Japan
Achievement	4.09	4.34	3.68	3.59	3.62	4.34 USA
Universalism	4.37	3.91	4.68	4.62	4.42	4.89 Italy
Benevolence	4.83	4.72	4.95	4.75	4.96	5.05 Belgium
Self-direction	4.58	4.39	4.83	4.77	4.79	5.02 Sweden
Conformity	3.77	4.16	3.23	3.42	3.33	4.23 Italy

(NB scores are means derived from a six-point Likert scale, where 1 = low agreement and 6 = very high agreement. The higher the score, the greater the individual believes that value to be important to them.)

This suggests the importance of having comparator data available for any empirical values research – something that the European Social Survey, which incorporates Schwartz’s Portrait Values Questionnaire, now makes possible. For ethnically diverse societies that embrace many different cultural and religious beliefs and practices, such as the UK, it also suggests that sub-national variations in values may well exist (Schwartz 2011).

4.4.4.2.1 The Relationships Between Individual Values

A critical component of Schwartz’s theory is that the values all have a relationship to one another, *“values are related through the motives they serve”* (Maio et al. 2009, p. 701). Maio et al (2009) explored the effect of changes in opposing and orthogonal values in the Schwartz values framework. Their findings - that changes in one value type will lead to changes in others - in the same direction for related values, and in opposing direction for non-related values; and, that it is possible to stimulate changes in the expression of values and their effect upon behaviour - by priming / conscious manipulation, are crucial to understanding how appeal to values – carefully done – may have the potential to influence behaviours.

Despite this connectivity between the value types, however, most research has focused upon the interplay of only a handful, or a subset of values, such as those linked to altruism. The effect of different value combinations in different contexts upon behaviours has been largely unexplored. This would appear to be a significant gap – if we believe that values do, indeed, fundamentally shape behaviour. Could the relationship between (unexplored) value combinations be the reason for the attitude-behaviour gap; and, exactly which values are consumers trading off, for example, when they make decisions to purchase one good over another?

In their 2005 study, Shaw et al (2005) explored (self-declared) ethical consumer values. Using Schwartz’s values framework – in the form of a questionnaire and in-depth interviews with a small sample of the questionnaire respondents (n=8), the authors identified important, unimportant and some new values that drove consumer behaviour. Important value types were: Self-direction, Stimulation, Achievement, Hedonism, Security, Benevolence, Universalism and Conformity. Unimportant values – for this group - were power and tradition. The findings are of more meaning at finer scale, when examining the meanings of individual values – Table 24.

Table 24 Importance of Universal Values to UK Ethical Consumers (Shaw et al 2005)

Value Type	Meaning	Value importance %
Self-direction	<i>Freedom of action and thought</i>	85
	Self-respect (belief in ones' own worth)	61
	Independent (self-reliant, self-sufficient)	64
	Choosing own goals (selecting own purposes)	52
	Curious (interested in everything, exploring)	64
Stimulation	<i>A varied life (filled with novelty, challenge and change)</i>	73
Achievement	Capable (competent, effective, efficient)	67
	Influential (having an impact on people and events)	58
	Intelligent (logical, thinking)	58
Hedonism	Enjoying life (enjoying food, sex, leisure etc)	67
Security	<i>Family security(safety for loved ones)</i>	79
	<i>Healthy (not being sick physically or mentally)</i>	91
	Clean (neat, tidy)	64
Benevolence	True friendship (close, supportive friends)	55
	Loyal (faithful to my friends, group)	52
	<i>Honest (genuine, sincere)</i>	70
	<i>Helpful (working for the welfare of others)</i>	88
	<i>Responsible (dependable, reliable)</i>	85
Universalism	<i>Equality (equal opportunity for all)</i>	97
	<i>A world at peace (free of war and conflict)</i>	70
	Unity with nature (fitting into nature)	64
	<i>Social justice (correcting injustice, caring for the weak)</i>	85
	<i>Broad minded (tolerant of different ideas and beliefs)</i>	76
	<i>Protecting the environment preserving nature)</i>	91
Conformity	<i>Politeness (courtesy, good manners)</i>	76
	Self-discipline (self-restraint, resistance to temptation)	52
	Honouring of parents and elders (showing respect)	52
Power	Capitalism (control and dominance of multinationals)	No value (identified in focus groups)
	Consumer power (the impact of my purchase decisions)	No value (identified in focus groups)
Universalism	Animal welfare (protection for the welfare of all animals)	No value (identified in focus groups)

When the stronger scores are highlighted an interesting profile of the values of an ethical shopper emerges. They value choice, variety and the opportunity to make healthy choices for their loved ones. They have a strong interest in helping others, particularly those less fortunate than themselves, and in preserving the natural environment; and, they value certain behaviours – honesty, reliability and politeness, in others and in the organisations with which they interact. The identification of three additional value dimensions – animal welfare, capitalism and consumer power, adds further richness to the profile, indicating that ethical shoppers are also concerned about the personal impact of their shopping behaviour as it affects global power structures and the way in which food is produced.

The breadth of the values identified here is worthy of note for, while several studies have highlighted the particular importance of Universalism and Benevolence / Altruism in ethical

decision-making (Vermeir and Verbeke 2008; de Boer, Hoogland and Boersema 2007), Shaw's work finds that other, non-environmental, values are also important to these consumers – specifically aspects of Self-Direction, Stimulation and Security. Research into consumers' choices for cloth versus paper nappies has also revealed how differing value strengths and differing value combinations combine to shape intentions and then behaviours (Follows and Jobber 2000). Thus, those with higher self-enhancement values were more likely to perceive greater individual consequences in using cloth versus paper nappies than environmental consequences, compared to those with higher self-transcendent values; and that individual consequences could over-rule consideration of the environmental consequences of their actions.

From a policy perspective, this presents two implications. Firstly, it suggests that the individual consequences of an environmentally-friendly behaviour must be minimised if that behaviour is to stand a chance of succeeding amongst those who do not have a particularly high self-transcendent value orientation (in the context of seafood consumption, any alternative has to taste good, look good and be affordable). Secondly, that interventions aimed at influencing consumer behaviour should directly and purposefully connect to the important values held by individuals while also recognising that these values may not always be obvious. Schultz and Zelezny (2003) also called for a reframing of messages to appeal to dominant values – even when these (as in the case of the USA) run contrary to environmental values. While in the long term value change may be the only real solution to environmental degradation, they argue that it is unethical to impose their (pro-environmental) values on others; instead, they suggest that tailoring the message to appeal to the dominant values within the population is *“pragmatic and, in our opinion, more likely to succeed”* p. 134.

4.4.4.3 Cultural Values

In addition to theories of individual values, an extensive literature has also developed around the existence and effect of cultural values upon behaviours (Schwartz 1999; Hofstede 1983). Schwartz uses Williams' (1970) definition of cultural values as *“implicitly or explicitly shared abstract ideas about what is good, right and desirable in a society”* (Schwartz 1999, p. 25).

Using comparative data derived from surveys of Teachers and Students from 49 different countries, Schwartz (1999) was able to demonstrate empirically the existence of 7 cultural values as well as distinct regional groupings on the basis of the importance given to the 7 value types – a factor, Schwartz argues, of the common socio-historical development contexts of these areas. Thus, English-speaking nations, such as the USA and UK differed from the rest of the world in the relative importance given to Mastery and Affective Autonomy. Eastern European nations

tended towards Harmony as their dominant cultural value. Egalitarianism and Intellectual Autonomy characterises Western Europe; Hierarchy is dominant in the Far East; and Latin American nations appeared, overall, to have a more balanced set of cultural values, with no one seeming to dominate. (There is also some evidence for a specific Islamic culture that transcends geography.) Evidence for regional cultural variations has been supported by the work of other researchers (Ronen and Shenkar 1985; Hofstede and McCrae 2004).

The idea that Values can vary between nations resonates with research into the effect of cultural variations upon individual behaviour. Shaw, Clarke and Shaw (1998), for example, contend that culture must be recognised for its effect upon shaping consumption patterns and individual choices. While “culture” has been defined in many different ways, if Linton’s definition (below) is taken as the most widely accepted, it suggests that culture will strongly influence individual behaviours. Culture is...*“A configuration of learned behaviours and results of behaviour whose component parts are shared and transmitted by the members of a particular society”* (Shaw, Clarke and Shaw 1998 quoting Linton (1945), p. 165).

The effect of culture upon personal choices and performance was explored empirically by Iyengar and Lepper (1999) in their experiment with Anglo and Asian-American school children. When given free rein to choose any kind of word puzzle, Anglo-American children performed significantly better than their Asian-American peers. When the choice was removed from the children, however, the reverse was true. The authors conclude that this is a manifestation of deeply-rooted cultural differences between (individualistic) western and (collectivist) eastern societies. This has interesting implications for behavioural change work – suggesting, as it does, different tactics for different ethnic audiences. Thus, in a western society, one may expect success from behavioural change strategies that emphasise the creation of alternative choices and of opportunities to express individualism; and, in Eastern societies for top-down, authoritative messages to have more effect. It may also be hypothesised that in a multicultural setting like the UK, both of these conditions will exist amongst the general population but that their relative dominance will vary geographically. Again, this suggests the need for development of contextually-specific behavioural change interventions that best reflect the prevailing (sub)-culture(s).

4.4.4.4 The Effect of Values on Behaviour

Dietz, Fitzgerald and Shwom (2005) articulate the notion that values help to steer decision-making, particularly when faced with dilemmas or novel choices *“...the concept of values is often deployed to explain how we make new choices”* p. 339. With respect to consumer behaviour, then, we might reasonably expect a strong correlation between membership of a particular

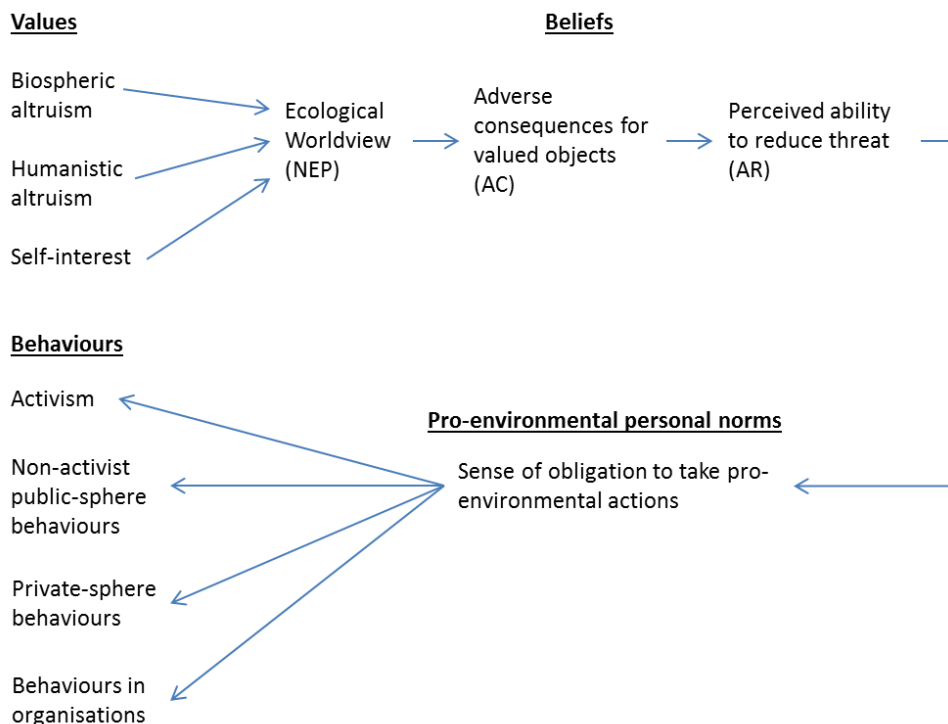
values cluster and their ethical consumer status because, theoretically, a person's values ultimately drive their consumption behaviours. For example, someone who falls within the biospheric orientation, should also group in the ethical consumer category (the Values-Beliefs-Norms theory, described below, is derived from this logic).

The academic literature here is divided into studies exploring the effects of individual and cultural values upon individual and societal behaviour. There is little research into the effects of the two combined and, as Schwartz (2011) makes clear, different research questions will require the application of one or either but not typically both together. However, he also notes that, if used correctly, the theories of individual and cultural values, studied together, can give a deeper and richer understanding of behaviour.

4.4.4.4.1 Individual Values

The effect of personal values has also been explored in some depth. The Values-Beliefs-Norms (VBN) theory of environmental behaviour, for example, links Ecological Value Theory with the Norm Activation Model to posit that individual values are the driving force behind all behaviours (and specifically the willingness or not to accept the New Ecological Paradigm) (Stern 2000). Although they may not influence behaviours directly, the authors argue that it is their effect upon the formation of beliefs, feelings of power and control, attitude formation and (most significantly, from a predictive basis) personal norms that in turn determine action. Figure 20 represents this diagrammatically – the arrows are intentionally directional.

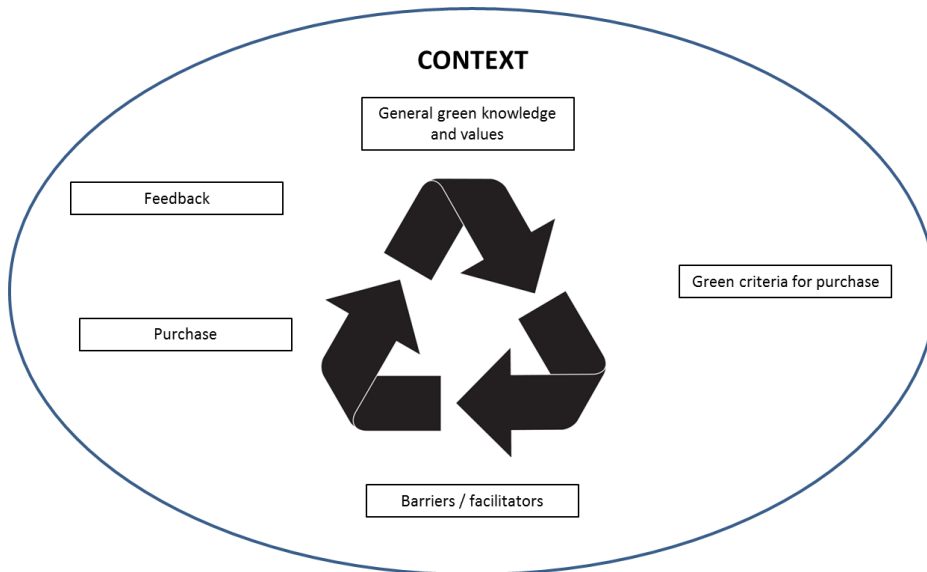
Fig. 20 The Values-Beliefs-Norms Theory of Environmentalism (Dietz et al 2005, after Stern 2000)



Kaiser, Hubner and Bogner (2005) compared the predictive power of the Values-Beliefs-Norm (VBN) model with the Theory of Planned Behaviour (TPB) in a study of German students' environmental behaviours. Overall, the TPB proved a stronger predictor of behaviours but the norms in the VBN accounted for 64% of the behaviours. The inclusion of norms as a fourth variable in the TPB increased its predictive power by 5% but when it was included as an antecedent of attitude, the model's predictive power increased to 9%. The authors therefore conclude that personal norms need not be a separate variable because, in the context of environmentally-responsible behaviour, it will already form an integral part of an individual's attitude. It should be noted, however, that this study made use of both recalled (not actual) behaviours and that the study participants had all been primed through the questions they were asked such that their personal norms had been activated. It is unlikely that intentions would be as strong in an un-primed audience, in which case, it *may* be relevant to consider norms as a separate variable.

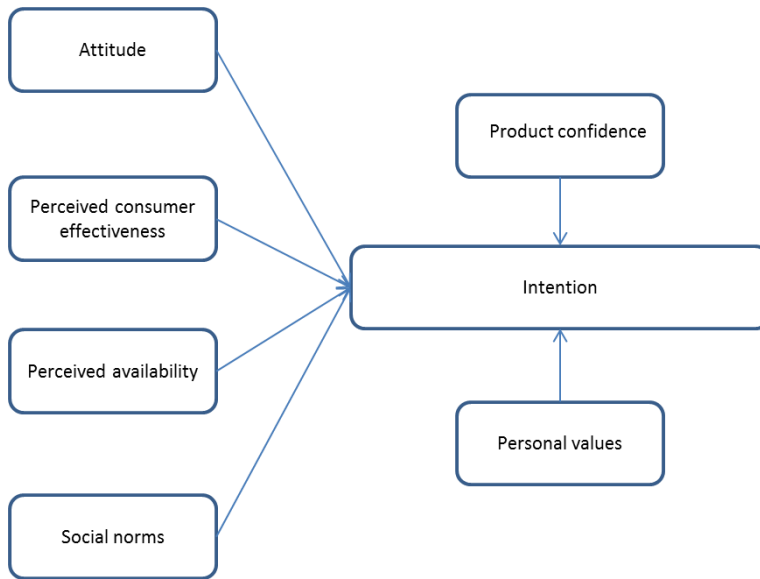
As with other pure values-based approaches, the weakness of the VBN theory is that it excludes consideration of other factors (extrinsic and intrinsic) that can influence behaviour. Consequently, a person's value orientation may not always appear to be congruent with patterns of observed behaviour, wherein even self-declared ethical consumers make choices that go against their most important values. Young et al (2010), for example, explored the choices made by self-declared green consumers when buying large technology items such as fridges and washing machines. While also feeling obligated to consider the more environmentally-friendly options, on occasion these consumers made non-green choices that were in apparent conflict with both their knowledge and their values. Various situational factors – notably, time, information availability, price and personal effort were identified as the reasons behind these choices. Prior experience - of a brand, a particular type of product, was also a significant factor in guiding decision-making. The authors' resulting model of green consumption builds these factors into a theoretical framework that reflects decision-making as a continuous and highly-changeable process (Figure 21).

Fig. 21 Young et al's (2010) Green Consumer Purchasing Model



Vermeir and Verbeke (2006) building on Jager (2000), developed a more comprehensive values-based model, by considering the relationships between values, information, perceived personal effectiveness, involvement and perceived availability (of alternative products) upon young consumer attitudes and intentions towards sustainability. They found that individual values predicted the degree to which subjects were concerned about the environment. Involvement with sustainability issues, perceived control and certainty about product availability were also all positively associated with increased positive attitude and an increased intention to buy sustainable goods. For those with less positive attitudes, social norms (in the form of peer pressure) were able to influence intention. The authors subsequently built an additional component – product confidence – into a conceptual framework to explore the combined effect of values and confidence on young adults' intention to purchase environmentally-friendly foods (Figure 22) (Vermeir and Verbeke 2008).

Fig. 22 Vermeir and Verbeke (2008) Conceptual framework



50% of the variation in intention to consume was explained by the combinations of attitudes, perceived social influences, perceived consumer effectiveness and availability of the green product. Confidence in the product was also highly correlated with intention to buy. Yet, while “Attitude” was the most significant predictor of intention, Values were the next most significant factor – having the effect of changing the relative importance of the model constructs based upon dominant value types. Thus, the intentions of individuals who scored highly in the value Universalism were shaped primarily by perceived effectiveness and product availability; whereas low-Universalism individuals were influenced by social norms and then perceived availability.

Guagnano, Dietz and Stern (1994) investigated willingness to pay (WTP) for environmental protection as a reflection of altruism and measures of personal cost. They also found that both altruism and self-interest (in terms of personal costs) could result in increases in WTP – depending upon the framing of the question. Similarly, Menzel and Bogeholz (2010) compared the values of German and Chilean schoolchildren and found that while Universalism and personal norms were important predictors of environmental behaviour, Self-direction and Stimulation also had a role to play. This is again suggestive of the need for careful packaging of messages to appeal to audience(s) who might vary in their value orientations.

Schwartz (1999) summarises research into the effect of individual values upon a variety of behaviours, including voting, political activism and opposition to immigration and found that all had clear and significant correlations with different value types, as hypothesised by the Schwartz Values Theory.

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Cameron, Brown and Chapman (1998) explored the effect of pro-social and pro-self-values upon environmental behaviour (support for a planned environmentally-friendly public transport scheme). Pro-self individuals (characterised as being competitive and individualistic) were less supportive of the scheme and more concerned about the personal costs of the scheme than pro-social people (altruistic and cooperative). The pro-self people were more likely to send letters of complaint about the scheme than the pro-socials, who, in turn, were more likely to send letters of support. Interestingly, however, just over a third of all people in each social value group opted not to send any kind of letter – an indicator of indifference ...or of the intention-behaviour gap again? In both groups, however, perceptions of personal cost – as opposed to benefits, were a better predictor of support for the scheme or not. The authors conclude that promotion of environmental behaviour would therefore benefit from a focus upon personal costs (and the alleviation of these) over the promotion of environmental benefits, i.e. appeal to the more dominant value type within the prevailing culture.

Lusk, Nilsson and Foster (2007) conducted an experimental study investigating the effect of the personality traits of altruism and free-riding on US residents willingness to pay for certified pork products (the three product attributes were animal welfare, effect upon the environment and the use of antibiotics.) They found that the more altruistic a person was, the less likely they were to actually want to buy pork; that highly altruistic people were willing to pay more; and that animal welfare and environmental concerns rated more highly in altruistic people than in free riders, with animal welfare concerns being paramount. In contrast, high-scoring free-riders were less concerned with animal welfare and the environment. However, altruism and egotism / free-riding only explained a small amount of the variation in consumer preferences for the different product attributes, indicating that other, unexplored, factors were also influencing behaviour. It is possible, for instance, that individuals with high free riding scores may also have low levels of perceived effectiveness, or confidence – factors known to influence behaviour (Verbeke et al 2007; Carrigan and Attalla 2001). It is also highly probable that other values, such as Universalism, Conformity and Hedonism influenced the consumers' choices.

De Boer, Hoogland and Boersema (2007) mapped consumer values to motivational associations (promotion or prevention-oriented) and found that individuals with high levels of 'Universalism' were more likely to avoid meat or eat less meat and to score highly on measures of concern for animal welfare. Goal orientation is implicated as an additional important component affecting (or, in their words, mediating) consumer choices - in addition to values and attitude.

4.4.4.2 Cultural Values

Looking at the effect of cultural values, Thørgersen and Grunert-Beckmann (1997) found evidence for the values–attitude-behaviour hierarchy, as exemplified by the VBN theory, within their study of recycling and general waste reduction behaviour in Denmark. Values – particularly those contained within the subset “biospheric altruism” had the most effect upon attitude formation and subsequent behaviours, although perceived personal costs also had an observable effect (suggestive of an interplay between self-interest and altruism.) Interestingly, the authors were also able to confirm the presence of a biospheric altruism-orientation within the Danish population, which is deemed to be a pre-requisite for pro-environmental behaviour. This finding distinguished Denmark from the other studied nation of the time, the United States, and is arguably a driving force behind Denmark’s superior performance on environmental issues in the prevailing 15 years (Gunton and Calbick 2010).

Schwartz (2007) explicitly explored the effect of cultural values on policy creation and enactment by comparing the extent of state interventions in capitalist economies in the World. Using comparative cultural values data to compare those with high / low intervention scores, he found that those with lowest intervention levels had the higher scores for mastery, hierarchy and embedded-ness vs the more liberal values of harmony, egalitarianism and intellectual autonomy. Kasser (2011) also found a strong correlation between the countries that scored highly on the values of egalitarianism and harmony and the degree to which they had invested in activities for the current and future well-being of children.

There is therefore a clear link between values and behaviour but a shortage of research that explores the full inter-relationships of the universal, individual values; and, no research into the combined effects of culture and individual values upon consumer decision-making. A significant draw-back of values–based approaches, however, is that situational or contextual factors are often poorly explained or ignored, with all decisions attributed to values. In this context it is perhaps not surprising that consumers have often been found to make decisions at odds with their stated values-simply because other factors have not been adequately taken into account.

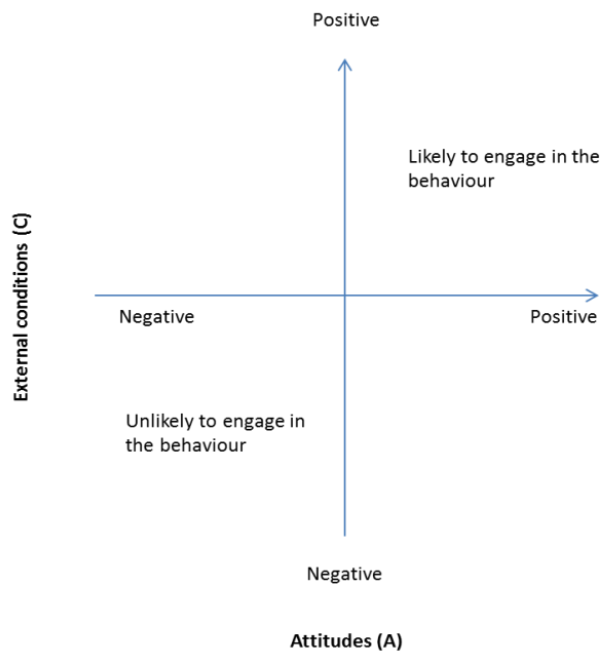
4.4.5 Integrated theories of behaviour

Reflecting that external, societal, forces (such as legislation and price incentives) can have as much impact upon behaviours as intrinsic (self) variables such as values, attitudes and beliefs; and, as Structuration Theory would suggest, that these variables continuously interact with one another to shape outcomes (Giddens 1984), integrated theories of behaviour that combine both dimensions are becoming increasingly prevalent (albeit that they remain in the minority) (Jackson 2005b).

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The Attitude – Behaviour – Context model, for example (Figure 23) (Guagnano, Stern and Dietz 1995), proposes that behaviours (B) are directly influenced by the interaction of an individual's Attitudes (beliefs, values, norms) with external facilitating (or limiting) conditions (C), in essence, that "*behaviour is a function of the organism and its environment*" (Jackson 2005a, p. 92). Thus, someone who has both a positive attitude and finds themselves in a positive enabling environment is very likely to engage in the behaviour (why *wouldn't* they ?!), as opposed to someone who either holds a negative attitude or holds a positive attitude but finds themselves in a difficult operating environment.

Fig. 23 The "Attitude – Behaviour- Context" model (Guagnano, Stern and Dietz 1995)

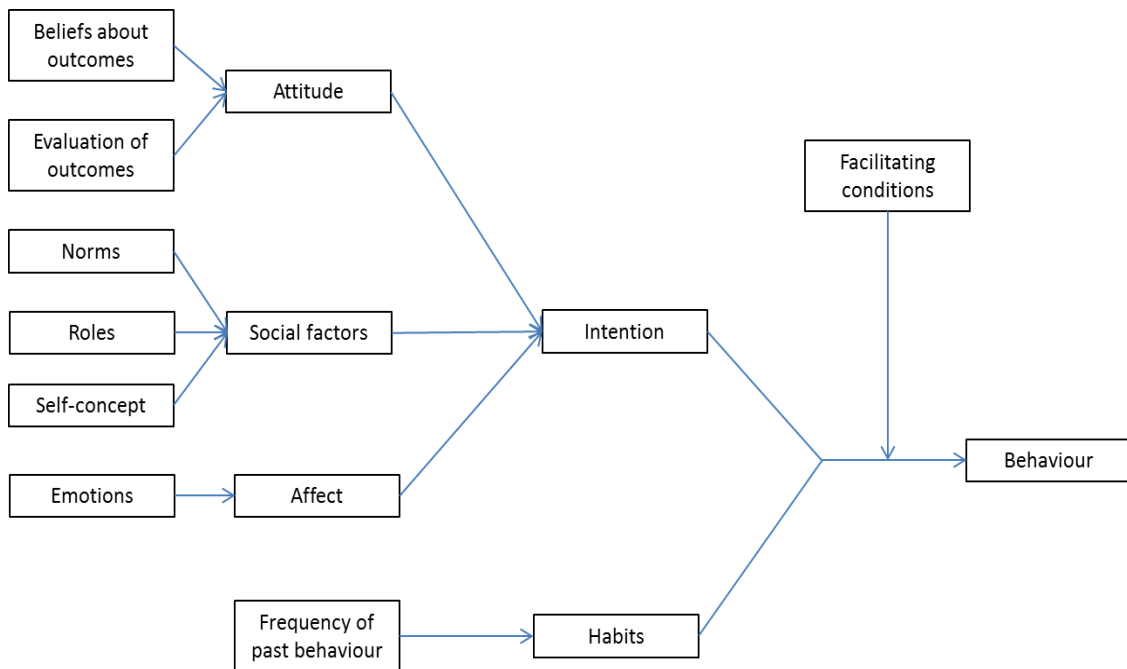


The Ipsative Theory of Behaviour also posits that internal *and* external constraints (real or imagined) can work to inhibit behaviours, something that Tanner (1999) was able to demonstrate empirically with respect to car usage.

In concluding his review of the environmental behaviour literature, Stern (2000) argued for the development of models that incorporated what he described as the four "causal variables" of pro-environmental behaviour. Two of these are encapsulated into the ABC (attitudes and contextual factors). The remaining two – habit and personal capabilities have (as discussed above) previously both been included as additional features of rational choice models, notably the Theory of Planned Behaviour (if one equates personal capabilities with the construct of Perceived Behavioural Control). Yet to date, no single model incorporating these four variables has been developed or empirically tested. The model that perhaps comes closest, however,

was developed much earlier (and absent consideration of pro-environmental behaviour) by Triandis (1977) (Figure 24).

Fig. 24 Triandis’ Theory of Interpersonal Behaviour (1977)



In this theory, Intention (as with the rational-choice-based theories) directly leads to behaviours, but this is mediated by Habits (which in turn are determined by the frequency of past behaviours.) Intention is also shaped through the convergence of Social factors (here notably relating to concepts of the self and perceptions of how an individual should behave in any given situation or role), Attitudes and Emotions – this latter component distinguishing this theory from the rational-choice approaches that assume logic-based decision-making. Contextual or situational factors are then captured in the variable “Facilitating Conditions” which Triandis theorised had a direct (objective) bearing on actual behaviours as opposed to a subjective bearing as conceptualised by the “perceived behavioural control” variable within the TPB (Bamberg and Schmidt 2003).

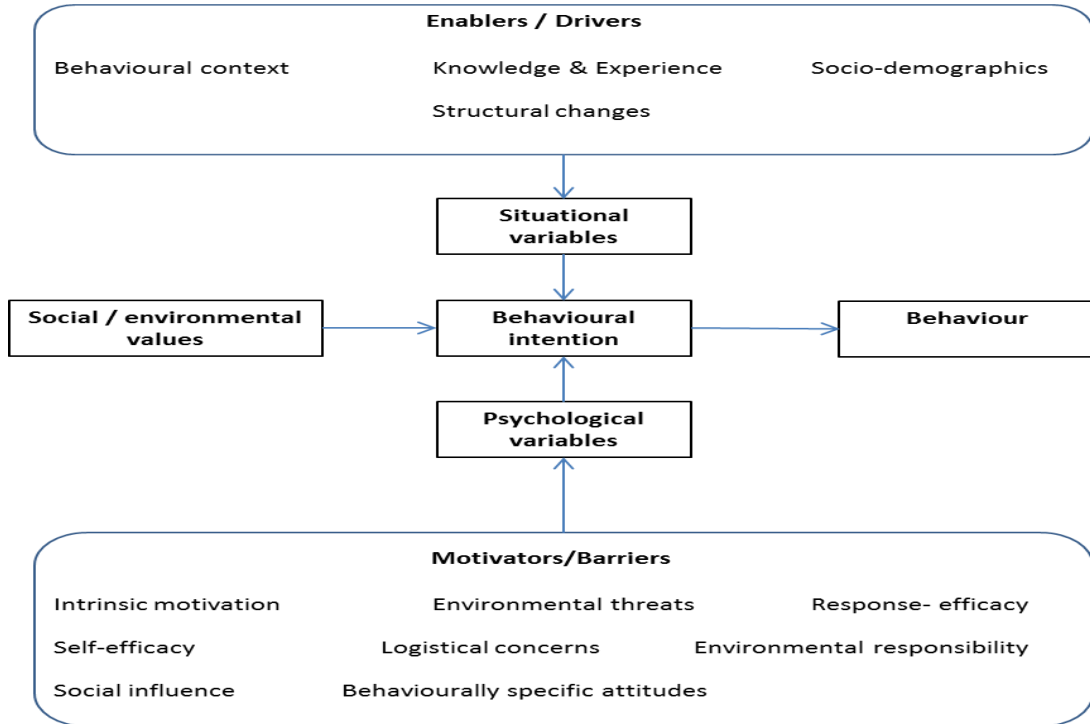
Fewer empirical studies have been undertaken using this framework but, where they have, it has been found to have a greater predictive power than rational-choice based approaches, with Triandis’ Personal Norm variable better predicting Intention and Habit better predicting Behaviour, particularly in the case of everyday behaviours, such as travel choice use (or, arguably, most food shopping). Further, the “roles” construct within the Triandis model had a very strong effect upon intention, even when controlling for the effect of subjective norm. This suggests that the subjective norm construct utilised in the TPB is too narrow (Bamberg and Schmidt 2003). Within the context of food shopping behaviours, it also implies that, depending

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Bamberg and Moser (2007) combined the NAM and the TPB into a single model and explored the effects of the resulting 9 variables upon pro-environmental behaviours. Intention mediated the association of all of the variables and explained an average of 27% of the variance in behaviour; with Perceived Behavioural Control, Moral Norm and Attitude again emerging as the strongest independent predictors of Intention – together explaining 52% of the variation in behaviours. They conclude that pro-environmental behaviour is motivated by both pro-self and pro-social motives, such that integrated models of behaviour that combine both elements must be the way forward.

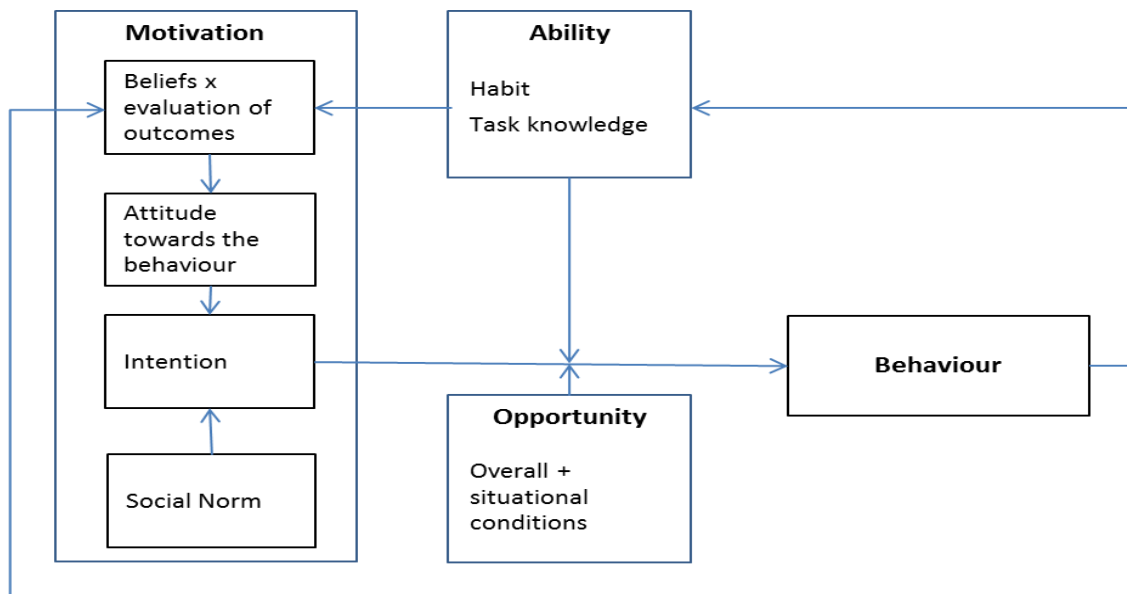
Barr and Gilg (2007) tested their conceptual framework across four environmental behaviours within a dispersed UK community (Figure 26). Combining psychological and situational factors with values, the complex model demonstrated how pro-environmental behaviours (in this case, energy saving, water conservation, waste management and “green consumerism”) are firmly situated within everyday situations and behaviours. Consequently, while behaviours may be motivated by personal norms, they will also be affected by more practical factors such as price, availability and convenience (i.e. socio-demographics, structural change, behavioural context (Fig 26)). This resonates strongly with the theme of this research. For, while consumers may be aware of and motivated by a desire to make sustainable decisions, their actual reason for engaging in the behaviour in the first place is a mundane one - they want something nice to eat! One might reasonably expect, therefore, a similar interaction of these kinds of variables in consumer decision-making regarding seafood.

Fig. 26 Barr & Gilg’s Conceptual Framework for Understanding Environmental Behaviour (2007)



Also derived from a review of the literature on pro-environmental behaviour, the Motivation, Ability and Opportunity model attempts to integrate intrinsic and extrinsic variables into a single model encapsulating the key variables felt to be associated with “green” behaviours (Thøgersen 1995) (Figure 27).

Fig. 27 The Motivation – Ability – Opportunity Model (Thøgersen 1995)



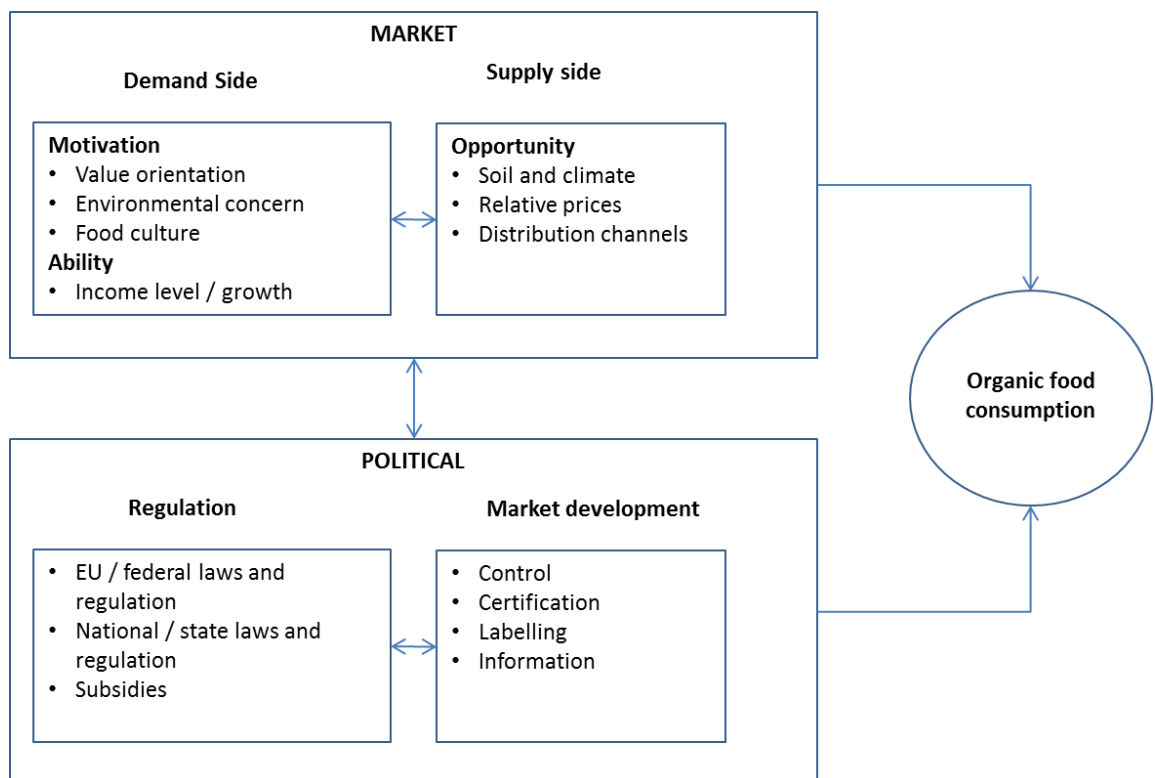
The variable “Opportunity” closely reflects Triandis’ “Facilitating Conditions” (taking an objective view of it) and the authors demonstrated its effect through the example of glass recycling wherein, given the opportunity (by providing the facilities), students increased their

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recycling behaviours. Again, like Triandis' model, Opportunity moderates Intention which then impacts upon Behaviour. Habit was included as a function of ability, based on evidence from studies into home energy conservation and travel mode choice, which found it to be the single greatest predictor of behaviours. The authors also include "Task Knowledge" (which is akin to Stern's concept of "Personal capabilities") in the Ability variable, arguing that insufficient or poorly misunderstood information can lead to consumers failing to behave in the desired manner (e.g. by putting ceramics into glass recycling containers)

Thøgersen subsequently incorporated the Motive, Ability, Opportunity model into a conceptual framework explaining the determinants of organic food consumption (Figure 28) (Thøgersen 2010). Positioning this specific behaviour in the context of both demand and supply-side *and* political pressures that serve to "frame and constrain individual choices" p. 171, the resulting framework serves to both highlight the myriad forces driving food consumption in general and ethical food in particular.

Fig. 28 Determinants of (organic) food consumption (Thøgersen 2010)



The complexity of this framework would render its conversion into a model for empirical testing as an impossible task. What it does provide, however, is a structure through which to consider the consumption of other food stuffs with an ethical dimension, such as Seafood. Further, it is possible to combine elements of this Framework with Barr & Gilg's to provide an ever more

complex, but perhaps more comprehensive, view of the variables potentially influencing current seafood consumption.

For example, market supply-side factors could usefully be included in Barr & Gilg's listing of situational variables, as product availability and price are potentially strong determinants of whether or not a consumer will buy a particular seafood product. Additionally, in the UK retail context, which has been shown to be heavily dominated by large supermarket chains with equivalent, centralised buying and distribution processes, retail decision-making regarding product allocation will be key to consumer sales. Seasonality and weather conditions can also affect seafood availability, rendering them important additional situational variables.

Thøgersen argued the need for further research into the effect of national food cultures to better understand the appetite for (in his case) organic food but, again, this could usefully be considered in the context of UK seafood consumption (Thøgersen 2010). In this case, food culture may both inhibit and drive food consumption through its influence upon situational, psychological *and* social/environmental variables. Taking the example of Cod, which is predominantly eaten by UK consumers in the form of fish and chips but has also been publicised as being overfished, it is possible to see how product availability (a situational variable) could combine with an individual's innate concern for the environment (values) with a feeling of personal helplessness in the face of a major environmental problem (response-efficacy). Thus "food culture" might be deemed an additional variable in its own right in a more integrated framework.

It could also be argued that, at least in a UK context, food culture – the kinds of food people eat and the choices they make about food, are ultimately and inextricably rooted in notions of social class, with the professional classes still spending proportionately more on fresh food (including fish) than the working classes who spend more on bread, sausages etc (Warde 1997). Warde also asserts that in making choices about food, consumers have to decide between four antinomies of taste, namely, Novelty and Tradition; Health and Indulgence; Economy and Extravagance; and, Care and Convenience. Contradictions and tensions between these opposing poles are prevalent in all aspects of modern life – choosing a car, holiday, what to watch on TV. Ward's research, however, has plotted a change in the degree to which these opposing values have been appealed to by the *food media* (a review of consumer magazines between 1968 – 88 revealed an increased emphasis upon tradition, indulgence, health (conversely given the emphasis also upon indulgence) and convenience; and, a decreased emphasis upon novelty, extravagance and care. Economy remained constant.) This research is now quite old and almost certainly there have continued to be changes in emphasis upon these dimensions – post financial

collapse, for example, one suspects that the emphasis upon economy has increased. Nevertheless, these dimensions would still appear to be relevant today and might therefore also be expected to appear in any consideration of the motivations underlying seafood consumption.

Barr & Gilg's "Behavioural context" could also usefully be supplemented by the political dimensions identified in Thøgersen's framework, reflecting the complex legislative and regulatory environment within which seafood shopping decisions are made - notably, the influence of the European Union upon UK fishing quotas (and the consequent much publicised practice of discarding), the development of eco-labels, and the provision of consumer information through media, governmental and non-governmental channels – some of which will be containing competing messages (e.g. healthy diets versus sustainable fish consumption.)

4.5 CONCLUSION

"Human motivations are so multi-faceted that about the only thing one can say with absolute certainty is that it is virtually impossible to derive universal causal models." (Jackson 2005a, p. 6).

"Economics, demographics, consumer values and psychology all contribute to an understanding of [sustainable] behaviour. However, the clearest conclusions emerging from the research literature are that green consumers are extremely heterogeneous and that their behaviour is not subject to a single explanation or a single best way to influence it." (Peattie 2010, p. 201).

This chapter has reviewed the academic literature with respect to consumer behaviour in general and sustainable consumption in particular with the aim of generating some insights into the factors that might explain the unsustainability of the UK's seafood consumption patterns. The preceding sections have demonstrated how complex an issue this is. Numerous demographic, psycho-social, cognitive and situational variables can all have an impact upon a consumer's decision-making - both as they effect intentions and how those intentions are then actually carried out. Drawing on the Literature, however, the following factors are highlighted as *potentially* having particular relevance for sustainable seafood buying behaviours.

4.5.1 Demographics

- Gender - specifically, being Female, is both an indicator of an increased likelihood of engaging in pro-environmental behaviours and of taking out political concerns in the shopping arena. Gender and Identity are also implicated in consumers' perceptions of their roles – something that can vary significantly depending upon context and which, in turn, can drastically affect shopper behaviours.

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- Age has been shown to be important, for its effect upon attitude formation and the strength of personal values.
- Education can be important because it enhances a person's social capital, which has been shown to affect their likelihood to engage in environmentally-motivated behaviours, such as boycotting. Education in its broadest sense can also be key to enabling effective ecological citizenship, a pre-requisite, it is argued, for the transition towards strong sustainable consumption.
- Income will likely have an effect because fish is a commodity and, faced with rising prices, consumers can be expected to make trade-offs between their ethical beliefs and practical needs (as encapsulated by Conventions Theory.)
- Place of residence (coastal/urban) may also have an effect because there is some evidence that involvement with the fishing industry, in even a very loose capacity, creates a stronger sense of engagement and increased likelihood to be concerned with issues of sustainability.

4.5.2 Psycho-social variables

- Social Norms have been shown to have a very significant effect upon consumers' intentions. Yet little research has sought to understand how both injunctive norms, descriptive norms *and* the interactions between them can influence behaviours.
- Personal norms – once activated, can also be powerful determinants of intentions but have been shown to be highly variable depending upon the issue at hand (ethical hierarchies at play) and the context.
- Personal Values, on the other hand, are deemed to be a more stable construct (albeit that there is some evidence that they can change over time) and there is a clear link between values and the subsequent formation of attitudes, beliefs and intentions to act. Despite a very strong theoretical model that stresses the need to understand the relationships between individual values, however, most academic research focuses attention upon just a subset (usually those deemed to be associated with pro-environmental behaviours.) By failing to appreciate the importance of other values upon behaviours, most consumer studies have missed an opportunity to gain a richer understanding of consumer motivations (and to explain phenomena such as the attitude-behaviour gap.)
- Cultural values have been shown to vary significantly across different regions of the world and, arguably, to also vary within countries on geographic and ethnic lines. The UK is characterised as being concerned with the values of Mastery and Affective Autonomy and this is reflected in the prevailing, market-based, approach to encouraging

sustainable consumption. The Literature suggests that these market-based approaches are failing, however, because consumers lack the skills and information needed to make different decisions.

- Distinctly different food cultures can also be observed throughout the world and, arguably, within nations as well. A better understanding of prevailing food cultures - why we eat the things we do – could generate additional insight to shift consumers towards more sustainable alternatives. In doing so, consideration needs to be given to the impact of social class (which, as above, implies the recognition of levels of consumer education, income and social capital) and of the four antinomies of taste which might also be deemed as measures of consumers' intrinsic motivations to choose different foods.
- Attitudes towards an object will determine whether a person is likely to engage with it or not. Prior experience of the object (positive or negative) can significantly affect a person's attitude as can the frequency with which the person continues to engage with it. Thus, one can assume that those who are regularly eating seafood have both positive attitudes toward it and that they engage regularly with the behaviours. Techniques such as laddering can help to explain how such attitudes have developed and why - information that could be useful for subsequent behavioural change initiatives.
- Perceived Behavioural Control / Self- Efficacy/Social Capital – a major finding from the psycho-social literature relating to consumer behaviour is the importance of consumers' opinions of their own abilities. This can impact at both a very practical level (do they have the skills required to, for example, cook a piece of unfamiliar seafood); and in more abstract ways (i.e. do they have the (self)-confidence to believe that their actions can make a difference on a bigger, societal, level.) Absent high levels of personal control, consumers' intentions can very easily be derailed.

4.5.3 Cognitive variables

- Knowledge and personal experience of the issues relating to sustainable consumption; and of shopping for and cooking seafood will affect a person's likelihood and ability to make choices that differ from the mainstream.
- The degree to which a consumer is engaged in conscious or unconscious behaviours can be an effect of the regularity of previous experiences (i.e. habitualised behaviours become automatic) but they can be lifted out of the unconscious through structured interventions, such as individual feedback.

4.5.4 Situational and Contextual variables

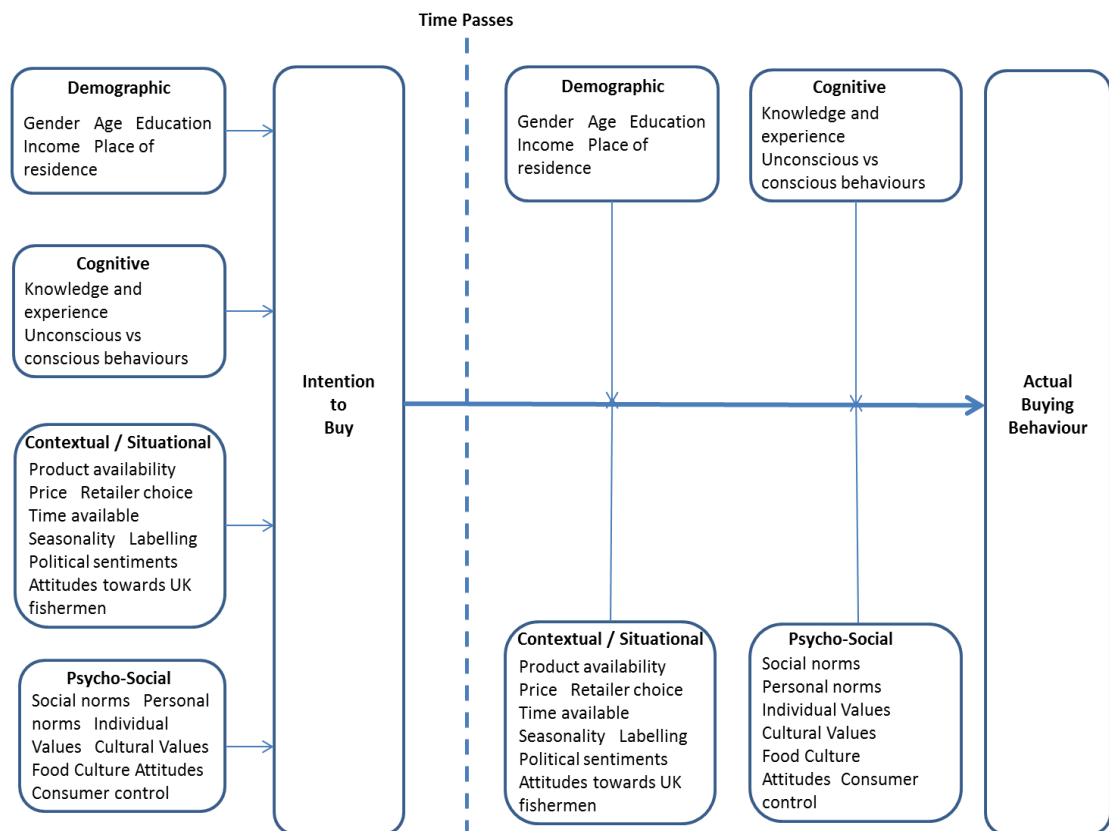
- Product availability is a key, albeit most basic, determinant of consumer decision-making. If the product isn't in the shops, the consumer has no choice but NOT to buy it. Hartmann's research suggests the limited extent to which consumers' opinions factor into new product development (and, by extension, retailer product selection.) Chapter 3 also demonstrated that UK retailers had a significantly different offering when it came to fresh seafood.
- Product price (linked to a consideration of household income, as above) can also be expected to influence consumer decision-making. In the highly competitive UK retail environment which has been characterised by fierce price wars between the big supermarket brands, the effect of promotions and special offers might be expected to be particularly acute.
- Choice of retailer may also be a significant factor influencing seafood buying behaviour. Chapter 3 described how the UK's biggest supermarkets dominated seafood sales but that the (more scarce) independent fishmongers seemed to offer a wider and more unusual range of products. Does having ready access to an independent fishmonger influence consumer decision-making?
- Closely linked to the issue of retail access is that of Time. How much time a consumer has at their disposal may make a big difference between whether they are willing to seek out an independent fishmonger or not. Time is also relevant when it comes to the preparing and cooking of seafood – is the consumer looking for something quick and easy; or are they shopping for an important dinner party? Here, it might be expected that the context will determine the amount of time that the consumer will invest in the task.
- Seasonality can be expected to influence consumption – both for its effect upon overall levels of demand (the Tesco clubcard analysis revealed strong seasonal variations in sales); but also with respect to product availability, in that certain wild-caught species will only be available at particular times of the year. It has been argued that the rise to prominence of farmed Salmon in the UK diet is as a direct result of Supermarkets' concerns for ensuring a consistent, reliable supply of product. Other farmed species such as seabass and bream are also now routinely available all year round in supermarkets (and to an extent, independent fishmongers) with wild-caught, more seasonal varieties, less so. This begs the question of whether seasonality as a concept has any real relevance to today's seafood consumer.

- The market-based approach to sustainable consumption has encouraged the development of a range of labelling schemes and consumer guides aimed at enabling consumers to make more informed (and sustainable) seafood choices. Yet while there is a fairly extensive academic literature debating the merits and drawbacks of such initiatives, less attention has been given to the importance consumers attach to these labels and of the factors that really matter to them when it comes to the range of potential ethical issues associated with seafood consumption. Further, and perhaps more fundamentally, despite all of the academic and media debate about the need for sustainable seafood, there has been no attempt to understand the concept from a consumer perspective. Consequently, labelling schemes and other campaigns that promote sustainable seafood have the potential to be received very differently depending upon the consumers' definition of the concept.
- Finally, the political context could have implications for UK seafood consumer behaviour, not just for its influence upon market-based approaches to sustainable consumption (as discussed above) but also for the formation of opinions about the UK fishing industry relative to its European counterparts. The media attention given to the EU-mandated practice of discarding over-quota fish generated considerable disquiet amongst ordinary members of the UK public many of whom were encouraged to sign the petition that ultimately brought about the announcement of the discards ban. UK fishermen featured prominently in these campaigns. Elsewhere in food retailing there has been a growing interest in local produce – as exemplified by the rising numbers of farmers markets operating nationally; and, in retailers deploying the term in their labelling to differentiate home-grown from foreign produce. The negative (anti EU) media attention coupled with this general trend towards local-ness may encourage consumers to seek out British seafood.

4.5.5 A Conceptual Framework for Understanding the Sustainability of UK Seafood Consumption

Taking these variables, it is possible to construct a conceptual framework through which the issue of UK seafood consumption might be viewed – Figure 29.

Fig. 29 A Conceptual Framework for Understanding the Sustainability of UK Seafood Consumption



This Framework reflects the long list of variables that, from the Literature, might be significant in driving UK consumption patterns. It is suggested that all four groupings of variable – demographic, cognitive, psycho-social and contextual/situational will have some kind of effect upon consumers’ intentions to buy. Over the time taken between shaping the intention and actually carrying out the purchase, however, it is also suggested that these same four groupings of variables can have an effect upon the achievement of the initial intention, such that the eventual outcome may be different from the plan. The extent to which these variables interact with one another and how strongly they shape intention versus actual buying behaviour, is not clear from the Literature, hence linkages between the variables are currently not described.

4.5.6 The Research Questions

The above Framework, while attempting to be holistic in nature, is almost certainly not complete. The reality is that no study has ever been conducted that seeks to understand (seafood) consumption from such a broad base. It has been studied from a demographic perspective; from a psycho-social perspective; from a cognitive perspective; and, to an extent, from a situational perspective. But rarely have these issues been considered in combination with one or the other and nowhere has an attempt been made to explore the full range of potential issues outlined above (Olsen 2004).

Further, no study explores these issues from a consumer perspective, that is, that asks the consumer why *they* think they consume the way that they do. Not only can such an approach reveal previously undiscovered insights but it also has the potential to raise consumer behaviours from the level of the unconscious to the conscious and, in so doing, to enable consumers to critically reflect on their choices. It is argued that, absent the understanding that such an approach can generate, it is doubtful that efforts to encourage sustainable consumption will be successful.

The aim of this study is therefore to address this gap in the academic literature by exploring, in depth, the full range of issues that UK consumers articulate as driving their seafood consumption patterns.

Chapter 3 described how the UK's current patterns of consumption are dominated by just five species – the so-called “Big 5” of Cod, Haddock, Salmon, Tuna and Prawns, the continued consumption of which presents various sustainability challenges. The overall objective of this research is to understand why these five are so popular, even when numerous initiatives have been undertaken to try and shift consumer behaviours towards more sustainable alternatives.

Thus, the Research Objective is : Why the Big 5 ?

Chapter 3 described the outcomes of two pieces of analysis into current UK seafood sales – thus answering the first two Research Questions identified for this research (see Fig. 1, Table 1). This analysis, however, also surfaced six additional **Research Questions** which provide the structure through which to answer the overarching Research Objective. The Research Questions are:

- **Research Question 3 : Why are there regional variations in seafood sales?**
- **Research Question 4 : Are Tesco supermarket shoppers different from other shoppers?**
- **Research Question 5 : Are age and income important in seafood consumption?**
- **Research Question 6 : What do consumers understand about sustainability?**
- **Research Question 7 : Are consumers aware of the differences in the sustainability of the seafood offered by retailers and does it influence their buying behaviours ?; and,**
- **Research Question 8 : Could supermarkets be doing more to promote sales of sustainable seafood?**

The evidence from the academic literature on sustainable consumption indicates that consumer motivations are often embedded in a variety of ordinary, routine and habitual behaviours which are, themselves, heavily influenced by social norms and practices and constrained by institutional and socio-political contexts. This highlights the absolute necessity of understanding

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and appreciating the contribution of the external context in which the consumer is making their decisions, in addition to those provided by intrinsic factors such as values, attitudes and beliefs (Jackson 2005a). The emphasis upon needing to try and understand the whole picture precludes an exclusively model-based, quantitative research design. Instead, it suggests the need for a mix of methods that can both capture and quantify certain (easily measured) variables as well as those less tangible (and / or measurable) aspects of behaviour that may also be having an effect upon individuals' choices. The following chapter describes the approach developed for this Study.

CHAPTER 5 : METHODOLOGY

5.1 INTRODUCTION

The previous chapters have presented a body of evidence to suggest that the reasons for unsustainable consumer seafood behaviour are likely to be many and to be shaped by a variety of different forces, the interaction of which is probably impossible to predict through any given behavioural model. In order to attempt to understand this situation in a meaningful way, a mixed methods approach is indicated that can address the depth as well as the breadth of the problem.

This chapter begins by discussing the philosophical approach that is supported by a mixed methods study of this kind. It continues with a description of and justification for the chosen methods and their relationship to the overall Research Objective and supplementary Research Questions. The characteristics of the study population are then described, enabling the comparison of the consumers in this study with UK average consumers (as reflected in the Tesco clubcard analysis presented in Chapter 3); and with attributes previously described in the academic literature on seafood consumption (discussed in Chapter 4). Some notable differences between the study population and previous study populations are highlighted.

5.2 RESEARCH PHILOSOPHY

5.2.1 Overview

The previous chapter found that consumer research can be broadly grouped into three fields of enquiry. The first involves profiling the consumers – describing who and what they are in terms of demographics, prevailing attitudes and beliefs. The second builds on this information by seeking to predict – through the use of various models – how a consumer will react in different circumstances. The final field is concerned with exploring individual motivations that might explain observed behaviours. Because of their different approaches, each field is typically characterised by different methodological approaches – with the first two dominated by quantitative studies; and the latter by qualitative ones (Papaoikonomou, Ryan and Valverde 2011). While not explicitly explored in the vast majority of scientific papers (McGregor 2007), these studies also betray distinctive philosophical differences that serve to locate academic enquiry into three differing paradigms – positivist, critical and interpretive (McGregor and Murnane 2010).

The relative dominance of these paradigms and beliefs about their incommensurability, however, has waned over time. For while positivism may have been the dominant philosophical approach in the past (Papaoikonomou, Ryan and Valverde 2011) its influence has increasingly declined in favour of interpretive and critical / radical humanist approaches. There has also been

a growing call for pluralism in order to maximise the potential to understand an increasingly complex area of study. Thus, in her decadal review of the *International Journal of Consumer Studies*, McGregor (2007) bemoaned the finding that over 96% of all published articles were positivist; that only 30% made use of more than one data collection method; and that there was no explicit discussion of the merits (or otherwise) of combining qualitative and quantitative methods. She argued “*such paradigmatic combinations are desirable because they would help the Journal promote many ways of knowing*” (2007, p. 14).

Ekstrom (2003) argued that, while historically consumer research had found its home in the discipline of marketing and the functionalist / positivist paradigm (Burrell and Morgan 1979), the latter part of the twentieth century had seen a paradigm shift away from positivism towards interpretive and critical approaches and the greater influences of other disciplines, most notably Anthropology. Demirdjian and Senguder (2004) also noted the growing importance of cultural anthropology over the traditional disciplines of economics and sociology and attribute its rise to the difficulties practitioners found in applying theories borne out of an objective, positivist approach, to an inherently subjective issue such as consumer behaviour.

Hunt (1991) also argued against there being a dominant paradigm, insisting instead that the field was characterised (even then) “*by the open, often indiscriminate, borrowing of disparate methods and theories from everywhere*” p 39. (The position had changed little by the time of McGregor’s review – over 100 different models, conceptual frameworks and theories were being explored in the literature (McGregor 2007).) Hunt posited that Critical Pluralism – with its use of triangulation and the acceptance that multiple realities exist, was the only way forward. Writing over 20 years later, Joy and Li (2012) substantiate Hunt’s observations by characterising the modern literature on consumer behaviour as utilising multiple data sources and triangulation; and, being concerned with the meanings of, and influences on, individual behaviours. By additionally asserting that the literature recognises that “*consumers’ lives are constructed around multiple realities shaped by consumption experiences*”, (2012, p. 155) and therefore that both the subjective and objective combined to create those “realities”, the authors position the majority of current research within the Critical paradigm (Guba 1990) although they do not make this actual conclusion themselves.

5.2.2 Being Critical

With its emphasis upon both objectively measuring individual behaviours, knowledge and values, raising consumer consciousness *and* interpreting the relative effect of these elements upon consumer behaviour, this study fits within the Critical paradigm described by Guba (1990)

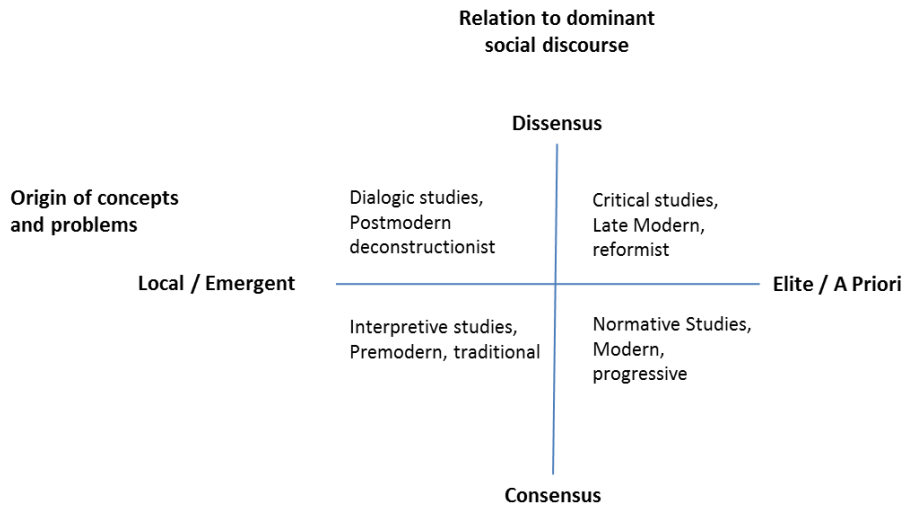
and the critical element of Burrell & Morgan's Radical Humanist paradigm (Burrell and Morgan 1979).

Burrell and Morgan identified three branches of critical theory – Lucacksian, Gramsci and The Frankfurt School. Each is similar in its central commitment to human emancipation – opening the eyes of people who, otherwise, would continue to “*actively participate in their own subjugation*” (Alvesson and Deetz 2000, p.15). They differ however, in the manner in which that emancipation can be achieved. Arguably because they are the least *politically* challenging, some of the most influential theories, from a management perspective, have come from the Frankfurt School, in general, and the work of Jurgen Habermas, and his theory of communicative competence, in particular (Burrell and Morgan 1979).

With its overt assertion of the importance of language, Mingers' (2000) description of what it means to be Critical is clearly influenced by Habermas's work. He identifies four elements: critical thinking – being able and prepared to challenge what has been communicated about a given topic in the past; challenging conventional wisdom, the so-called critique of tradition; questioning the validity of one view, over another, the critique of authority; and, being sceptical of “facts” that are presented as “truths”, recognising that knowledge and information is always affected by the values of the researcher and the wider society within which she operates. With respect to this last point, Mingers identifies four different types of knowledge (propositional, experiential, performative and epistemological) and argues that each will have its own form of truth which should be arrived at through a process of rational discourse (Mingers 2008). Central to all Critical perspectives of truth and knowledge, however, is the notion of fallibility, i.e. recognising that it is always grounded in a specific place and time and that as research endeavours continue, new truths will emerge to replace old ones (Goles and Hirschheim 2000; Hunt 2005; Mingers 2008).

Deetz (1996) offers an alternative to Burrell and Morgan's 4-way model by describing philosophical approaches on axes defined by their relationships to the dominant social discourses of the time and the origin of the concepts under examination (Figure 30).

Fig. 30 Deetz's "Contrasting Dimensions" from the Metatheory of Representational Practices (Deetz 1996)



Describing the four boxes as “*dimensions of difference*” in research, p. 201, Deetz steers clear of suggesting that there cannot be movement between and across them. Rather, it is they offer it as a way of demonstrating that different approaches exist relative to the prevailing context for the research.

In applying this and Mingers’ frameworks to this study, the research can clearly be defined as Critical, in that it:

- Falls at the elite/a prio end of the spectrum in recognising existing theories and the associated language of consumer behaviour, including the recognition of constructs in some of the more popular models of behaviour such as the Theory of Planned Behaviour (Ajzen 1991) and the Norm Activated Model of behaviour (Schwartz 1977); but it also challenges how these theories have been incompletely and, therefore, inadequately applied in previous research;
- Seeks to challenge the dominant social discourse about UK seafood buying behaviour, i.e. that consumers can and will only buy 5 types of fish, thereby achieving the “critique of tradition”; and,
- Is inherently emancipatory by arguing that consumers, through a combination of their own lack of consciousness and ideological hegemony (Burrell & Morgan 1979) are locked into a pattern of buying the same kinds of fish.

5.2.3 Ethical implications

Alvesson and Deetz (2000) make the observation that “... *critical theory has the most explicit set of value commitments and most direct attention to moral and ethical issues*” p. 35. This research

can also be characterised by the extent to which the researcher's own values are driving it; and by the challenges that this then presents from an ethical and moral perspective.

For example, by asserting that consumers should make alternative choices, the research is making a value judgement about their existing choices. It implies, for example, that choosing Cod is "bad". This is not the objective of the research but if the message were widely negatively received, it could have a very damaging effect upon the livelihoods of the people the research is seeking to support – namely, the small-scale UK fisherman.

Similarly, from an environmental perspective, it would be disastrous if as a result of the research, consumers suddenly demanded very large volumes of a fish species that had previously been relatively unexploited. There are precedents for this. By changing the names of the Patagonian Toothfish and Rock Crab to Chilean Seabass and Peekytoe Crab, respectively, promoters in the US were able to open up huge markets for previously unexploited species that are now at risk of over-exploitation (Jacquet and Pauly 2008). While unlikely to happen given the relatively low-key nature of this work this was an important issue to be aware of in the process of engaging with consumers.

The researcher's own role in the research process also needed to be recognised. The research was not being conducted from a positivist perspective, where the researcher strives to remain physically and emotionally removed from the research topic (Guba 1990). Indeed, trying to claim such a distance could be argued as being immoral since there clearly cannot be a reality that isn't affected by external factors, the researcher included (Hunt 2005). As such, care was taken in how the researcher presented themselves to the consumers being conscious that physical appearance, language used and general conduct may all affect how the study progressed – both in terms of the ease of interacting with partners and consumers, and in the findings that were generated.

5.2.4 Concluding Remarks

The research falls within the Critical paradigm and proposes a mixed methods approach as a consequence. Consumers were actively involved throughout the research process with the intention of both exposing them to and then overcoming the imbalances within the current UK seafood market that limit consumer choices. Ethical concerns were considered and were actively addressed throughout the study (see 5.4 below). By explicitly stating the ontology, epistemology, logic and axiology behind this research, this study distinguishes itself from much of the academic literature on consumer behaviour and ensures that the research design, as described in the following sections, is fit for purpose.

5.3 THE RESEARCH DESIGN

5.3.1 Overview

In accepting the need for and value of pluralism; the idea that there are multiple forms of knowledge – neither of which can be argued to be better than the other, designed as they are to discover different things (Mingers 2008; McGregor and Murnane 2010); and, that the aim of the research is transformation through consciousness raising (Guba 1990), a reductive, mixed-methods approach was developed. The emphasis in the research design was upon *rigour*, with a focus upon ensuring credibility and transferability (as opposed to internal and external validity, respectively, which would be the focus of positivist research.) It should also be dependable and confirmable (McGregor and Murnane 2010).

In total, this Study was informed by three separate but connected phases of data collection and analysis (see Figure 1, Chapter 1).

The first phase of the research consisted of the Tesco Club Card analysis that was presented in Chapter 3. This analysis enabled the identification of trends, patterns and variations in both sales of fresh seafood and in the demographic profiles of those who bought it. Tesco has the largest single share of the UK Supermarket market and, through the Tesco Clubcard, captures data on the shopping habits of 40% of all UK households. Analysis of sales of seafood within Tesco UK stores could therefore be argued as being representative of the wider UK population, although care is needed with this interpretation as it is known that Tesco has a younger shopper demographic than Morrison's or Waitrose, for example. This analysis answered the first Research Question (i.e. What are the current sales patterns for seafood in the UK?); and generated the following five further research questions (see Figure 1 and Table 1, p. 19):

- RQ 2 : How does Tesco's seafood offer compare with other UK Supermarket brands?
- RQ 3 : Why are there regional variations in seafood sales?
- RQ 4 : Are Tesco supermarket shoppers different from other shoppers?
- RQ 5 : Are age and income important in seafood consumption?
- RQ 6 : What do consumers understand about sustainability?

Phase 2 (also described fully in Chapter 3) explored RQ 2 by examining the differences across the UK retail landscape in terms of product offering, focusing upon the UK's five largest supermarkets in terms of market share (Tesco, Sainsbury, Asda, Morrison's and Waitrose.) This analysis generated a further two questions:

- RQ7 : Are consumers aware of the differences in the sustainability of the seafood offered by retailers and does it influence their buying behaviours ?

- RQ 8 : Could supermarkets be doing more to promote sales of sustainable seafood ?

Phase 3 sought to engage directly with consumers to answer RQs 3 to 8, by better understanding why they make the choices they do; how they experience the retail offer; to explore what they knew about sustainable seafood and to determine if their knowledge resulted in any differences in buying behaviours. The use of both quantitative and qualitative methods was indicated here to bring richness to the data collection and to permit triangulation. The methods were community workshops; personal diaries; one to one interviews using repertory grids; and a survey.

These methods and their applicability to answering Research Questions 3 to 8, are described in detail below.

5.3.2 Community workshops

The purpose of the community workshops was to enable free flowing discussion amongst a group of adult seafood consumers. The content and format of the workshops was carefully designed to enable participants to address the exploratory questions that had been generated in the previous two phases of data collection (Research Questions 6, 7 & 8) (See Table 1, Fig. 1, p.19).

(See Appendix 2 for the detailed agenda for the workshops)

Eight workshops were convened in total across two regions of England that contrasted on the basis of the amounts of seafood consumed, as identified in the dunnhumby analysis. Four were held in the North East of England and four in the South East. The South East represented a high consumption region (accounting for 10% of total seafood sales) and the North East a low consumption region (3% of total sales.) To explore the effect of place and, specifically of proximity to and potential involvement with the fishing industry (Trondsen et al. 2004), participants in the workshops were recruited from contrasting localities - urban / rural (distant from sea) and coastal. The chosen communities were Cranbrook and Hastings in the South East; and Durham and North Shields in the North East (Figure 31). In choosing these locations, care was taken to achieve parity between them on the grounds of deprivation and distance to the coast; and, in the case of the coastal towns, in the presence of a similarly-sized fishing fleet. Thus Cranbrook and Durham were 20 and 21 miles from the coastal town respectively and had similarly low scores on the Index of Multiple Deprivation (an overall measure of deprivation derived from 38 separate indicators, to express the deprivation experienced by people living in England) (McLennan et al. 2011) (see Appendix 3).

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Both Hastings and North Shields retain a commercially important and relevant fishing fleet. The Hastings fleet is slightly larger ($n = 364$ compared to $n = 332$ in North Shields) and both have declined substantially from historical levels although the two fishing ports have also benefitted from recent inwards investment - Hastings has been in receipt of EU funding to enhance its fishing operations; and North Shields has received lottery funding to enhance its fish quay, which houses the main harbour, fish market and various fish retailers and restaurants.

Income was thought to be particularly important to account for because of the slight confusion in the academic literature concerning the influence of income and seafood consumption (Olsen 2004). In choosing locations with similar levels of deprivation and affluence, it was anticipated that the effect of income would be negligible across the comparison groups.

Fig. 31 The Four Study Locations



Recruitment for the workshops was researcher-driven and involved a leafleting campaign via retail outlets; the targeting of existing community groups (such as women's institutes) and, through the placing of an advertisement, accompanying a short article about the research, in free newspapers (Peek and Fothergill 2009). The only qualifications for recruitment were that participants needed to be over 18 years of age, to be current purchasers of seafood and to be resident in the area where the workshops were taking place. In this way, participants had

common experience that would enable them to interact in a group setting (Bryman 2012). The risk of failing to recruit sufficient participants was also minimised. Participation was further incentivised by the inclusion of all participants into a prize draw.

Because the research was interested in exploring whether behavioural change might be possible amongst these consumers, the research design involved participants taking part in two workshops – each a month apart. The first workshop, lasting approximately 1.5 hours, introduced participants to the background to the research and engaged them in discussion about their current buying behaviours : what they buy; when, where they bought it and what issues they took account of when doing so. Participants also completed a baseline questionnaire that captured current consumption behaviours as well as demographic and attitudinal factors that have been linked to seafood consumption in previous studies (Olsen 2004).

The second workshop focused upon exploring participants understanding of sustainability and its impact upon their buying behaviours. Group discussion and participation in a game enabled participants to both develop their own definition of sustainable seafood; and, to develop a greater awareness of the issues surrounding sustainable consumption and of the species currently deemed to be sustainable. The game was designed to test their knowledge of different fish species – from pictures of the whole animal; and their awareness of the sustainability of those species. Participants were given an A4 sheet of paper containing a grid with images of ten different species of seafood and information about the production method of each species (farmed or caught at sea). Initially participants were asked to identify the ten species from the pictures. Their next task was to determine whether the species was safe to eat or should be avoided (from a sustainability perspective) using the information on production method and species. Once the participants had completed the grid, the researcher gave the answers to the species and the question of whether to eat or avoid – this information being taken from the Marine Conservation Society's Good Fish Guide (<http://www.fishonline.org/>).

The second half of the second workshop explored participants' experiences of shopping for seafood. Data was presented showing the variability in the offering provided by the five largest UK Supermarkets (Tesco, Sainsbury's, Morrisons, Asda, Waitrose). Participants were asked to reflect on their awareness of the differences between the supermarkets and whether this affected their buying behaviours in any way.

To minimise attrition between workshops, participants were sent an email between sessions and were sent a reminder about the date of the second workshop a week in advance.

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Each workshop took place in a local community venue chosen on the basis of its accessibility for study participants. Despite recruiting sufficient numbers overall to permit a group-based approach (nNE = 19, nSE = 19) and taking steps to assess participants' preferences for time of meeting, their ultimate availability was such that the first workshops, in particular, were poorly attended (Table 25).

Table 25 Workshop Attendance

	NE		SE	
	Coastal	Urban	Coastal	Urban
Workshop 1	4 (m=1; f = 3)	2 (m=1;f=1)	2 (m=2)	1 (f=1)
Workshop 2	2 (m=1;f=1)	5 (m=4;f=1)	5 (m=4;f=1)	3 (m=1;f=2)

The low attendance was a barrier to the generation of group data but did enable the capture of detailed baseline survey data from those who were able to attend one or both of the workshops (see below). It also provided a unique insight, through the playing of the sustainability game in the second workshop, into participants' knowledge about different commonly eaten fish species, which was typically found to be low with respect to both the physical appearances of the seafood that they eat and their sustainability status (see Chapter 6 for a full discussion).

The decision was therefore made to persist with the two-workshop format, despite the lower than anticipated numbers, with the first focusing upon current and previous buying behaviours and the second workshop exploring participants' understanding and definitions of sustainability and their experiences of retail. To mitigate the effect of the lower numbers, additional one to one interviews (n = 64) were scheduled with the participants (see below). Insights generated from the group discussions were thus supplemented and complemented by data from individual interviews.

The choice of the term workshop (as opposed to focus group) was intended to emphasise the participatory nature of the research. Involvement by participants in the research process was intended to be both educational and inspirational for researcher and the participants, with the latter ultimately being asked to rate the extent to which their behaviours were likely to change in the future as a result of their involvement. In this way, the method is similar to the Contingent Valuation Market Stall technique, in that participants are enabled to engage more fully with complex issues through the provision of information, discussion and time for reflection and learning (Philip and MacMillan 2005).

In a further departure from the traditional focus group, every effort was made to create a diverse group membership, rather than segmenting the groups on the basis of various demographics.

In this way, the effect upon buying behaviours of in-group variations in age, income, education, gender and ethnic origin - issues known to have some effect upon seafood behaviours (Wellman 1992) might be explored by the participants themselves. This has the advantage of generating insight for both the researcher and the participants about the extent to which attitudes and behaviours vary across society as a whole, as opposed to within specific demographic groups (Hesse-Biber and Leavy 2006). A potential disadvantage of the approach, however, is the extra effort required by the facilitator in ensuring that everyone feels able and comfortable to participate (Bryman 2012).

To pre-empt any attribution problems associated with the group discussions (Bryman 2012), each session was audio-recorded. Transcripts of the workshops were analysed to identify common and varying themes and concepts using the qualitative analysis software, NVivo 10.

5.3.3 Survey of Individual Participants

To understand the profile of the consumers participating in the study and to identify differences and similarities between them, basic demographic data was captured for every study participant via a one-page questionnaire (n = 64) (Appendix 4). The survey data contributed to answering Research Questions 3, 4 and 5.

Twenty nine of the sixty four study participants also completed a more detailed survey that captured additional information on their current purchase behaviour; awareness of the environmental effects of the fishing industry; and their individual values (Appendix 5). All of these factors have been associated with varying degrees of likelihood to buy seafood and to engage in pro-environmental behaviours, such as shopping for sustainable alternatives (Myrland et al. 2000; Wellman 1992; Hanson and Herrmann 1995). Questions relating to the differences between consumers on the basis of these variables were also generated from the first two phases of the data collection and analysis (questions 2, 3, 4, and 5 in Fig. 1 and Table 1, p.19-20).

Typically those who completed the full survey had also expressed an initial interest in taking part in the workshops (but did not necessarily actually attend.) It is therefore possible that this sub group were keener and therefore incomparable to the other study participants. Statistical analysis found no real significant differences between the full and partial study populations, however. The ratio of males to females in the subgroup was marginally greater ($\chi^2 = 3.6666$, $df = 1$, $p = 0.056$) and there was a slightly greater degree of involvement in the fishing industry amongst the full survey group but this was not statistically significant ($\chi^2_{\text{exact}} = 4.4544$, $df = 1$, $p = 0.067$). On every measure the two groups were comparable.

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Individual values were measured using the abbreviated version of the Schwartz Portrait Values Questionnaire (PVQ) currently used within the European Social Survey (ESS). The PVQ has been extensively field tested and found to be reliable across cultures and a wide range of demographic indicators (Schwartz 2011). The ESS-version of the PVQ contains 21 short descriptions of an individual. The respondent is asked to rate on a 1 – 6 point scale, how alike they are to the description. When the scores are combined, mean scores on the 10 universal values can be obtained. The 2010/11 version of the ESS-PVQ is a refinement of previous versions deployed in the earlier four rounds of the Survey and addresses concerns raised previously about a lack of discriminant validity of the different values measured by the ESS (Knoppen & Saris 2009). It was adopted for inclusion in the 2010/11 survey and has consequently been field tested in 30 nations. Data from the 2010 round of the European Social Survey was used to calculate UK average individual value scores, which then served as a comparator group for the participants in this study.

Ethnicity and Income categories were the same as those used in the 2011 UK Census and Institute for Fiscal Studies Household income survey, respectively.

The questionnaire was piloted prior to its use in the workshops to remove or amend any unclear or superfluous questions. Questionnaires were numbered and given to individual participants for completion at the beginning of the first workshop session or before their interview. In this way, a baseline position could be attained, absent the effect of their participation in the research, for every participant.

Data from the surveys was inputted initially into Excel and then exported into the statistical software SPSS Statistics 19 for analysis.

Three distinct analyses were carried out using the data from the shorter (demographic) questionnaire (n = 64). It was firstly interrogated to determine if there were any differences on any measure between the full survey and partial survey respondents. By finding that the groups were similar, the subsequent interview data could be grouped together into a single dataset, without concern that the views being expressed were affected by differences in demographics (see 5.3.4 below). Secondly, to explore differences across the groups of participants, analysis compared the demographics of the NE versus SE participants; and the coastal vs urban participants (this sought to address question 2 in Fig 1). Finally, the demographic data of all the study participants was compared with nationally available data to explore any differences between the two populations. This latter analysis was important for examining the links between age and income and seafood consumption (question 4 in Fig. 1 and Table 1, p. 19-20).

5.3.4 Personal diaries

Between the two workshops and for up to four to six weeks afterwards, participants were asked to keep a personal diary in which to record their purchase activity and behaviours. The aim of this exercise was to capture real-time purchase behaviour (as opposed to relying upon recall, with the possibilities for error that this then introduces (Bernard 2011); to get a sense of the actual experiences of the shoppers (they were asked to not just note what they had bought but to also reflect on why they had made the purchase, for example); and, to record any changes in buying behaviour as a (potential) result of having taken part in the workshops. The subsequent analysis considered whether the diaries revealed any differences between the SE and NE study participants, thereby addressing Research Question 2 (see Fig. 1 and Table 1, p. 19).

Solicited, or “researcher driven” diaries differ from unsolicited or autobiographical diaries in being focused upon a specific topic of interest that has been determined by the researcher in advance (Jones 2000; Meth 2003; Jacelon and Imperio 2005; Milligan, Bingley and Gatrell 2005). The degree of structure given to the diary will vary depending upon the research question and research tradition, with those falling within the normative (i.e. positivist) paradigm tending to take the form of questionnaires and interpretive approaches utilising semi- or unstructured diaries in order to gather thicker (qualitative) descriptions of social phenomena (Symon 2004; Patterson 2005). As a qualitative method they remain largely underutilised, despite evidence for their effectiveness in capturing the emic perspective and, in so doing, often revealing differences in the responses participants give to other, complementary, methods (such as focus groups and surveys) (Meth 2003; Milligan, Bingley and Gatrell 2005; Corti 1993; Elliott 1997; Elliott and Jankel-Elliott 2003). Further, as a longitudinal method, diaries have the ability to capture more data than static techniques such as interviews and to identify changes in positions over time. The contemporaneous nature of diary-keeping helps to reduce errors associated with participant recall and because they are completed by the participants at the place of their choosing, they are highly contextualised. From a Critical perspective diaries also have a potentially transformative effect – directly involving the participants in the research process and providing the space and opportunity for participant reflection on current and past behaviours and to record any changes in their lives (Meth 2003; Symon 2004; Milligan, Bingley and Gatrell 2005; Jackson et al. 2006; Kenten 2010).

The diary format does require a degree of participant literacy (although use of video diaries, for example, can alleviate this) and attrition can be a concern, particularly if the study exceeds several weeks (Meth 2003; Jacelon and Imperio 2005; Symon 2004; Kenten 2010). As a method it is also not for everyone, with some taking better to group discussion, for example, than

personal record keeping (Elliott 1997). Thus, while diaries have merit as a stand-alone tool, it is in combination with other qualitative methods that they have been most usefully deployed (Corti 1993; Elliott and Jankel-Elliott 2003; Milligan, Bingley and Gatrell 2005).

In common with previous studies (Meth 2003; Symon 2004; Corti 1993) the diaries constituted a small stapled booklet of eight pre-formatted sheets of paper – each page representing one shopping trip, that prompted participants to describe what seafood they had bought, when, why and from where; as well as to record the range of other fish species for sale at the time. They were also asked to note down any reflections and / or actions that had arisen from the participation in the workshops – including any questions / concerns they had during the first workshop which they did not feel able to raise. (This latter requirement was specifically included as a way of evaluating the community workshop approach, similar to the issuing of the post-workshop questionnaire (Hesse-Biber and Leavy 2004).) The cover sheet was a different colour to make it easily identifiable. The first page gave instructions on how to complete the diary and gave the researcher's contact details in case of any difficulty or questions. A blank diary is attached in Appendix 6.

Participants were recruited at the first workshop so that the purpose of the diary-keeping could be properly explained and any concerns regarding confidentiality could be addressed – factors known to affect attrition rates during diary-keeping (Meth 2003; Symon 2004; Corti 1993). Every workshop attendee was given the opportunity to keep a diary but participation was voluntary (and not a condition of remaining involved in the workshops). This presented the risk of low levels of diary keeping but, as the emphasis of the diary approach is upon providing thick descriptions of behaviours, sample size was not deemed a significant issue (and previous studies have ranged in size from 10 (Symon 2004; Jackson et al. 2006) to 1,609 participants (Milligan, Bingley and Gatrell 2005)). Participants were asked to begin completing the diaries after the first workshop and to continue to complete them for every seafood buying trip for four to six weeks after the last workshop took place.

Eighteen diaries were issued and returned (10 from SE participants and 8 from NE participants). Each diary was scanned and imported into Nvivo 10 for Coding and analysis. Data was interrogated for differences between the NE and SE participants with respect to what they were buying; how regularly and any possible changes in their buying behaviours - thereby providing additional data to address Research Questions 2 to 7 (see Fig 1 and Table 1, p. 19-20).

5.3.5 Semi-Structured Interviews

The fourth and most substantial component of the data collection constituted of sixty four one to one interviews. These were conducted between November 2013 and March 2014 (thirty-two with participants living in the South East of England and thirty two with participants living in the North East of England.) The interviews were intended to explore the meanings individuals assigned to their fish choices in a much deeper way than is permitted in group-based discussion. By holding the interviews after the conclusion of the workshops, it was intended that they would elicit both new themes and permit the exploration of issues that arose through the group discussions. For those interviewees who also kept a diary, holding the interviews after the return date for the diaries permitted exploration of issues arising with the diary keeping as well as ensuring that the diaries were returned (as the researcher could take them away with her after the interview concluded) – thereby increasing the diary return rate.

Each interview was conducted in the same format. For practical reasons the majority of the interviews were conducted over the 'phone but where logistics allowed a number (n = 15) were conducted in person. The same researcher undertook every interview using a semi-structured interview guide (Appendix 7) that was designed to capture information about historical, current and future buying behaviours; consumers' understanding of the term sustainability; and consumers feelings about different edible fish species (thereby addressing the overarching Research Objective : Why the Big 5, as well as the six supplementary Research Questions (RQs 3 – 8 (see Fig 1 and Table 1, p. 19-20).)

Interview participants were recruited directly from the workshops; through snowballing - by asking workshop participants and local business contacts to suggest people who would be willing to be interviewed; and, by directly recruiting shoppers from fishmongers and supermarkets in the study areas. The decision to recruit new interviewees in addition to the workshop participants was intentional, serving both to mitigate against a failure to recruit sufficient participants from the focus groups (people had already given up a lot of their time to the two workshops); and, to provide the potential to explore the effect of previous involvement in the study upon interview responses (as a measure of the effect of the workshop process upon the participants.) Participation was further incentivised by the offer of inclusion into a prize draw.

Repertory Grids were used to add structure to the discussion about current preferences. The Repertory Grid approach is rooted in the Personal Construct Theory developed by George Kelly (Kelly 1955) At the heart of construct theory is the notion of “every man his own scientist” – the idea that as humans we all strive to understand ourselves and our surroundings; and that we do so through continual experimentation – developing hypotheses (“*constructs*”), subjecting these

to testing, evaluating the results and then accepting or rejecting the results based upon our findings with a consequent effect upon our behaviours. In this way, every individual develops their own personal construct system – a theoretical framework through which they view the world (Fransella and Bannister 1977). The repertory grid technique allows researchers to elucidate personal constructs in such a way that the researcher is able to see through others eyes, without necessarily having to agree with or have the same constructs as the interviewee.

The method involves a number of steps. Firstly, a series of elements are identified that are relevant to the area being researched. Because this study was concerned with why UK consumers prefer the top 5 species of Salmon, Cod, Haddock, Tuna and Prawns and the possibilities for encouraging consumers to try less utilised species, the elements were determined by the researcher in advance. They were the top 5 most commonly eaten fish species and five less commonly eaten, but still commercially available, UK wild-caught fish species (as identified through the analysis of the Tesco club-card data). The specific choice of these ten species was made with a view to ensuring that every person had at least some knowledge of each species, thereby ensuring equal participation amongst all the interviewees and complete grid construction in every interview. A blank grid is in Appendix 8.

Triadic sorting was then used to elicit a set of constructs from each interviewee. In this method, the interviewer asks the interviewee to identify how two of three items chosen by the interviewer are alike, or different from one another (Kelly 1955). The words the interviewees use to describe the differences are then recorded on a pre-printed grid, with the contrasting words placed at opposing ends of a row (see Table 26). The interviewer continued to present combinations of elements to the interviewee in order to generate between 10 and 12 constructs.

An advantage of the Repertory Grid technique is that the process of completing the grid, through structured conversation between interviewee and interviewer, allows for the elicitation of additional information about the individual's understanding of a given topic and the importance they assign to it. The choice of particular words to differentiate elements, for example, can be probed by the interviewer, through the use of why questions to elicit further insights into individual meanings. By laddering in this way, it is possible to move the discussion from a description of attributes only to higher levels of abstraction and so into a deeper exploration of consumer motivations for engaging in particular behaviours (Reynolds and Gutman 1988). So-called, higher-order constructs elicited through laddering were added to the grid as the interviews progressed.

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Once the outline of the grid was complete, interviewees were then asked to provide a very simple score for each element using a tick / cross approach – where a tick indicated that an element rated near the positive pole of their construct and a cross that it rated nearer the opposite end (see example in Table 26). This simple method enabled the researcher to visually inspect the grids for emergent patterns during the interview process and to engage the participant in a discussion about those patterns. In turn, these conversations, often yielded additional constructs that were then rated, as above. The process of construct elicitation and rating continued until such time as the participant felt that they had given everything they wanted to say on the topic and the researcher was content that there was sufficient material, in the completed grids themselves and from the narrative of the interviews, to permit subsequent analysis.

Table 26 Example of Partially-Completed Repertory Grid

	Salmon	Cod	Tuna	Prawns	Herring	
No bones	✓	✓	✓	✓	✗	Bony
Firm texture	✓	✓	✓	✓	✓	Flaky
Easy to cook	✓	✓	✓	✓	✗	Difficult

The completed repertory grids were retained, securely, by the researcher for analysis at both the individual and group level – the latter to explore the extent to which commonality (use of common constructs), might explain reasons for variations in overall fish consumption and the types of fish eaten by UK consumers.

Each interview was audio-recorded and subsequently transcribed and imported in to Nvivo 10 for analysis. Three high level codes were initially created that reflected the overarching research question and the six supplementary questions generated from the first two phases of data collection and analysis (see Fig. 1 and Table 1, p. 19-20). Thus, the first theme was “Consumers and the Big 5.” The six questions were grouped under two topic headings – sustainability; and retail behaviours. The resulting high-level codes were thus “consumers and sustainability” and “consumers and retail.” All of the workshop and interview data was subsequently coded to these high level themes, with additional lower level codes developed reflecting the finer detailed themes within each of the main themes.

5.3.6 Connection to the Research Questions

Phase 3 of the research therefore consisted of the use of four different methods to answer the six additional Research Questions generated through the first two phases of data collection and analysis (see Figure 1, p. 19) and, ultimately, to answer the overarching Research Objective : Why the Big 5.

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Table 1 is repeated here as a reminder of how the methods used in this final phase of field work relate to the six Research Questions. The shading indicates that Research Questions 1 and 2 were answered by the two earlier phases of analysis and were not the focus of this phase. The table also indicates where these questions have been answered in the body of the Thesis.

Table 1 Summary Table Connecting the Research Questions to the Methods and Findings (shading indicates that RQs 1 and 2 were answered in phase 1 and 2 of data collection and analysis).

Research Objective : Why the Big 5 ?		
Research Question	Method(s) Used	Where are Findings Discussed
RQ 1 : What are current UK Sales Patterns for Seafood?	<ul style="list-style-type: none"> • Analysis of Tesco clubcard data held on the dunnhumby database 	<ul style="list-style-type: none"> • 3.5
RQ 2 : How does Tesco's offer compare with the other UK Supermarkets?	<ul style="list-style-type: none"> • On-line review of the seafood for sale at the UK's five largest supermarkets 	<ul style="list-style-type: none"> • 3.4.2
RQ 3 : Why are there regional variations in seafood sales?	<ul style="list-style-type: none"> • Survey – to capture information on place of residence and consumption frequency (recalled) • Diaries – to capture information on place of residence and consumption (real-time) • Interviews – for consumer views on their consumption patterns 	<ul style="list-style-type: none"> • 5.5.1 • 6.2.4.3 • 6.2.4.4 • 6.2.4.5
RQ 4 : Are Tesco supermarket shoppers different from other shoppers?	<ul style="list-style-type: none"> • Survey – to compare the characteristics of the study participants with the average Tesco shopper • Diaries – to capture information on where the consumers are shopping and what they bought • Interviews – for consumers views on the different 	<ul style="list-style-type: none"> • 5.5 • 6.2.3.3

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	retailers and their offerings	
RQ 5 : Are age and income important in seafood consumption?	<ul style="list-style-type: none"> • Survey – to capture information on income, age and consumption • Interviews – for consumers’ views of their own consumption behaviours 	<ul style="list-style-type: none"> • 5.5 • 6.2.2.1 • 6.2.4.1
RQ 6 : What do consumers understand about sustainability?	<ul style="list-style-type: none"> • Survey – to capture knowledge and awareness of sustainability issues relating to seafood • Workshops – to capture participants’ knowledge of the sustainability status of 10 species • Interviews – for consumers views on what sustainability means and whether it affects their buying behaviour 	<ul style="list-style-type: none"> • 5.5.6 • 6.3
RQ7 : Are consumers aware of the differences in the sustainability of the seafood offered by retailers and does it influence their buying behaviours?	<ul style="list-style-type: none"> • Workshop – to explore consumer reactions to differing Supermarket offers • Interviews – for consumer views on why they shop where they do 	<ul style="list-style-type: none"> • 6.2.3.3 • 6.3.3.2.2
RQ 8 : Could supermarkets be doing more to promote sales of sustainable seafood?	<ul style="list-style-type: none"> • Interviews – for consumers’ views on how supermarkets offer seafood 	<ul style="list-style-type: none"> • 6.2.3.2 • 6.2.3.4 • 6.2.4.2 • 6.2.4.4 • 6.4.2.2

5.3.7 Ethical Considerations

The study complied fully with the University’s policy on ethical conduct in research (see Appendix 9).

An ethical checklist was completed and submitted to the School which described the aims of the study and confirmed that there were no significant ethical issues to be concerned about - in that the study topic was not contentious and there was no potential for participant harm or distress arising from taking part. The personal safety of the researcher was highlighted as a potential issue and was addressed by ensuring that a) all interviews were conducted either over the phone

or in a public place; b) the whereabouts of the researcher was known at all times by a third party; and c) that for the field work, the researcher stayed in appropriate, safe, accommodation and hired their transport from a reputable leasing firm.

Informed consent was ensured at every stage of the data collection process – from initial recruitment, through to taking part in the workshops, interviews and carrying out the questionnaires, by the researcher advising every participant about the purpose of the study; their credentials (i.e. that they were a University of Kent Doctoral student funded by a UK Research Council); and how their data would be used and stored.

Thus, at initial recruitment via both the face to face and on-line methods described above, participants received a copy of the flyer (Appendix 10) that explained the context of the study, the criteria for taking part (that they were 18 years old or older, were UK residents and ate seafood), how the study would operate (workshops, interviews etc.) and how their data would be used to inform future initiatives aimed at increasing the sustainability of UK seafood consumption patterns. By requiring that participants meet the initial criteria at the point of recruitment, the researcher was confident that they would be able to contribute to the aims of the study. This, however, was further tested / demonstrated by the participants' responses to the questionnaire, as described in Section 5.5 below.

At the point of data collection (i.e. the workshops and interviews), the researcher again introduced herself, explained the purpose of the study and assured participants that their responses were confidential to the researcher. It was explained that the personal details captured in the questionnaire would be used to inform the analysis (and an explanation was given as to why, for example, income was being requested as a variable because of the research evidence pointing to a link between wealth and seafood consumption); but that any personal identifiers (such as names and addresses) would be removed from any public reports derived from the research.

The collected data comprised both hard-copy and digital materials. The hard copies (questionnaires and diaries) were retained by the researcher, filed together and stored in a locked office to which only the researcher had access. The digital information (recordings of the interviews and workshops) was stored on the personal drive of the researcher's computer again ensuring that only they could access it. Records were backed up onto two separate external hard drives which the researcher kept in a locked draw in their office.

5.4 CHARACTERISTICS OF THE STUDY POPULATION

5.4.1 Demographics (Age, Ethnicity, Household Income, Gender, Involvement and Place of Residence)

Slightly more females than males took part in the study as a whole (57.8 % vs 42.2%) but this was not significant compared to national gender profiles ($\chi^2 = 3.273$, $df = 3$, $p = 0.351$). Participant age was, however, heavily skewed towards the middle aged and older population ($\chi^2 = 79.218$, $df = 18$, $p < 0.001$) compared to national age profiles. The ethnicity profile of the study population was also significantly less heterogeneous than the national average, with 89% of the study population describing themselves as white British versus 79% in the UK population as a whole ($\chi^2 = 10.299$, $df = 3$, $p = 0.016$). Across the regions, the profile varied, with the NE study population being slightly more diverse (88 % White British : 12 % Other vs 90 % : 10% in the SE) but the differences were statistically insignificant ($\chi^2 = 1.018$, $df = 2$, $p = 1$).

As a whole the study participants were reasonably well off – median household income was £25 - 40,000 per annum, or approximately £673 / week, compared to the national average of £427/ week (Cribb et al 2013). Income is possibly a reflection of participant education – a third had higher degrees and 20% had first degrees; and less than five percent had no formal qualifications, compared with 23% in the wider UK population (ONS 2014a). Regionally, educational attainment varied, with the SE participants being the better qualified (40% having higher degrees compared to 28% in the NE) but these differences were not statistically significant ($\chi^2 = 8.727$, $df = 6$, $p = .174$).

Juhl and Poulson (2000) demonstrated how “involvement” (i.e. the “*level of a consumer’s personal relationship with a product or service including perceived importance, value and risk*” (Antonides and Van Raaij 1998, p. 118)) positively affected seafood consumption. Fourteen percent of the study participants had some kind of close personal connection with the fishing industry through family or friends and might, therefore, have been expected to consume more seafood than their counterparts. However, no significant statistical differences were found between the groups, with respect to the amounts of seafood consumed ($\chi^2 = 2.533$, $df = 2$, $p = 0.282$).

Involvement with the fishing industry did vary across the regions, with the NE having the most connections (18.8% of participants versus just 9.4% in the SE). Perhaps unsurprisingly, coastal participants also expressed more connections than urban ones. Neither of these variations were statistically significant, however.

As a whole the study participants tended to originally hail from urban areas – 73% vs 27% for coastal towns and villages. The SE group had higher numbers of representatives of coastal communities and less from inner cities than the NE but, again, these differences were statistically insignificant ($\chi^2 = 3.489$, $df = 3$, $p = 0.345$).

Appendix 11 contains a full summary of the demographic data.

It can therefore be concluded that the study population shared many of the characteristics of the “typical” seafood consumer described in previous research, by being older, wealthier and ethnically less diverse than comparative national populations (Olsen 2003; Myrland et al. 2000; Wellman 1992; Burger 2008; Pieniak, Verbeke and Scholderer 2010).

Key differences were also identified, however, in that no evidence could be found for a gender difference with respect to buying frequency or preferences for eco-labelled seafood in stark contrast to previous findings (Wessells, Johnston and Donath 1999). Place of residence also appeared insignificant, in contrast with previous studies (Verbeke and Vackier 2005; Myrland et al. 2000; Trondsen et al. 2004). Potential explanations for this are discussed in the following chapter.

5.4.2 Participant Values

Individual values have been identified as an important variable in shaping consumers’ intentions to behave in a particular manner (Schwartz 1999; Menzel and Bögeholz 2010; Lusk, Nilsson and Foster 2007). Understanding a person’s values may therefore provide some insight into their buying behaviours. To explore the full values profile of the consumers in this study, the values data collected from section 3 of the full baseline survey ($n = 29$) was compared with the UK data captured by the 2012 European Social Survey. Individual raw means for the ten individual values were calculated by combining the scores of the statements in the index that related to them. The data was then corrected following the procedures described by Schwartz (http://www.europeansocialsurvey.org/docs/methodology/ESS1_human_values_scale.pdf)

The sample size in this study was relatively small ($n = 29$) making generalisations difficult. The participants were also all recruited for the express purpose of talking about seafood consumption and so can be assumed to have an above average interest in the topic and, possibly, therefore, a greater affinity for values, such as Universalism, which are linked to a concern for the environment. Nevertheless, as an initial investigation into the values profiles of a particular consumer segment (i.e. seafood buyers), the results of the analysis are intriguing.

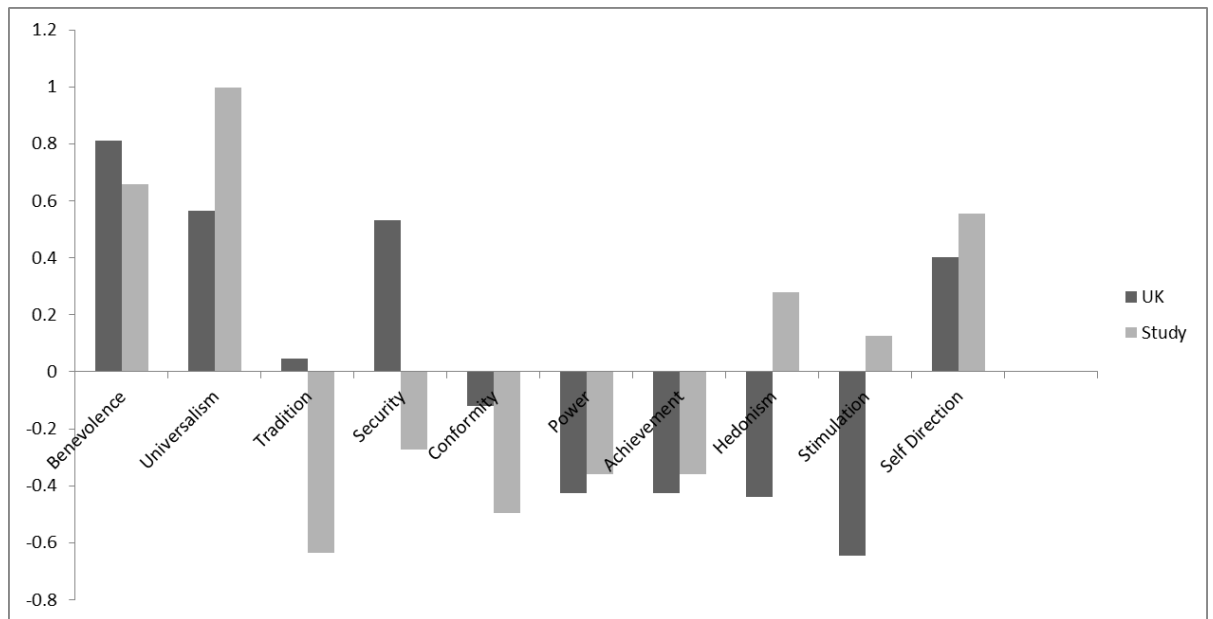
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The first key finding was that the mean centred scores varied considerably between the UK and the Study population. Statistical analysis confirmed that those differences were highly significant for six values – Security, Conformity, Tradition, Universalism, Stimulation and Hedonism (Table 27, Figure 32).

Table 27 Mean Centred Scores For The Ten Universal Values Found In The UK Population As a Whole And The Study Population

Value	UK Population	All Study	T-statistics
Security	.5316	-.2718	=5.558,df=2296, p<0.001 ***
Conformity	-.1183	-.4959	t=2.082, df =2298, p = 0.037 *
Tradition	.0476	-.6338	t=4.164,df = 2295, p < 0.001***
Benevolence	.8129	.6593	t = 1.301, df = 2296, p = 0.193
Universalism	.5646	.9984	t=-3.660, df=2299, p<0.001***
Self Direction	.4039	.5558	t=-1.073, df = 2298, p = 0.283
Stimulation	-.6447	.1248	T=-4.169, df=2297, p < 0.001***
Hedonism	-.4394	.2800	T=-4.105, df=2296, p<0.001 ***
Achievement	-.4248	-.3580	T = -0.381, df=2295, p = 0.703
Power	-.4248	-.3580	T=-0.381, df=2295, p=0.703

Fig. 32 Mean Centred Scores for the Ten Individual Personal Values of the Study Population and the the UK Population as a whole



These findings show that the study population was significantly *less concerned* about the values of Security, Conformity and Tradition and significantly *more concerned* with the values of Universalism, Stimulation and Hedonism than the UK population as a whole. The majority of the literature on individual values has focused upon comparing the values profiles of different nations, using common professional groupings (such as teachers or students) as the comparator group, rather than intra-societal variations in values (Schwartz 2011). Prior to 2011, only one study existed that explored societal value consensus and subsequent empirical research into this topic has been very limited (Schwartz and Sagie 2000; Fischer and Schwartz 2011). Values consensus is thought to be a key indicator of, and foundation for, national stability. In finding that there is a distinct dissensus amongst two societal groupings within the UK (i.e. the “average” consumer and the “seafood consumer”), this study adds to the Values literature and confirms the complex and arguably fragmented nature of contemporary UK society (Fischer and Schwartz 2011). Further, by finding that seafood consumers are somehow different from the UK average consumer, this study opens up a new area for further research, i.e. intra-societal values differences relating to food-buying behaviour. It would be informative, for example, to conduct further research with a larger group of consumers to determine if value differences exist across other food groups and / or to consumers with a heightened interest in food generally (the “foodies”); or whether these results are unique to those identifying strongly as seafood consumers. The implications for policy makers and for retail from such an analysis could be far reaching.

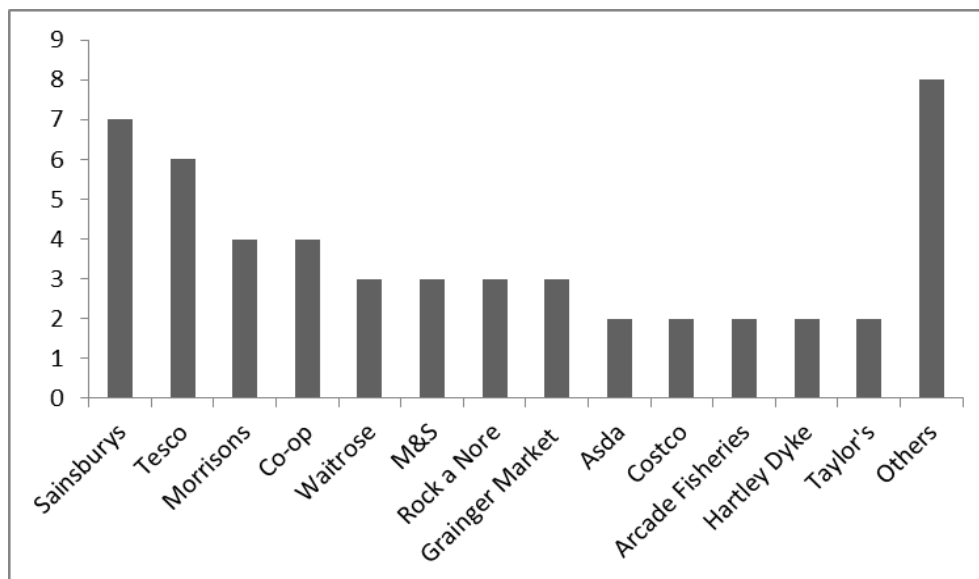
The second key finding from this analysis was that the lower scoring values of Security, Conformity and Tradition clustered together in Schwartz's values framework under the higher order value of Conservation (see Figure 19 in Chapter 4). The values of Hedonism and Stimulation lie in direct opposition to these values in the Openness to Change values cluster (Schwartz 1992). This study therefore adds to the values Literature in providing further evidence in support of the theorised orthogonal relationship between the individual values, in that the consumers who scored highly on the Openness to Change values scored correspondingly lowly on the opposing value cluster of Conservation.

5.4.3 Where Participants Shopped for Seafood

Analysis of the baseline questionnaires revealed that the supermarkets were the typical shopping destination, with 65.5% of participants stating that they *usually* shopped there as opposed to the 20.7% who frequented fishmongers only. 13.7% deployed a combination of the two. Just over half of all shoppers, however, claimed to shop around for their seafood on occasion, (frequented more than one supermarket or fishmonger). Interestingly, the urban dwellers were much less likely to shop around than their coastal counterparts ($\chi^2 = 6.428$, $df = 1$, $p = 0.011$), possibly reflecting the differing retail landscapes, wherein fishmongers are a bigger part of the retail scene in coastal than urban areas, thereby permitting coastal shoppers to shop around with greater ease.

The diary analysis also confirmed the relative popularity of the supermarkets over independent fishmongers (between them the Big 5 supermarkets accounted for 42% of the total number of shopping trips recorded by the diarists.) The customers in this study, however, favoured Sainsbury's and Morrison's over Tesco and Asda. Waitrose was the 5th most frequently visited retailer (behind the Co-op) (Figure 33). In this respect, then, the behaviours of the consumers in this study differed slightly from the average UK consumer – in that they relied less upon the supermarkets for their seafood than the average (buying 42% versus the 75% national figure (Seafish 2015)) and they were buying from retailers with a lower overall market share. The reasons for this pattern of behaviour are elucidated in section 6.3 below (consumers and retail.) Overall, however, the finding that the consumers shopped around ensured that they were, again, well qualified to talk about their experiences of the UK retail scene.

Fig. 33 Total Number of Shopping Visits per Individual Retailer (as recorded in Shoppers' Diaries)

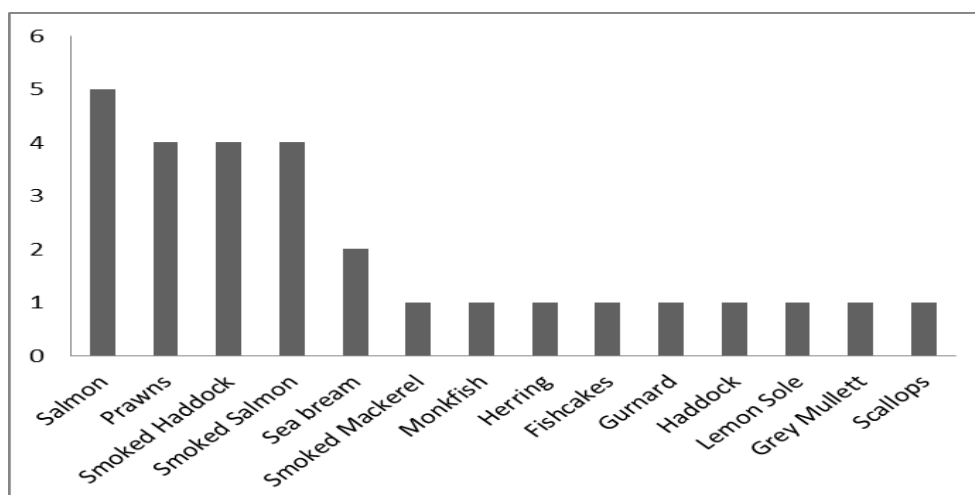


5.4.4 What Consumers Bought

Analysis of the questionnaires confirmed that, as a whole, the study population were regular buyers of seafood with over a half buying more than 4 times a month. This compares favourably with the findings from a recent UK study where 68% of participants ate less than this (Clonan et al. 2012), suggesting, again, that the consumers recruited for this study were keen seafood consumers and therefore in a good position to talk with confidence about their buying behaviours. Buyers in the NE shopped more regularly than those in the SE but the differences were not significant ($\chi^2 = 3.060$, $df = 2$, $p = 0.217$).

When asked to recall their most recent purchase, the majority of respondents cited Salmon – smoked or unsmoked, with Prawns and smoked Haddock being the next most popular, as per national consumption trends (Figure 34).

Fig. 34 Number of Participants Recalling Recently Buying Different Kinds of Seafood



Similarly, and consistent with national buying patterns, the diary analysis found that Salmon was by far the most frequently purchased item of seafood, with Prawns, Haddock, Cod and, interestingly, Mackerel making up the top 5. However, together, these 5 “species” only accounted for 57% of the purchases made by the study participants, indicating that the study population were buying a wider variety of seafood than the average UK shopper (wherein 80% of sales are accounted for by the “Big 5” of Cod, Haddock, Salmon, Tuna and Prawns). Indeed, between them the study shoppers bought 26 different species and, in doing so, demonstrated a collective demand for seafood variety that was found in just one of the UK’s supermarket chains - Morrison’s (section 3.4.2).

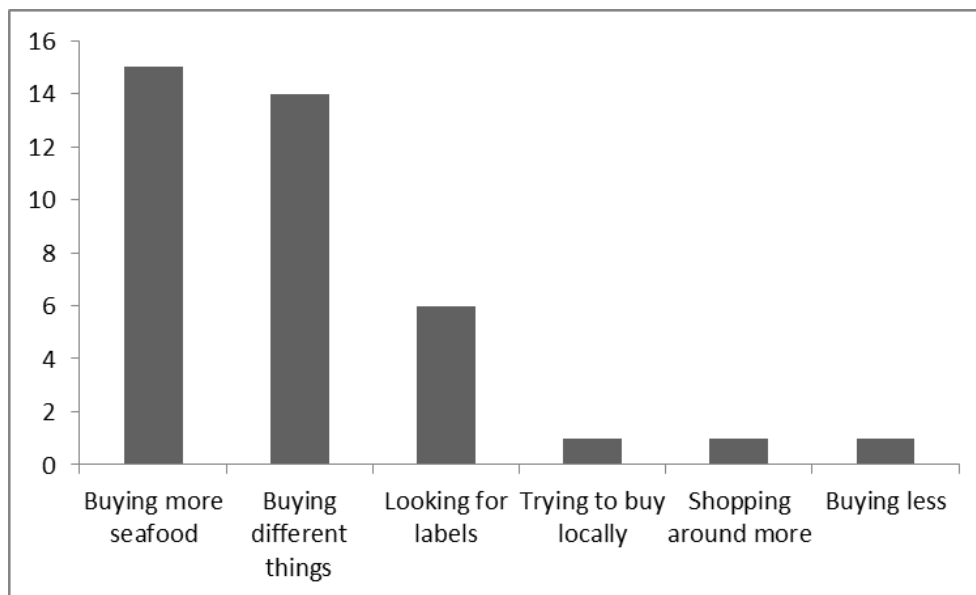
The diary analysis revealed that Cod was the fifth most popular item purchased behind Mackerel and was bought, as Cod fillets, by six of the eighteen diary-keepers. Its inclusion in this list is interesting given that the questionnaire respondents (most of whom also completed a shopping diary), failed to recall buying Cod, with none of them giving Cod in response to the question about their most recently purchased seafood (see Fig. 34 above.) While this may be completely coincidental, it is notable that the consumers in this study talked strongly about avoiding Cod for sustainability reasons (see section 6.3). Perhaps in the case of the questionnaire, then, consumers were experiencing selective recall, for fear of evidencing buying behaviours that conflicted with their ethical standpoint - in essence displaying the intention-behaviour gap that has been debated so heavily in the wider ethical consumption literature (Carrigan and Attalla 2001; Szmigin, Carrigan and McEachern 2009; Wheale and Hinton 2007; Auger and Devinney 2007; Chatzidakis, Hibbert and Smith 2007; Bakker and Dagevos 2011).

Comparing the interview responses with the diary entries, however, produced an alternative explanation, for it emerged that these consumers had a more positive view of the status of *local* Cod stocks and trusted their local retailers in providing local (and therefore sustainable) produce. Thus, one consumer described how he would buy Cod from the local fishmonger (which sells locally-caught fish) but generally not from a supermarket; and others perceived that UK fish stocks were better managed than other stocks and were therefore alright to eat from a sustainability perspective. This finding is both illustrative of consumer opinion regarding the sustainability of UK fishing practices (which is discussed further in 6.4.3.2.2 below) and demonstrates the usefulness, from a research design perspective, of deploying contrasting methods to investigate a research question from differing angles, or lenses (Denzin 2012). Without the use of these different forms of data, quite contrasting views about UK consumers could be drawn.

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Finally with respect to buying behaviours, it was notable that a large number of study participants reported making changes to their seafood buying habits in recent years (62.1%). Buying more seafood and buying different things were the most commonly expressed changes, with 61% of participants making both of these changes together. Shoppers also reported increasingly looking for labels (Figure 35). However, there were no differences between the regions or between the urban and coastal groups on this variable ($\chi^2 = 0.279$, $df = 1$, $p = 0.597$; $\chi^2 = 0.426$, $df = 1$, $p = 0.514$).

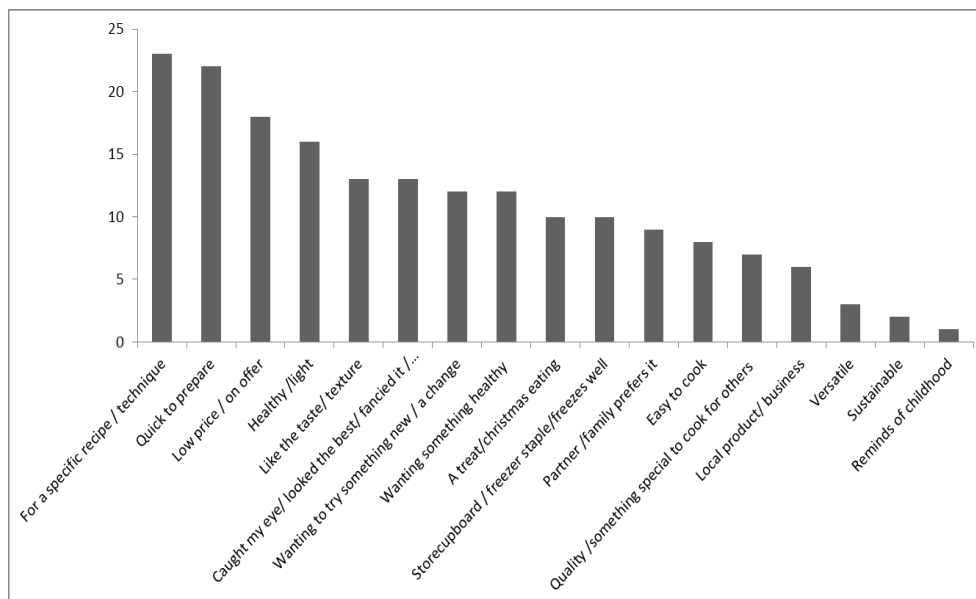
Fig. 35 Number of Consumers Reporting Changes in their Seafood Buying Behaviour



5.4.5 Consumers Reasons for Buying Seafood

Analysis of the diaries revealed multiple reasons behind individual consumer decisions to buy particular things. The most frequently cited reason was consumers wanting something for a specific recipe that they were following. After this, issues of convenience, cost, taste preferences and novelty were all important motivations. Despite supposed consumer demand for sustainable fish (AMR Marketing Research 2012), few consumers offered this as their primary reason for choosing a specific product (Figure 36).

Fig. 36 Consumer reasons for buying their seafood (numbers of individual responses)



Relating these reasons to the products that the consumers bought (as recorded in their diaries) it was notable that the majority of the mackerel sales were in the form of supermarket-bought smoked mackerel fillets. These products are typically packaged to make them easy to use, ready to eat and to keep longer in fridges (thus meeting numerous consumer criteria.) Smoked Salmon is similarly packaged, as are pre-cooked Prawns. The reasons behind their purchases given in the diaries recurred strongly in the one to one interviews – when consumers spoke about why they bought the things they did on a daily basis, why they chose *not* to buy certain things and why, specifically, they thought UK consumers preferred the Big 5 of Cod, Haddock, Tuna, Salmon and Prawns. Convenience, ease, availability and supermarket special offers all featured prominently in consumers’ descriptions of shopping for seafood. This is explored fully in the following section (6.3).

5.4.6 Consumer Knowledge and Awareness of Sustainable Seafood

Analysis of the full baseline questionnaire (n = 29) revealed that the shoppers seemed generally unaware of how their seafood had been produced with 55% of participants not knowing if it had been farmed or wild caught. SE participants were the most unsure (71.4% didn’t know compared to 40% in the NE) but these differences were not statistically significant ($\chi^2 = 4.905$, df= 2, p= 0.086.)

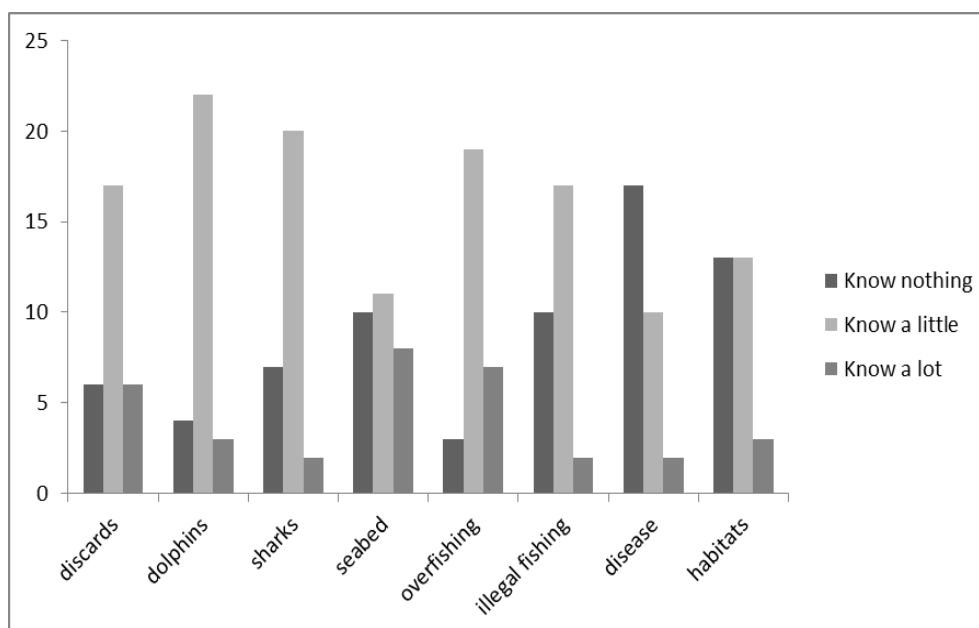
Participants were asked to state if they had heard about eight issues that have been associated with commercial seafood production. These included environmental as well as social aspects. In a second series of questions, participants were then asked to rate their *knowledge* of these issues, on a scale of 1-3, where 1 = know nothing, to 3 = know a lot.

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Participants were most aware of issues related to marine, wild-capture, fisheries. Overfishing was an issue that had been heard of by almost everyone (96.6 % awareness), with harm to dolphins (89.3%), harm to other marine life (85.7%) and discards (85.7%) also scoring highly. Participants were least aware of the issues surrounding aquaculture practices, i.e. the spread of disease (41.4%) and loss of coastal habitat (63%), which resonated with the uncertainty identified by Clonan et al. (2012) in their study into UK consumer attitudes towards eating fish (nearly three quarters of UK consumers were unsure about whether they should be eating farmed fish.) Regionally, awareness was comparable. Awareness of the bycatch of dolphins, sharks, turtles and seabirds was higher in the SE than the NE, at 100%, but statistically, these differences were not significant ($\chi^2 = 3.360$, $df = 1$, $p = 0.222$; $\chi^2 = 4.667$, $df = 1$, $p = 0.098$)

Knowledge of these marine issues was also relatively high, with 56% of respondents stating that they “know a little” about the issues overall and 14% claiming to know a lot. As with Awareness, however, across the different issues, participants’ admitted knowledge varied considerably (Figure 37).

Fig. 37 Number of Participants Who Expressed Knowledge of Socio-Environmental Issues Associated with the Fishing Industry



Consistent with the awareness scores, reported knowledge was greatest for overfishing (89.6% stating that they knew a little or a lot) followed by harm to dolphins (86.2%), discards (79.3%) and harm to other marine life (75.9%). Knowledge of illegal fishing, disease and habit loss were lowest – with disease being the least understood area (41.4% of participants knew a little or a lot about the issue). Also consistent with awareness, there were no significant differences

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amongst Knowledge on any of the issues across the NE and SE study regions or between the coastal and urban groups.

Three demographic variables – education, age and income were significantly correlated with knowledge about seafood sustainability, although the relationship was not consistent across all of the issues (Table 28). Thus, while increased age was associated with increased knowledge of overfishing, illegal fishing, damage to the seabed and discards, it was not a factor in explaining knowledge about the bycatch of dolphins or sharks. Interestingly the relationship between income and knowledge was negative with respect to overfishing - suggesting that those on higher incomes were somehow less aware of this issue than others. Education was only significant in explaining knowledge about the spread of disease. This is an important finding as it adds further weight to the observation that awareness of aquaculture issues is lower amongst the UK population (and that education can raise awareness.) Neither Gender nor Involvement with the fishing industry had any discernible effect upon any aspect of a person’s knowledge (Table 28).

Table 28 Pearson Correlations of the Relationships Between Consumer Knowledge of Sustainability Issues and Consumer Demographics

	discards	dolphins	sharks	seabed	overfishing	illegalfish	disease	habitats
gender	-.216	.108	-.230	-.274	-.218	-.049	-.142	-.265
age	.543**	.010	.080	.549**	.675**	.562**	.243	.356
income	.182	.092	.178	-.145	-.386*	.062	.027	.012
education	-.342	.254	.345	.117	.008	.039	.377*	.222
involvement	.125	.177	.273	.156	.136	.010	.049	-.051

*Indicates significance at 0.05 **Indicates significance at 0.01 level

With respect to consumer-initiated changes to buying behaviours, only one variable – “unintended capture of sharks, turtles and seabirds” was associated with an increased likelihood to have made changes ($r = .449, p = 0.015$). This is an intriguing finding, for it suggests that while the majority of consumers were aware of issues such as overfishing, knowledge alone had been insufficient to bring about a significant change in their buying behaviours.

5.4.6 Summary : Consumer Characteristics

The consumers engaged in this study shared a number of traits with consumers engaged in previous research in that they were typically older, wealthier and ethnically less diverse than the UK population as a whole (Appendix 11) (Myrland et al. 2000; Wellman 1992; Burger 2008).

The relatively high number of men taking part was surprising given previous research into food behaviours but could perhaps be explained by the small sample size and the growth in interest

amongst UK men in cooking as a masculine activity, particularly where it involves meat and fish that has been hunted for by themselves. Further research into these gender differences is suggested.

Where a person lived seemed to have little impact on the participants' overall current consumption of seafood and there was no discernible difference between the groups regarding the types of seafood bought and where it was being bought (i.e. supermarket or fishmonger). This finding was unexpected given that the Tesco clubcard analysis revealed distinct regional differences in consumption patterns and previous studies have found a link between location and seafood consumption. The relatively small sample size possibly explains this. It is equally as possible, however, that for this group of keen consumers, distance from the sea (or a fishmongers) was not a significant impediment to their buying seafood. Indeed, as the following sections demonstrate, for some, making a trip to the coast or to their fishmonger to buy fresh seafood, was something to look forward to and enjoy.

The demographics of the study group are important to consider here. Being older and more affluent than the UK average, they can be expected to have more time and income at their disposal to permit them to make special trips to buy seafood. This luxury isn't available to everyone within the UK - many of whom will not have ready access to an independent fishmonger, for example. In this way, it might be concluded that the study participants represented a different demographic to the average Tesco customer, whose buying patterns were described in the dunnhumby analysis presented in Chapter 3. It is not possible, however, to make generalisations about all UK seafood consumers from this data.

Further, the consumers who completed the full baseline survey (n = 29) possessed a markedly different values profile to the UK average, valuing Hedonism, Universalism and Stimulation and caring little for Tradition. This is possibly suggestive of a distinct sub group within contemporary UK society that can be defined by their food buying and eating habits – including *where* they shop. The consumers in this study favoured Sainsbury's over Tesco, for example, with Sainsbury's being known to have higher ethical standards than Tesco. Exploring if these findings are generalisable to other seafood consumers, however, will require further quantitative research.

When it came to explaining the reasons for their seafood purchases, the consumers in this study identified a range of both intrinsic (e.g. healthy, tasty) and extrinsic (e.g., price, store cupboard staple) factors that governed their purchases. Overwhelmingly, however, consumers reported having fixed ideas about what they wanted, which tended to be something that was quick to

prepare. Salmon and Prawns, because of the way in which they are presented to consumers, both fitted the bill perfectly in this respect and, unsurprisingly, were the most frequently bought items reported by the participants in both their diaries and questionnaires.

In contrast, ethical concerns were only infrequently given as a primary reason for buying seafood (wanting to support local business; and sustainable) a finding that might be used to explain the popularity of Salmon and Prawns, for which the ethical arguments are more complicated and possibly less understood by consumers. This was reflected in the overall lack of awareness by the study participants of the issues relating to farmed versus wild-caught seafood - the latter being dominated by concerns about overfishing and bycatch.

5.5 CONCLUSION

The choice of mixed methods used in the study reflects the critical nature of the research. The use of the questionnaires and diaries in conjunction with the group and individual discussions enables both the objective measurement of participant characteristics previously found to be relevant for seafood consumption (such as values, age, income and education) as well as a fuller exploration of more intangible variables (feelings of control, family dynamics) that cannot as easily be captured through quantitative approaches. The choice of interviews permitted the exploration of these many variables from the consumers' perspectives. The decision to hold two workshops with each group permits participant engagement and reflection and had the potential to be emancipatory in enabling consumers to consider alternatives to their current buying patterns (changes that could be tracked through the diary-keeping.) Importantly, by consciously mixing both quantitative and qualitative methods, the research design permits triangulation or, adopting Ellingson's post-modern interpretation of the term, crystallisation – the idea that a problem has been viewed through multiple different facets. In so doing, the goal of generating a “*thick, complex interpretation*” (Denzin 2012, p. 84) of seafood consumption patterns, should be achieved.

The following chapter presents the findings from the research.

CHAPTER 6 : RESULTS

6.1 INTRODUCTION

This chapter describes the results from the final phase of data collection, consisting of the workshops, questionnaires, diaries and one to one interviews – methods that were chosen to enable the answering of the overarching Research Objective : Why the Big 5?

This part of the study specifically sought consumers' perspectives on why they ate the things they did – what influenced them, how they shopped, whether their behaviours had changed

over time, what they knew about sustainable seafood and whether or not they applied this knowledge to their shopping behaviours. In so doing, it addresses the gaps identified in the current academic literature in providing a consumer-centric, holistic, interpretive analysis of UK seafood consumer behaviour.

The analysis is presented in three sections that reflect the grouped research questions derived from the Literature Review and the dunnhumby and on-line grocery analysis presented in Chapter 3. Thus, questions 1, 3, 4 and 5 relate to consumers' experiences of retail. Questions 6, 7 and 8 explore consumers' understanding of and views regarding sustainability; and Questions 1 – 8 taken together address the overarching Research Objective of "Why the Big 5" as well as providing detailed information in consumers' views regarding these 5 species in particular.

Each of these three sections is then structured according to the variables identified in the conceptual framework presented in Chapter 4, which attempted to summarise the range of *potential* variables that *might* influence seafood behaviour, as derived from the academic literature and industry reports on consumer behaviour (see Fig. 29, section 4.5.5). The framework suggested that four groupings of variables have an influence upon unsustainable seafood buyer behaviour: demographics (such as age and gender); psycho-social variables (such as norms, values and perceived behavioural control); cognitive variables (such as knowledge and awareness of the issues surrounding the purchase of seafood); and, situational and contextual variables (such as product availability and consumer time.) These variables may impact by shaping consumers intentions to consume in general. It is suggested that, when consumers then find themselves in an actual buying scenario (i.e. after some time has passed (however short) from the formation of the initial intention), these same variables may then impact again to influence the buying outcome.

Drawing upon the various data sources, evidence for the differing importance of these variables at different points in the buying process, is presented and discussed in reference to the Literature on Seafood consumption.

Thus, section 6.2, "Consumers and Retail", explores how consumers described their experiences of, buying seafood - where they bought it from, why they bought it in the places that they did, and the ways in which their choices might vary depending upon the particular buying context, i.e. everyday buying for home consumption versus recreational buying for home consumption versus the experience of eating out. The relative importance of a number of differing psycho-social, situational, contextual and demographic variables is highlighted here.

In discussing the second theme, “Consumers and Sustainability” (section 6.3), cognitive variables are more pertinent, particularly with respect to understanding consumer knowledge with respect to sustainability and the sources of information consumers use to inform themselves. Psycho-social variables (notably individual values and social norms) are, however, also strongly implicated in consumers’ views regarding the over-exploitation of particular species.

The final section, “Consumers and the Big 5” (section 6.4) explores how consumers described their experiences of consuming the five most popular species in the UK in comparison to other less regularly eaten species. Using the data drawn from the completion of the repertory grids, a number of psycho-social, cognitive and situational and contextual variables are again found to be key in explaining the specific popularity of the Big 5.

The chapter concludes by summarising the main findings across the three sections of analysis. The implications of these findings are discussed fully in Chapter 7.

6.2 CONSUMERS AND THE RETAIL ENVIRONMENT

6.2.1 Introduction

This section explores the ways in which consumers talked about shopping for seafood and what mattered to them. By coding inductively, a number of variables were identified that could be grouped under the four headings described in the conceptual framework, i.e. demographics; cognitive; situational / contextual; and psycho-social.

6.2.2 Demographic Variables

6.2.2.1 Lifestage

Lifestage had various effects upon buying behaviours, with family dynamics and subjective norms, to use the terminology of the Theory of Planned Behaviour (Ajzen 1991), strongly influencing what seafood was consumed at home. Most of the participants in the study were in, or had been in, long term relationships, wherein the preferences of their partners had greatly shaped what they ate as a couple, with those partnered with unenthusiastic seafood eaters typically restricting themselves rather than seeking to influence their partners towards greater uptake.

“It certainly wasn’t my pattern before but I guess if I’m honest that I’ve sort of fallen in with my wife’s pattern...but edged her away a bit from vegetarian tendencies (laughs).”
(003 SE)

“I’ve been married twice, my first wife wasn’t very adventurous as far as food is concerned; and I suppose we got married 11 years ago, so from then really. Things on

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the media, on television, the cookery programmes, I've generally got into cooking since then so I've then moved on to seafood, I cook things like shellfish and that sort of thing." (010 NE)

"If I was cooking and eating with my partner it would be the Cod. If I was eating with my son it would be the Herring. I think it's because Chris finds eating fish which is pretty boneless a lot easier whereas Jack's not challenged by the nature of the Herring." (013 NE)

"I married someone who was very fond of fish and I think if anything we've taken a very specific positive view of fish and we eat it at least twice a week because we love it and we think it's very good for our health and it adds such tremendous variety to one's diet." (014 NE)

"I try to do things, years and years ago, I'm getting Plaice and stuffing it with an interesting stuffing and then baking it and my husband kind of went "eww whats that", you know, so there's no point trying to do anything like that really because it's just a waste of effort (laughs)." (015 SE)

Younger, child-free households (and singles), tended not to buy so much seafood for home consumption and, if they did, to prefer the convenience of supermarket packaged fish - factors of eating out more, of lower cooking confidence, lower incomes, time pressures and, to an extent, of wanting to reduce waste.

"I live on my own at the moment so generally food planning is quite difficult I find. I find I throw a lot of food away which is frustrating so I tend to try and... that's probably why I'm so impulsive because I tend to buy what I feel like at that day but I don't really buy a lot of stuff in advance." (004 SE)

"And having money as well to buy fish so when I was a student I was virtually completely vegetarian, I used to buy vegetables from the market but then I got a job, got more into cooking and different ingredients so splashing out a bit more on food." (005 SE)

"I suppose then really not eating huge amounts of fish until probably I started cooking for myself, after I was married. All the time I was living in flats in London and things you existed on most peculiar things, not, you know, proper meals." (008 SE)

"It can be quite difficult when you are just catering for yourself because if you're not careful you can end up with quite a lot of waste and that's not good. I hate waste." (008 NE)

As children arrived on the scene, participants described wanting to provide nutritious, healthy (and quick and easy) meals for them such that a limited amount of seafood (usually in the form of fishfingers or fish pies, both of which were typically Cod-based) began appearing on household menus. Such moral obligations to provide seafood as part of a healthy diet have been described elsewhere in the Literature (Olsen 2004). Several participants discussed the importance to them of eating as a whole family, which in turn necessitated the production of dishes that all the family liked – ruling out certain fish dishes on this basis, for fear of them being too fiddly or otherwise difficult for children to eat.

"We do buy [from supermarkets], not fish but we'll buy the kids fishfingers. They will get bought probably maybe a box once a month. It's just something for a quick lunch for them." (009 NE)

"When my boys were little we had fishfingers, Cod in those days and then it became Coley I think...I think it's Coley. So we gave them those and we had Prawns from time to time but we also, I'm very keen on trout but that was very difficult for the boys, little boys they couldn't manage that." (017 SE)

"I did fish pie nearly every week because that went down well with all of them [3 CHILDREN]. That would be with Cod." (027 NE)

"Interviewer : What is about cooking for the children that you need to take into consideration? "Well one is not in the business of throwing a meal away because they don't like it so you cook what they like.....they wouldn't have eaten Herring very happily when they were children, I think the flavour and the bones." (027 NE)

As children became teenaged and more concerned with appearances and peer acceptance, concerns moved away from taste towards wanting to spare children the effects of the lingering smell of home cooked seafood.

".. it's very difficult to cook fish in my house because of the smell. My son is like allergic to it!" (001 NE)

"I used to eat probably more when I was younger. My children used to eat a lot, you know, used to eat a lot more when they were younger, but they sort of, well, my eldest

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boy, actually, he's sort of got a terrible sort of aversion to the smell of fish, and so we tended not to purchase it very often, in all fairness." (007 SE)

Ageing brought with it an increased appreciation for both ones' own health and the health of wider society and the environment, with respondents talking about becoming less selfish in their outlook and behaviour.

"I guess everyone goes through that phase in a different way but starting to realise actually that there are a lot more implications to how I spend my money, how I buy food, what it's supporting and the cause that's going on behind it. It's not just about satisfying my hunger, my desire to eat certain things, there is a responsibility on me as a consumer to think about these things. So I think that mindset is changing more and more as I get older." (026 SE)

Finally, when the children moved away from home, parental eating patterns tended to revert back to pre-children states but with a notable increase in the amount of seafood, as cooking skills in the intervening years had increased, the participants' tastes had changed in favour of lighter, healthier meals and, perhaps, most critically, household disposable income had grown such that the (perceived) rising price of seafood was not a significant barrier to its purchase.

"For a long time one has to cook food that children will eat so you tend to get rather stuck in your cooking habits through force of habit but what the children will eat is important....They've gone now and we do vary our menu a lot." (027 NE)

"I do like to make sure we have an oily fish every week, yes I think we are conscious of the health benefits...and being careful about the big fish, not having too much, because there's all this been written about mercury so, like Tuna and swordfish." (006 SE)

"I suppose we are reasonably fortunate in that price isn't necessarily an issue. We're not wealthy by any means but we've got a reasonable income so if we're shopping we're not really governed by price I think, we are governed by what we like." (006 SE)

"I probably, I suppose, became more adventurous and more concerned about what I was eating and probably financial, as well, you know, you've got perhaps more money to spend on our food and so you're a bit more aware of and looking for different things." (008 SE)

"I think I am eating more fish. I've started to eat a lot of tinned mackerel which I absolutely love and smoked mackerel which comes in a sort of vacuum pack but I

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absolutely love those....I needed something to eat which wasn't a sandwich which was just a bit lighter." (003 NE)

"..being as we don't have kids are retired now where we don't have the expenses that you used to have when you are working so the money isn't tight enough to worry about price all the time." (004 NE)

"I am in the very very lucky position for once in my life where price doesn't matter. I don't have 2 children as a drain and both of my kids are very well set up so you don't feel that, you know, we have supported them in the past big time but we don't have to now." (006 NE)

"My situation has improved as well financially which I think helps, as I've got older, mortgage is getting paid off and I've got a bit better pay, my wife's got a decent job and that sort of thing, so, we can maybe afford to buy things which if it doesn't work out isn't a disaster but we can afford to buy things to experiment with." (010 NE)

"On the whole I'm just prepared to pay. I think I'm lucky that my husband and I are in the retired age group that although we didn't have big incomes when we were working we are reasonably well off as pensioners. We don't have to scrimp and save each week, we can spend more or less what we like on food without thinking in too much about it and we are very fortunate that is the case." (014 NE)

Retirement had also occasionally brought with it a household move – to the country or coast, which, in turn, had then increased the availability of fresh produce from which to choose from.

"Most of our lives, the first 30, 40 years if you like, was down in Yorkshire so there weren't that many fish shops available other than supermarkets, whereas up here you have a choice of supermarkets or wet fish fresh, so there's more fish available up here in the north than there was in Yorkshire." (004 NE)

6.2.3 Cognitive Variables

6.2.3.1 Childhood Experiences

Consideration of family dynamics highlighted perhaps one of the most fundamental relationships that consumers had to their seafood, their childhood eating experiences, which they could often vividly recall.

"We did eat a lot of fish as children. We always had it on a Friday. I lived in Gosforth which is about ten miles in from the coast and a fish lady used to come up with a barrow

on the electric train from the coast to Gosforth and she would sell fish from there.” (006 NE)

“Oh! What I do remember eating as a child is Herring roes because I bought some from David on the fish stall the other day and I said I haven’t had these since I was a kid!” (026 NE)

“Eating fish was not something that happened much when I was a small child because it was during the war, so there wasn’t fish available. I do remember the fishmonger – we had several in Hexham; and I can remember everyone knew when he had a bit of fish, you’d get a great queue, because of the smell – it was pretty high (laughs!)” (027 NE)

“It was predominantly Cod, Haddock Herring, lots of Herring, lots of sprats which my grandmother used to just roast in the oven because the sprats were cheap; and I still love sprats but you can’t get them that often and they’re not particularly cheap anymore.” (009 SE)

It was notable that those who had grown up eating seafood had carried it through into their adult lives and, in many cases, had then passed the love on to their own children and grandchildren. Those who had had little exposure to seafood as children, beyond fish and chip suppers, found it harder to integrate seafood into their diets as adults and, in many cases, needed some additional, external, stimulus to encourage them to start buying and eating it.

“I’m pretty convinced that it was my upbringing. It was my father’s love of fish and stories of fishing and having fished myself that has made a big difference to my tastes.” (017 SE)

“So they [the grandchildren] eat fish pie regularly and all kinds of fish, they’ve been brought up to eat fish because my son’s a great believer in fish and fortunately his wife likes fish as well.” (014 NE)

“Fishfingers, that’s what we ate, that was our introduction to fish. There you are - it was nothing, until my mate who worked in the Bull Ring market, after I’d left home, he introduced me to other fish because he had the whole array on his market stall...which was where I would learn by watching him while I was standing there chatting; watching him do it.” (003 NE)

“I didn’t eat much shellfish [as a child], I ate fish but it would probably be fairly predictable, you know, maybe fish and chips or something like that...I think really I got

started picking up a leaflet at the Fish Quay, there used to be an annual festival on at North Shields at the Fish Quay and some of the fish stands used to come out with their stalls....I picked up various leaflets over the years and I actually find that I use these leaflets that I've had for years to do fish recipes or I'll pick up fish leaflets in Waitrose or something like that and use them so I would say that I've expanded my repertoire quite a lot with the help of those sort of giveaway leaflets." (015 NE)

6.2.3.2 Shopping Styles : Impulse vs Planned

An additional cognitive variable relates to how consumers went about their shopping. In talking about their buying behaviours, the participants could generally be grouped into those who went out with a very specific purchase in mind, for a specific recipe (planners) versus those who were open to whatever looked good from a freshness and / or economic perspective (impulse buyers.)

"If I was buying [seafood] I would have an idea of what I was going to do with it before I went out so I would be going looking for something specific for a specific recipe." (008 SE)

"It's much more impulsive I think... it might be even that I'm in the supermarket and I'm looking at something and I probably haven't decided what I'm going to have and then I'll see something in the fish counter or something and think oh I'd like [that]." (004 SE)

"No, never, I never have a clue before I turn up, I just know I want something (laughs)...[I look for]...price, just the visual appeal, and something I haven't tried before." (017 NE)

The diary analysis found that the most frequently given reason for a seafood purchase was to use it for a specific recipe followed by a product being "quick to prepare" (n = 45) – both factors that suggest a degree of prior thought went into the purchase. Impulse buys were also common, however, in consumers' descriptions of how the product was "on offer", "caught the eye" and in "wanting to try something new" (n = 43). Thus, seafood buying was neither purely impulse-driven nor planned but a fairly even mixture of the two.

Further, these categories were not mutually exclusive, with participants regularly citing occasions when they had gone out with a specific item in mind only to be prompted to make additional impulse buys because a particular product had gained their attention in some way. Across the planners and the impulse buyers, there seemed to be a greater sense of relaxation about buying seafood on a whim, i.e. an openness to going with what looked good and / or of taking the advice of the fishmonger to try something new, for example, that was not matched in their buying behaviours for other products – possibly because of the way in which meat and

fish are displayed, with eye-catching fish more likely to be a whole specimen, versus, for example, a fillet or a joint of meat.

Motivations to impulse-buy did vary significantly, however, depending on where the shopping was taking place. Thus, in the case of the supermarkets, the impulse was typically borne out of the product being on offer. In contrast, impulse buys in fishmongers tended to happen because the product looked to be particularly fresh or interesting and/or it had been recommended to the customer by the fishmonger.

“It would be the use I was looking for at the time, that’s really what you’d be shopping for. If there was a bargain on the board then you would usually buy that and freeze that but initially you would go for what it was you were looking for in the first place.” (005 NE)

“If I buy fish off a wet fish stall, whether it’s in the supermarket or in the market, I know sort of roughly what I’m looking for..I know that, you know, I’m looking for bright eyes and red gills and, you know, I know that, so I’ll have a look at that.” (008 NE)

“If I do buy on a whim sort of the spur of the moment..like when I bought the mussels I bought seabass as well because they were offering 4 filets for £10 and I’ve put them in the freezer and so can do something with them on another occasion.” (008 SE)

“We do our big shop at Tescos and because we buy our fish elsewhere and our meat, but having said that, if there’s something on the counter that takes our fancy we’ll get it or if there’s something on offer we’ll get it and that tends to be the half side of Salmon sort of thing because it might be on special offer so we’ll get a whole one and cut it up.” (010 NE)

“We usually talk to the person who’s serving [at the supermarket counter]and what’s the fish of the moment. They often have a sale, a fish of the day and sometimes it will come with a free pack of butter or they’ll fillet it and whatever for you and we’ll frequently, or mostly if they are advising this, we take that, whatever it is you know, we just like fish, we don’t care what it is really.” (011 NE)

“I can’t remember which shop it was but there was some big red mullet and next to it was the multi-coloured of the mackerel, the grey-blue of the mackerel and they just looked good, nice pretty coloured pattern together, so we bought some of each, cos it looked nice together....we didn’t eat them together so I don’t see how it mattered (laughs) but she did anyway!” (011 NE)

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“At Taylors my normal line is to go and see what’s fresh, what’s local and what’s cheap and then I end up buying something that’s fresh, local and maybe more than I can afford but it just, you know, if it really looks nice.” (016 NE)

“Before Ridley’s came there was a lady had a place opposite the abbey and she used to get some odd fish in like Arctic Char and the she would say “this is lovely try it”, you know, or John Dory which was not even heard of in those days ...she introduced us to quite a lot of different fishes.” (026 NE)

Additionally, those participants who did not have a local fishmonger, or irregularly shopped at one, found the prospect of buying from an independent retailer both more exciting and encouraging of impromptu purchases.

“If I was somewhere like Hexham and there was a market on like that and there was a wet fish counter, I would buy, I would definitely buy something on there, you know, I would take that opportunity.” (015 NE)

“Where I go past a farmer’s market and there’s a fishmongers there, I’ll always get a few bits to stock up in the freezer.” (017 NE)

Impulse buyers (in contrast to planners) tended to be confident in their cooking ability and / or in knowing that they could access recipes and cooking advice / tips easily if they needed it. Linked to this, they also tended to shop without lists (and to behave in this way for all of their shopping, not just for seafood.)

“We eat more variety than we ever used to. I would never... I think you hesitate to buy something if you’re not sure how to cook it whereas now I’ll buy it and then work it out when I get home.” (006 SE)

“We see what we think we like and then we decide what to do with it” (Interviewer : Ok and you’ve got quite a food repertoire so you know what to do ? “Yes and, you know, you don’t have to stick to recipes you can adapt, which we do.” (026 NE)

“I never ever have a list, I just go in and go round and... I’m probably their dream customer because I’m the kind of person that’s going to be swayed by all of the stuff that they put out, you know, because I just go in and, I’m very impulsive like that.” (004 SE)

6.2.3.3 Trust

Consumer’s trust in the quality and provenance of their seafood varied considerably – with those who bought predominantly from independent fishmongers (which typically had less obvious

labelling than supermarkets) stating that they put their faith in the fishmonger having made responsible sourcing decisions. Notably, this degree of trust did not extend to supermarkets, although brand was important here, with Waitrose, Marks and Spencer and (to a slightly lesser extent) Sainsbury's and the Co-operative being trusted more than the other Supermarket brands with respect to sourcing. Tesco fared particularly poorly, with many consumers talking openly about their distaste for the Brand and what they perceived as its unethical business practices.

"Well I just trust everything that Marks and Spencer's buy. They have a free card as far as I'm concerned (Laughs)." (001 SE)

"I said I trusted Marks & Spencer because of their Plan A, Plan B policy and they tend to label food quite well. I don't go to Tesco's just because I just don't go to Tesco's. [Laughs] I don't really favour it as a brand and that's for all sorts of other reasons not necessarily because of seafood." (005 SE)

"I think it's the Tesco brand I don't like..I don't like their ethics, I prefer the ethics of Sainsbury's I think. I prefer Waitrose as well and as we can't do that we go to Sainsbury's." (006 SE)

"I used to shop in Tescos the vast majority of the time and if you asked me what was the reason for changing it would be a bit difficult to pin it down really but I suppose I felt at one time that the quality of what Tescos had on offer was better and I felt that that declined to some extent; and it was also the case that I had read some stuff which was to do with staff employment relations in Tescos compared with staff employment relations in Sainsburys and that probably coloured things as well...I work for a trade union so if I get to hear that Tescos don't recognise trade unions and are not into collective bargaining than I am more loathe to give them my business than I might otherwise have been (laughs)." (013 NE)

"Mr Ridley has very high standards about what kind of Tuna he will buy, for instance, whereas heaven knows where Tesco's Tuna comes....and they sell things like Vietnamese cobbler and they do a lot of the fish imported from Asia which Mr Ridley wouldn't touch with a barge pole." (014 NE)

"We have a Tesco in Tenterdenwhich I would use to buy tinned food or something, you know peas or whatever, but I'd be honest I don't really buy my....I don't trust them you see that's the trouble (laughs).....I have my suspicions about Tesco's and about how they force prices down and therefore where they're going to get things from. I would go

to Waitrose to get meat and fish and things that I cared more about.... I know that Marks and Spencers are linked up with the Marine Conservation Society so I will buy stuff from them if I go there.” (O15 SE)

During the course of the Study it was notable that Tesco, in particular, experienced some very negative publicity – firstly because of its involvement in the horsemeat scandal (wherein horse meat was found to be contained within products in supermarket ready meals) and, secondly, because of accounting errors (that have subsequently been investigated as intentional fraud) that led to the overstating of annual profits by £263m. Profits in the Retailer have been steadily falling since 2013 prompting some to question whether Tesco’s (and equivalent large retailers) business model has irrevocably fallen out of favour with British consumers (Lawrence 2014b; Anderson 2014). Certainly, the views expressed by the majority of the consumers in this study support a shift towards wanting to shop locally and, by association, in smaller, independent shops (a movement that has been described elsewhere in the UK with respect to local and organic foods (Seyfang 2008). Critically, however, and as discussed above, this luxury was more typically reserved for those with more time and income at their disposal. Interestingly, “Time” was implicated as explaining differing consumer motivations between local and supermarket shoppers in the US (Campbell and Fairhurst 2014). As a trend, therefore, it is arguably less likely to represent those consumers who are both time and financially pressured (and who are in the majority in contemporary UK society.) This assertion needs testing, however, to avoid making an incorrect assumption that such shopping patterns are the sole preserve of the wealthy and/or time-rich.

6.2.3.4 Visual Appeal

The quality of the display, in terms of its visual appeal, could be described as a cognitive variable in that it encourages consumers to actively and consciously consider their purchases (relative to other seafood products on offer) in a way that buying a standard weight, pre-packaged item, for example, might not. Here, consumers drew a distinction between the displays of supermarket versus fishmonger fish counters. Supermarket displays were deemed to be arranged to encourage the uptake of special offers – with the offers being placed in the centre of the display and the less popular (non-offer) items placed at the sides. Generally, consumers also perceived the supermarkets as stocking a wider range of product (but not always displaying it well.)

In contrast, fishmonger displays were less regimented, for the most part, and focused instead upon showcasing the quality of the (usually fewer) products, rather than their prices and of showcasing the whole animal.

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Consumers reported noticing a distinct difference in the quality of the products on display (in terms of size and freshness) between supermarkets and the fishmongers and (to a limited extent) between supermarket brands.

“It’s chosen with more care at Waitrose it just seems juicier and hasn’t dried out you can see it’s a bit old and tired Tesco’s fish sometimes.” (002 NE)

“I didn’t feel particularly inspired by [the supermarket display] because there it almost looks like the sort of fish that you’d buy in a packet but it’s not in a packet, if you see what I mean, whereas at the Fishmonger, you can see the whole thing.” (008 SE)

“I would say that the display is slightly inferior to a supermarket because they’ve got all the crushed ice with the fish laid out and it is attractive but when you actually look at the fish it’s not as fresh, definitely not as fresh in the supermarkets as it is in our local fishmongers....it’s absolute crap as well.” (009 NE)

“I prefer when we go to Morrison’s, I think the fish are prepared and displayed better, more colourfully. They do this thing called Market Street where they pretend a street and they do present it better. The Tesco one is probably second one and the Asda one is a big square box with ice and fish laid out on top of it which is a little dull, I’m surprised...but there’s nothing wrong with the fish from Asda I haven’t had a complaint with it but they haven’t put as much effort into the display.” (011 NE)

“There is a Tesco and Waitrose here in Hexham, which are the ones I tend to go to. They have got people who are very interested in how they lay them out – they lay them out beautifully. They put little sprigs of parsley in, they have ice all around the fish, they put cut lemons to make it look good and the young man in Tesco’s fans out his sprats or whatever he’s laying out, his trout, and makes it look very nice. But you see I look at it quite closely, I’ve noticed some people come up and just glance at it and say oh I’ll have so and so..I look at the quality of the fish I’m not actually influenced greatly by the layout. I like to see it look nice because I think that draws you to look at the counter but I will look very carefully at the fish and if I find that the mackerel is brown and dry or the trout eyes have lost their lustre then I won’t buy them. I mean the whole mackerel at Tesco’s are very rarely good enough for me to buy. The gills aren’t red any longer, they’re not looking attractive, they’re not looking bright and slivery, which is how like to buy them. Mr Ridley will not sell mackerel unless they look good like that. That’s the difference.” (014 NE)

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“When Tesco’s came their fish stall smelled so appalling that it put me off for good (laughs)...but I was already buying from Riddleys - they had a shop in Hexham at the time.”
(027 NE)

“I have tried buying stuff (shellfish) in supermarkets and it’s nowhere near as good as buying it fresh from a local trader.” (Hastings Workshop)

Some of the participants who had spent time abroad, particularly in France, also commented upon the differences between UK and French supermarket displays, with the latter being deemed far superior.

“Oh yes, if you go to a French supermarket you want to buy and eat everything because it all looks so appealing, sadly we don’t do it here.” (008 SE)

“Virtually never [buy] from supermarkets because they simply don’t stack up against the French ones and having lived in France for five years and of course [wife] being half French we think of the fish counter in Auchan or Carrefour and then we look at it in Sainsburys and we think this isn’t really worth the effort.” (009 SE)

It was notable that those fishmongers visited as part of this study for recruitment purposes that had more modern, visually-appealing displays, reported faring better economically and had more confidence about the future, than their counterparts who had more traditional displays (e.g. of pre-filleted white fish.) The difference in the displays between fishmongers is perhaps illustrative of varying attitudes by retailers about the importance of high quality visual displays. Taylor’s award winning fish counter changed daily, for example, and featured predominantly whole fish that were a genuine feast for the eye (Fig. 38) in contrast to some of the more traditional wet fish stalls in supermarkets and fishmongers alike, that tended to display fillets only, for example, and were therefore less inspiring for consumers.

Fig. 38 Taylors Fish Counter, North Shields



(Photograph provided by Mr P Gilbert)

“The previous one [display at Taylor’s] had a big octopus in the middle that that was raised and stared out but unfortunately I missed that one with my camera (laughs)...there are others, there’s a couple of wet fish retailers along the main street behind the quayside and they tend to be all the prepared fish in, you know about 4 or 5 different species and when they are all prepared without any skins, not whole and just all in fillets, yes it’s convenient but it’s not as attractive to look at.” (004 NE)

“I suppose fishmongers, butchers, greengrocers, individual, independently–owned shops do it don’t they much more and perhaps it’s the Supermarket just perceives that people want it all sort of pre prepared.” (008 SE)

“I mean you look at the other people on the fish quay in North Shields, some of them really, you know, don’t display what they’ve got. You go into Taylors and you think of this wonderful array of fish in front, your eyes wander over and you think “Oh gosh, what is there that looks really, really fun to bake?”” (016 NE)

Chapter 3 described trends in sales of seafood within the UK and showed that while sales volumes have increased only slightly, the amount consumers are spending on seafood has increased significantly (Marine Management Organisation 2014). Admittedly, only a handful of fishmongers were directly visited for this study, making generalisations impossible, but from the

comments consumers made in this study, it would appear that there *is* a strong market for seafood in the UK but that it needs to be adequately promoted to an increasingly discerning audience, some of whom are willing to pay ever higher amounts of money for what they perceive (visually) as a quality product.

Taking into account the finding that some consumers also find independent stores intimidating – for their banter and more masculine environment, it is suggested that the independent retail sector could benefit greatly from attending more closely to customer satisfaction, providing adequate staff training on stock handling and display; and encouraging more diverse staff profiles in terms of gender and ethnicity.

6.2.4 Situational / Contextual Variables

6.2.4.1 Time Available

With rising age, income and cessation of work pressures, many participants noted that they had more time available to be able to shop “properly”. Rather than doing a single, large, weekly shop in supermarkets, respondents described being willing to travel to a variety of different, independent, retailers to get their produce – a behavioural trend that extended to the majority of their fresh produce buying, not just for seafood.

“We would do a supermarket shop every 2 or 3 weeks but otherwise we buy on the day .. fish we will either buy on the day or the day before or more rarely it will be something that we ‘ve bought before and frozen.” (003 SE)

“When we were both working full time shopping was more of a, I guess, a convenience thing than a pleasure thing, so we were both getting in at 7 o’clock and having to cook a meal so it was different. It’s the luxury of retirement really.” (006 SE)

“Now that I’ve got more time, my buying habits both with meat and fish are better. I am being better about where I buy some of my things, my food generally, because, you must know what it’s like when you are racing to the supermarket, so I’m going far more now to the butcher and the fishmonger.” (008 SE)

“We buy our vegetables from a local farm shop-again once a week on a Saturday; we buy our meat exclusively from a local butcher, we never ever buy meat from a supermarket, and fish, well nearly always [from a fishmonger’s.]” (009 SE)

“I’m lucky when I’m at home I’m not working and I can be at home for two months at a time, so I do have the time to do that. I’ve got this luxury of having the whole day to shop

and put it together, if I was doing more of a nine to five life it wouldn't be like this.” (012 SE)

Cooking for special occasions was also linked to a desire to look around for the best produce – notably, this meant NOT shopping in supermarkets but taking the time to visit independent retailers.

“It depends what we're doing, if we're doing a big shop then I tend to add it in but if it's for a particular meal then I tend to go to a local shop.... a particular recipe and I've thought it through I'd rather use local fish.” (005 SE)

6.2.4.2 Price of Seafood

Money (or the lack of it) was also a significant factor that consumers talked about when differentiating between the large supermarket brands; between supermarkets and independent fishmongers; and when explaining their reasoning behind particular purchases (i.e. eco-labelled versus non-eco labelled goods.)

“I go to Morrisons because that's my local Usually but I've been shopping on line at Sainsbury's and Waitrose recently because they've got like bargain deals.” (001 NE)

“I bought Salmon the other day from Jim the fishmonger and for 2 pieces of Salmon, you know from the Supermarket I could have got a bag of [Salmon fillets], I mean admittedly they were large pieces, they were lovely, butI mean fortunately I don't have to think too hard about that but you know it's a fact that sometimes [fishmonger's are] more expensive.” (008 SE)

“Obviously the price point is a huge thing. If I'm overspent that month ..then I'll probably go to Tesco's because it's easier and simpler. Then at the beginning of the month I'll think “oh I'm going to treat myself” and order from Ocado or Waitrose ...the quality is much better, it's fresher.” (026 SE)

Seafood was generally described as being expensive relative to other meats and that its price had increased disproportionately in comparison to other meats over the years.

“Fish prices over the time that I've been buying it, since 2006, I've noticed it going up faster than the rate of inflation, probably faster than the rate of other food. I think when we first came down here [to Hastings] you could probably get a pair of Plaice fillets for £3 - 3.50 you certainly wouldn't get that now it would more like £5.50.” (003 SE)

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“Price can be an issue, yeah, it can be....I mean I eat a lot of chicken you know...which is cheap and it’s easy, and so in comparison fish is usually more expensive than that.” (004 SE)

“I think for people of our age it’s more noticing how the differential has changed. Fish we notice is a great deal more expensive than it was comparatively. They’ve got much closer to meat so I think whereas there was a time certainly when I was, say in my late 20’s, 30’s, when fish was a cheap option for a good diet. I think that is no longer the case.” (014 NE)

Still, a good number of participants felt that this was untrue and that canny and planned purchases of less well used cuts and / or species could make seafood better value than meat. Cooking knowledge and confidence were again a factor here, however - something that, again, was also generally and inextricably linked with aging.

“Everything is used. There’s no waste. I mean you’d buy a chunk of beef and 40% of that beef is fat but you’re paying the same price for the fat as you are for the meat that’s got no fat on it. So you buy a piece of fish it is all edible. So penny for penny it’s definitely better value than meat is.” (005 NE)

“I do honestly think it’s because people won’t cook the cheaper cuts of fish, it’s the same with meat, people won’t buy the cheaper cuts of meat and it’s because they don’t know how to cook them. I think that half the problem really. I mean, Mackerel we had 2 big Mackerel, 4 fillets, and they came to just over £5 which is really cheap.” (006 SE)

“I bought [mussels] from the fishmonger the other day and in the whole process we didn’t throw out one and for 2 people, a kilo of mussels, which was enough for a main meal for 2 of us was £4. Now you can’t get much better than that!” (008 SE)

“I think people want that sort of nice piece of white Cod and they won’t look at the slightly different piece of Coley or Hake or Panga or whatever because it looks different and they haven’t heard of it before. Well, we will look at that and they won’t and why should we pay £15 a kilo for a loin of Cod when we can pay the same or a lot less for something that’s just as good.” (010 NE)

“Sometimes we buy a cheap fish because it’s going to be marinated and you don’t need anything particularly tasty because it’s going to taste of spices anyway so it’s another way of saving money. But the other thing I was going to say is if you don’t buy a joint every weekend you’ve got lots of money for fish!” (026 NE)

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Consumers typically expected higher prices at independent fishmongers and, amongst the Supermarkets, in Waitrose and Marks and Spencer but also expected and felt that they received higher quality products in return.

"I think that I wouldn't particularly prefer one over another, I think M&S, I'd expect to be more expensive and probably expect a higher quality." (001 SE)

"But most of the time now we're spoilt he goes either to Billingsgate or Hastings every day.. and has a very good selection of fish. He's not cheap but fish isn't cheap." (009 SE)

"I actually find the prices aren't that much different and we don't actually worry about that in itself because I think it's cheaper than, usually, cheaper than meat, but you know you pay more in Marks, naturally. Asda, Tesco, Morrisons, the prices aren't that different." (011 NE)

"There's a good market in Durham and the guy that's got the fish stall there is good but expensive (laughs) because I think he's got no competition...he does all right for himself!" (013 NE)

"I'll tell you which shop I will go to mind you and buy fish as well if I'm in the right area for it and that's Waitrose." (015 NE)

"Cost..I have to say that the supermarkets can't be beaten on the cost front. Probably their fish is much cheaper than Ridley's I just haven't looked even!" (027 NE)

In contrast, Supermarkets such as Tesco, Asda and Morrisons were viewed as everyday, low cost, destinations that some consumers (i.e. those who typically only shopped at a fishmonger's) tended to visit as a last resort or for items that they knew they wouldn't usually find at their fishmonger's.

"No, the most I will ever buy is a packet of smoked Salmon but I won't buy any other fish in a supermarket." (006 SE)

"If something's gone wrong as it can do from time to time then it may be that I'll buy something off the fish stall in the supermarket because I've been away at the weekend or because Saturday I was working and I didn't get there..." (013 NE)

"Mr Ridley is only available twice a week so if for some reason we can't get to him then we might buy somewhere like Waitrose or Tesco's. In which case, you do actually quite often get a slightly broader range." (014 NE)

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"I mean I don't not go to supermarkets because sometimes it's convenience and you know range of stuff, you know, but yeah, I mean by and large if time and whatever else permits I always go to [Taylor's]." (016 NE)

Perhaps the most critical distinction between supermarkets and fishmongers with respect to pricing, however, related to the Supermarket habit of regularly putting products onto special offer. Ubiquitous special offers shaped many consumers' buying patterns, with consumers having no qualms about stocking up their freezer with, typically, reduced price Salmon, even when Salmon had not been on the shopping list to start with and / or they had no real knowledge of how much a normal priced purchase would have cost them. This factor alone played a major part in explaining the popularity of Salmon amongst the study participants.

"I would buy stuff that's got a reduced ticket on it....and stick it in the freezer or I'll have it that day, so I suppose I am looking for a bargain so I'm not going to have that at the wet fish counter I'm going to look in the chill counter and I'm going to look at the stuff that's reduced if I can." (001 NE)

"I usually shop at Tesco's they do a bag of Alaskan Salmon fillets and I think there's six in a bag, usually it's £9.99, regularly they do it for half price and that's when I buy it, I'll buy two probably and then double the price, double the amount for the price." (002 SE)

"We would shop Tescos, Waitrose – Waitrose are very good when they lower the price when they've got to sell it they sell it really not cheaply but...it's a good buy. You can buy it cheap, cheapish and then freeze it....Kate goes in there more often than I do and so she'll walk around and if she sees the Salmon or fish that's been knocked down in price she will pick it up...so we just keep it stocked in the fridge and the freezer and then use it as and when." (003 NE)

"If the Salmon looks good and nice then I'll have that, if not I'll buy the fillets....with having a freezer you're very adaptable you can buy as you choose rather than as you actually need - thank god for freezers !" (005 NE)

Consumers also talked about the price differences between eco-labelled, or otherwise sustainable products (such as those that had been locally produced) and the less sustainable alternatives. Here, again, income proved to be a major factor affecting consumer choices but it was not absolute, with several participants on lower incomes stating that they would rather go without than sacrifice their principles and choose something less sustainable. In general, however, environmental considerations (with some exceptions for dolphin-friendly Tuna and

sustainably-caught Cod) were not willingly brought into discussions about buying behaviours by the study participants – suggesting a low level of engagement on this issue in real-time buying scenarios; and, distinguishing seafood purchasing, in this regard, from consumers' stated practices with respect to meat and eggs.

“There’s not a limit. I’d rather have the MSC or have nothing, you know, just go without, if it’s that expensive well I’ll just choose something else to eat particular days but at the moment luckily I don’t have to make those sorts of decisions.” (005 SE)

“I was unemployed years ago, I was unemployed for a couple of years, and even then I would never kind of scrimp on food – food was the one thing that I would always buy nice things, you know.” (008 NE)

“I am a label reader but mainly because of the ingredients, I’m intolerant so I will look at ingredients and then I’ll start to look at the whole label and you know is this bad ...the same as meat, you know, is it friendly farming and I’d love to be able to buy happy clappy food the whole time but I can’t always afford it.” (001 SE)

“If ethical choices were more achievable and were cost-effective then I would certainly make the effort to buy them, and I do try and buy local where I can, I go to things like farm shops, a lot of my fruit and veg tends to be more local but the fish not so much.” (002 SE)

“I think it would be truer to say that I’m really shopping with my eyes on what I’m looking at rather than what the labelling is ... I don’t think it means a great deal..I sort of don’t necessarily think a lot of it really and actually if I think about it I probably don’t think that there is much of it. I’d say that if you went to the greengrocers next door or whatever you’re probably getting far more detail about what the fruit is and where it come from and how many he gets for the pound or whatever.....compared to the fish stall.” (013 NE)

“Well I sort of, I try to be as ethical as I can really, just generally I try to sort of buy, I don’t buy eggs very often but when I do I’ll get free range eggs, I mean I do feel a bit limited because of cost, you know, as a student I often can’t afford the most sort of ethically produced food.” (022 SE)

6.2.4.3 Retailer Convenience

Interestingly, those who regularly shopped in Supermarkets for their seafood expressed a certain degree of discomfort about that fact. They felt they had little choice BUT to shop there,

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usually because of the convenience factor and the absence of an alternative, local independent retailer, but would really prefer not having to. (This feeling was not limited to seafood purchases, however.)

“It’s mostly Sainsbury’s I’ve got to admit because again it’s probably laziness on my part it’s just easy, that’s where I do most of my shopping and it’s just easy for me to do that.”
(008 NE)

“In reality, I’d like to think that I didn’t get it all there but I think in reality I do, partly because I find with supermarkets I always have this dilemma... if I don’t buy that how long will they have a fresh fish counter for? Because I really would like them to be selling fish in the supermarket.” (015 NE)

“[We buy from] the supermarkets – Waitrose mostly and Tesco’s if we have to.”
Interviewer: Why your comment “if you have to go to Tesco”? “Because it’s enormous.”
(002 NE)

“We buy from the fish stall when we can but he’s only there Tuesdays and Fridays so we do use Waitrose other days.” (026 NE)

6.2.4.4 Product Availability

Availability was, to an extent, a feature of display - in terms of the range of products that could be found on both independent and big brand retailer fish counters. Participants’ were split in their perceptions about which retailers provided most choice - the independents or the supermarkets. Some felt that the supermarkets had a wider range of product available but that they bolstered their product offer with imported and farmed products, which was not always desirable. Others felt that the reverse was true and that supermarkets (perhaps increasingly) offered only a narrow range of “safe” products, as opposed to independent fishmongers who stocked more unusual and locally caught species, offering customers the chance to try things that they might not find in supermarkets.

“You probably get a bigger selection from Morrison’s and I honestly don’t know what that is. All I can think is Morrison’s is importing them from other sources, other than our own fish quays.” (005 NE)

“Now it’s brilliant because we go into Hartlepool or Sunderland for my shopping or even Durham and all the big supermarkets do a cracking range of fish, you’d be never bored..you can buy practically anything anywhere.” (011 NE)

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“Just generally more choice (in the supermarket) because they’ve got a wider buying power but then they’re flying things in from all over the world and should we buying that ?!” (026 NE)

“I mean I don’t think if you go round Tesco, I haven’t looked, you will find river cobbler but you won’t find a great deal of variety otherwise.” (016 NE)

“I think the Morrison’s counter, while I think it’s reasonable, I do think it seems to be narrowing a bit in terms of its range..so something like Pollock will just be on very occasionally, Whiting very rarely, and yet I’ll go the Fish Quay and I know there’ll be Whiting.” (015 NE)

“There’s not enough of that really [choice]. I don’t mean weird looking fish with 2 heads or something but if it was from a strange provenance then, yeah, definitely I’d go for that but there isn’t much of that in supermarkets because they tend to play it safe. I probably miss out on not going to the fishmonger’s but I haven’t got a fishmonger’s.” (001 SE)

“Wherever I am I go and have a look. Most times I don’t buy..because everybody seems to be getting very samey as to what they have.” (005 NE)

“When you go in a supermarket, for example, if I do look in the fish section, that’s all that seems to be there most of the time – Prawns, Cod, Salmon...quite often that’s all you can get.” (016 SE)

6.2.4.5 Special Occasion Buying

6.2.4.5.1 At the seaside

Many participants talked with enthusiasm about taking the opportunity, when they could, to buy seafood from coastal towns. In some cases, the visit was made with the express intention of buying fresh seafood; in others, the purchase was made opportunistically during a visit to the area.

“My father lives in Bexhill so I go down from time to time and if we ever go to North Kent and we’ll end up in Whitstable or somewhere like that and we’ll buy some fresh fish because it’s there and it’s silly not to.” (009 SE)

“I must admit when we’ve been to Norfolk you find that there’s a much more prevalence of people obviously fishing for local shellfish and so on and crabs and things like that and

it just seems to be you can access it much more easily, you know, so I find that automatically we just start eating a lot more of it when we're there." (O15 NE)

"I think some of it is the buying experience as well because if we go to North Shields we tend to be there for a day out. We'll have the dog, take the dog to the beach at Tynemouth and then we'll go to N Shields, we might go to the market.. it's all part of the day out for us and it is good value and it's fresh and you can see exactly what you are getting." (O10 NE)

"There was a wet fish shop in our local town which is about two and a half miles away but it had a pretty standard fare..so we would periodically go to North Shields Fish Quay because we're about eighteen miles from the coast maybe here and we'd stock up and buy maybe seven, eight, nine pounds of fish in weight and bring it back and freeze it." (O15 NE)

What is notable about this dynamic is that, despite tourists being lured to the towns by the presence of an active fishing fleet promising local produce, it is retailers (in the form of fishmongers and restaurateurs) who are typically benefitting most from the trade. Retailers in fishing towns such as Rye and Whitstable use the term "local" to appeal to tourists and residents alike who are keen to support their local fishing industry. However, the extent to which fishermen benefit from this interest in their product is currently unknown (Urquhart et al 2014).

6.2.4.5.2 Eating out in Restaurants

A striking feature of participants' descriptions of eating seafood was their obvious willingness to want to try seafood, in general, and particularly new things, when eating out – both in the UK and when on holiday abroad. Income and lifestage was implicated slightly in this behaviour, with those on higher incomes and without young children (and who therefore had the capacity to eat out more regularly) being more willing to take a risk on something that was previously untried; and younger, less confident cooks, liking to try seafood when out because the effort of preparing the meal had been undertaken by someone else who, in theory, knew what they were doing! Seafood lovers whose partner didn't share their enthusiasm also looked forward to the opportunity of indulging in their passion without needing to worry about their partner's preferences.

"I will try stuff that I haven't been eating at home if I can't cook it at home. If I think I can cook it for cheap and I have cooked it for cheap I won't have it in a restaurant." (O01 NE)

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"I like to try new things if I'm out and because I'm unlikely to at home, that's the whole point, so it's the being out and trying something new and being a bit creative I suppose. And then if I liked it I would quite possibly then start buying it at home.....I'm more likely to try something in a restaurant than I am to try it from the fish counter.....Some expert is cooking it, they know what they're doing, they know what tastes best with it presumably." (002 SE)

"If someone came along and somebody in a restaurant said this [Gurnard] is absolutely delicious, this is a really good meal and if you pick Cod you're missing out on something then I'd pick the Gurnard, I'd give it a go and then make my own mind up then. But I wouldn't recognize it and buy it in a shop because I don't know what to do with it." (003 NE)

"I think to some extent if you get a good restaurant and go out for a meal and they have some exotic fish that you haven't tried before for me that's always an attraction, that's my sense of adventure, and then if you see that same thing in a fish display I would try to do it on my own rather than have the cook obviously, the chef doing it, so I would try and imitate what you get at restaurants and that's part of the attraction for me, that I can do it myself." (004 NE)

"In a restaurant I'm probably more likely to try something new I don't how to prepare." (005 SE)

"If I went out for a meal I would always look at the fish dishes first on a menu...my husband - not, he's more of a meat eater than I am but I would always check out the fish dishes first." (015 NE)

"But because we have two kids and we don't go out for meals very often, when we went out for a meal if it was on the menu I wouldn't have it because I'd think this is a treat for us so I'd probably have something that I really know I want and really like. If we had the financial means to go out once a week I'd say oh I'll give that go, for sure yes." (009 NE)

"..When I'm going out for dinner at a restaurant I'm not that adventurous because it's sort of a whole meal and if it turns out I don't like it then that's that....It costs quite a bit for me to go out to a restaurant, you know, I want to make sure that I enjoy it really." (022 SE)

Finding new and exciting things on restaurant menus was not, however, a common occurrence.

“If I went out for a meal I would always look at the fish dishes first on a menu....the trouble is so many of them are Cod this and Cod that, I probably would think, just leave the Cod alone otherwise they’re just going to keep putting more Cod on the menu (laughs)....” (015 NE)

“Yes, I’ll eat anything (laughs)... it’s hard to find a lot of adventurous food places around Guildford (laughs) I mean London you see quite a few more but yes I’m open to trying new stuff.” (026 SE)

Despite consumer willingness and interest to try new things when eating out, the mainstream restaurant scene seems reluctant to stretch consumers too far – choosing instead to go for safe options of familiar species, many of which are now farmed. This would seem like a wasted opportunity to encourage the consumption of a wider range of currently under-utilised seafood options and, in so doing, remove pressure on over-exploited and intensively produced species.

The benefit of farmed products (from a retail perspective) is greater control over the look and quality of the product and, usually, very little risk regarding the availability of stock. Disease outbreaks and other environmental disasters may disrupt supply but, for the most part, the stock can always be found (albeit that prices may fluctuate to reflect temporary shortages.) In contrast, wild caught products have the disadvantage of being both seasonal and variable with respect to population density and distribution, thereby making them a less reliable product for retail.

The consumers in this study, however, spoke about liking variety and of looking forward to when seasonal products started arriving on the fish counters. This suggests that there is an opportunity to increase the range of product available but this should be tested, from a practicality and desirability stand-point, with both suppliers and consumers. Arguably, issues of economies of scale will surface – what may be possible for a local restaurateur may be unachievable for a national restaurant chain or Supermarket that is needing to source in much greater volumes. French and, recently, Spanish supermarkets, however, have been able to operate a business model that meets consumer demand for local and seasonal produce proving that it can be achieved, if the will and the infrastructure are both in place to enable it (Villegas 2014). Further research that explores these issues within the UK retail context is therefore suggested.

6.2.5 Psycho-Social Variables

6.2.5.1 Social Norms : Celebratory Meals with Family and Friends

In addition to the influences of family with respect to Lifestage, consumers also talked about the importance attached to cooking celebratory meals for family and friends. Here, cooking seafood

was often deemed a risky choice – on the basis of expectations about taste preferences and what friends and family would consider a fitting meal.

“We also like entertaining ..and, this is probably a terrible generalisation, but I think it’s true, and I don’t think all that many English people, and I mean English because the Scot’s are different, like fish; we tend not to offer fish if we’re entertaining.” (009 SE)

“Unfortunately a lot of people don’t really eat seafood anyway so that kind of makes it a bit more difficult but yes, so in the past I’ve cooked, I think, mostly starters – again, I almost feel that I can’t do a main seafood in case something goes horribly wrong (laughs)...so, all the seafood that’s easier to cook, so Prawns, Monkfish, things that are practically meat-like in the way you cook them that’s what I’ve done.” (026 SE)

It was also notable, however, that consumers would distinguish between supermarkets and independent fishmongers (and other independent retailers) when considering an important meal, such as Sunday lunch. Larger purchases for the centrepiece of a meal were viewed as being worth travelling further and paying extra for, in contrast to everyday staples.

“I do go to the North Akeham farm shop if I want a really nice piece of beef because they have their own cattle and it really is super...it’s not the same for other meats, I don’t go and buy mince and things like that....Cost - I have to say that the supermarkets can’t be beaten on the cost front. Probably their fish is much cheaper than Ridley’s I just haven’t looked even!” (027 NE)

Friends were another important influence on participants’ cooking skills and overall knowledge of seafood but were less credible as information sources than chefs, for example (See 6.4.4.2 for a wider discussion.)

“There’s a lot of it [sustainability] in media really...I was going to say if your friends are talking about it but then actually with friends it’s slightly less so because it doesn’t feel credible when people are talking about it.” (026 SE)

6.2.5.2 Personal Norms : Comfort in Retail/Customer Interaction

In talking about the places that they shopped, consumers drew a clear distinction between the experience of shopping in a supermarket and an independent fishmonger’s shop. Inter-personal relationships and interactions were important here – with consumers describing the fact that they could chat with a fishmonger, and get advice on cooking and preparation in a way that they didn’t feel they could get from a supermarket, even when the supermarket had a fishmonger working behind the counter. (There was a certain lack of confidence in the skills of supermarket

staff who many supposed were not properly trained.) In turn, this could lead to people trying new things and / or being persuaded to impulse buy.

“You get a bit of chat, a bit of advice on how best to keep the meat and fish, stuff like that, so yes I try and encourage the artisan butchers and fishmongers.” (004 NE)

“I would ask the fish merchant how versatile it is because I would know more or less by looking at the fish what you do, you know if you’re going to make a stew, a casserole, whatever, ask him if it would be good for that and they are usually very knowledgeable about what they are selling.” (005 NE)

“I always use the same one – Marsh... It’s an older couple, father and daughter that run it, old old chap I should think well beyond retirement, and they are just lovely....it’s partly the relationships and that they are very happy to do anything that you want. So they skin it very very happily and also the fish is good, it’s always fresh, I’ve never been disappointed.” (006 NE)

“He will fillet them for me and I know supermarkets will do it but I’m not sure they’re necessarily as good - he’s very good.” (006 SE)

“We pitch up and see what looks good. We sort of rely on him really don’t we? And because I’ve got to know them, they will have a chat to you about what’s in and he will tell me if the boats haven’t been able to go out so he’s only got what stock he’s already got , so yes, I do have a bit of a natter with him about what there is.” (006 SE)

“I’d rather go to the fishmonger....it all looks much more attractive, you see the whole fish, you’ve got somebody to talk to. It’s the same idea as going to the butcher, you know you can go in and say “Oh I want to make such and such, the recipe says... what do you think”? And sometimes they will say, “oh try this, it’s better value “...so you’re getting their expertise. I’d far rather go to the fishmonger.” (008 SE)

“..Plus the people you are buying it off tend to know what they are talking about. It’s sometimes useful to have a chat with them to see what’s what and how to cook it, how to prepare it.” (010 NE)

“I think if there’s something that looks interesting I will try it and certainly if Mr Ridley recommends something I will always try it. I don’t go so much by the recommendations of anybody in a supermarket because often they are not really experts in fish they just

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happen to be put on the fish counter (laughs) which is a very different matter all-together.” (014 NE)

“I mean I sometimes say to them [at the supermarket], what would you do with that by the way? You know, I would sometimes ask just for advice and they try to be helpful but I think maybe there are some fishmongers who’d have a bit more clue about it.” (015 NE)

This wasn’t for everyone, however – with some consumers put off by the banter that was usually associated with buying in a fishmonger’s, particularly because many fishmongers are also men-only environments, which can make them slightly more intimidating for some, particularly when asking for advice.

“I went down once, down there [The Stade] but I found the fishermen quite patronising, quite off-putting actually and also you’re faced with a very big choice, most of which I don’t know what it is, so really unless you’re there with somebody who knows something about it, or a slightly better customer atmosphere I would find it off-putting...To be fair I’m basing that all on one limited experience, but you do don’t you?” (002 SE)

“We know the people in the Rock a Nore far better and so for example over Christmas time my wife would probably give them some homemade biscuits as a little present or certainly a card. The Arcade is er....at least two out of the people who serve at Rock a Nore are women, the one here is more laddish, but in terms of the quality and price of fish - there’s very little difference.” (003 SE)

“I think the only weakness of going there is if you try and talk to the guys behind there about certain things that maybe you don’t know what they are or what they taste like...I mean I have to accept that if you don’t know what a lemon tastes like then it is a bit difficult to explain to somebody what a lemon tastes like, so I appreciate that they’ve got a problem if you say “what’s that like” because either the answer is that they’ve not tried it or they don’t feel that they can describe it ...” (013 NE)

A further intimidation arose in the process of selecting and paying for seafood from a fishmonger as opposed to at a supermarket counter or picking up a pre-packaged product. The less confident consumers talked about the fact that they had a good idea about how much, for example, 500g of mince would cost and how many meals it would make. In contrast, they lacked an equivalent understanding for seafood, such that they were unsure how much to ask for and how much the product would cost once it had been weighed (by which point most people felt

obliged to go through with a transaction, even if it cost more than they had anticipated.) Supermarket shopping appealed in these cases because the consumer could pick up a pre-packaged item with the price clearly displayed upon it without the need for any potentially embarrassing interaction with a fishmonger.

“I just want to go in and buy it...I do sometimes go to the fish counter at Tesco’s but you know I have to spend quite a bit of time studying what’s on I’m not just going to point and buy so I prefer to look at the packaged fish because it’s got more information on it.”
(001 SE)

“It’s about weight and often with the wet counter you’re looking at a whole fish and I don’t know whether I want 200g of that, 300g of that, a slice of that, I have no idea. So again you’re sort of, I mean I suspect if you went up there and you said, “I want a Salmon steak for one person,” that’s exactly what you’d get, but again if they do quite a generous one then suddenly it’s £2 more than you were expecting it can make quite a difference.”
(002 SE)

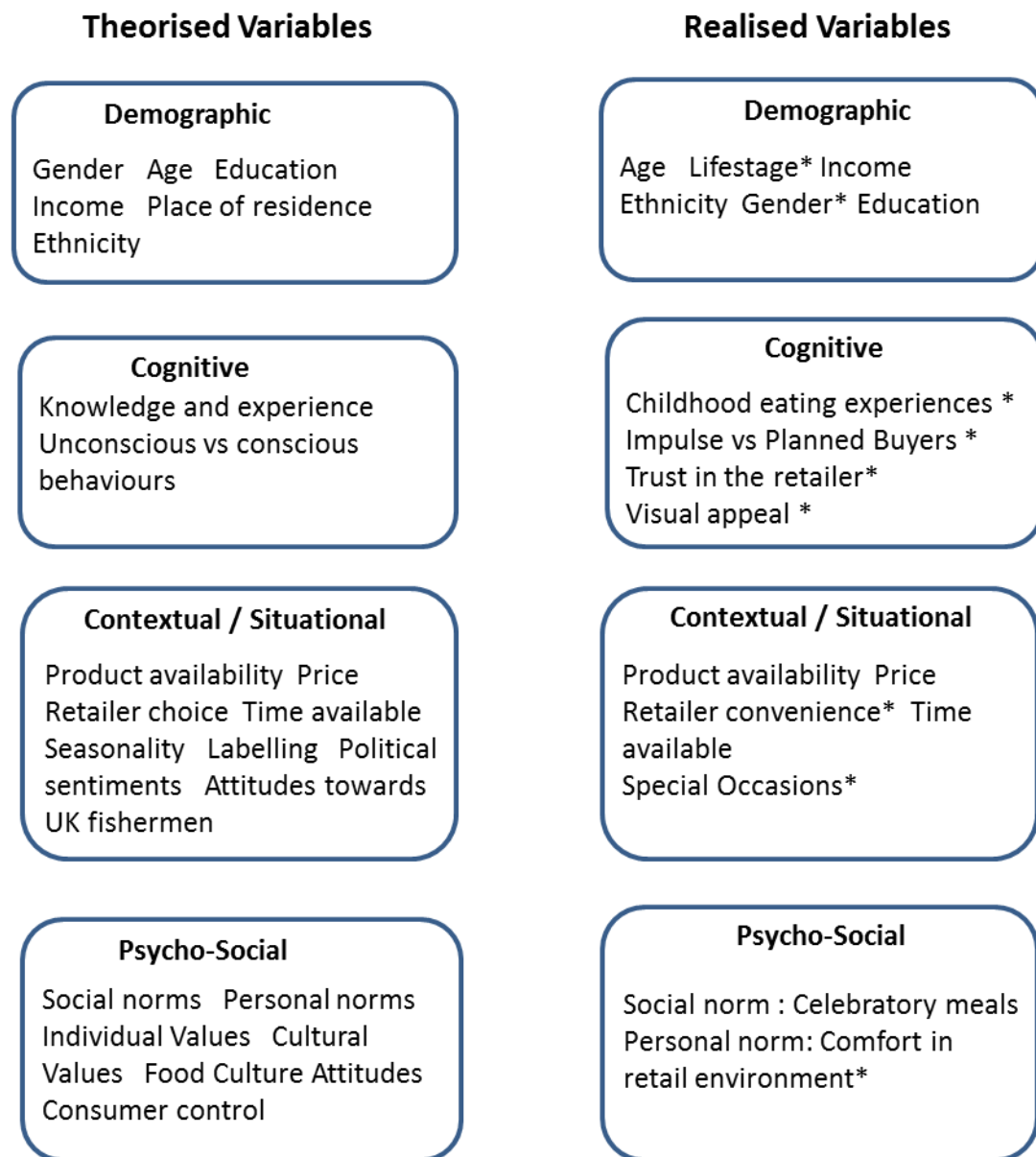
“I’ve dealt with counter stuff on the other counters in the supermarkets and they do appear to be very well trained and very friendly, but again it’s packaged, it’s easy, you know, I can get it and get out, I don’t need a conversation about it, I don’t need to think about it, it’s just there.” (002 SE)

“I think for me it is one of the advantages of buying fish in the supermarket is if I go to Marks and Spencers and they will have different fish there and they will have priced them by the unit and I can look and I can decide actually that piece of fish is too big for me or it will do 1 ½ meals and I don’t want 1 ½ meals I only want 1 or 2 so I won’t take that packet I’ll take this other packet you know so it’s more usable for me.” (015 SE)

6.2.6 Summary : Consumers and Retail

Referring back to the full range of variables identified in the Conceptual Framework, it is possible to conclude the importance of the following with respect to the UK seafood consumers examined in this study and their interactions with the retail environment and, similarly, to conclude the lesser importance of those variables not confirmed by the analysis. The variables with an asterisk are identified as new variables in the context of understanding UK seafood consumer behaviour (Figure 39).

Fig. 39 Variables Affecting How UK Seafood Consumers Shop for Seafood



Thus, as predicted from the Literature, Age, Income, Education and Ethnicity (White British) were all positively associated with an increased tendency to buy seafood overall (Wellman 1992; Burger 2008; Myrland et al. 2000). “Lifestage” provides a more granular interpretation of the effects of age upon consumption, and was found to be important in linking ageing with other household changes, such as the presence and absence of children and the changing role that that confers upon the individual and their seafood buying behaviours.

The variable “Gender” is identified as being distinct from the prevailing Literature in that this study found a definite male effect – more males took part than expected and they demonstrated

a particular enthusiasm for seafood that was unmatched by their female counterparts, possibly indicative of a difference between the sexes with respect to how seafood is viewed.

The consumers were found to be quite variable in their shopping styles – with some tending towards planned purchases more than others but most demonstrating a degree of impulsiveness when it came to buying seafood that was not reflected in other purchase behaviours. Experiences (good and bad) of eating seafood as children had a strong influence upon current eating patterns. Birch also found a positive link between childhood and adult seafood consumption patterns in her study of Australian consumers (Birch and Lawley 2014). The finding here supports this relationship but also extends the analysis to suggest that absent positive childhood experiences, specific interventions are required to switch an adult on to seafood, which do not appear to be as necessary for other, arguably more mainstream food products, such as beef and chicken although parallels can be drawn with previous research into adult fruit and vegetable consumption (Devine et al. 1998). Consumers talked about the influence of significant others and of foreign travel, for example, in shaping their liking for seafood

“I had a friend who was a fishmonger in Birmingham market and he would bring us odd bits of Cod and Salmon and prepare it and tell us how to cook it...that’s how I started to really enjoy [seafood].” (003 NE)

“I think my habits have been formed a bit by, partly by going abroad I would say on holiday, that definitely influenced because when you see the range of fish...and I must admit I just think, how can we not have access to more fish when we live eighteen miles from the North Sea and a fish quay?” (015 NE)

“Going to Italy, I guess, I went to Italy quite a lot when I was younger, and I’ve seen this nonsense which is the British attitude about, you know, posh food is for posh people.” (012SE)

“I’ve been very fortunate I’ve been able to travel. If you are never touched by these experiences why should you wonder about them? And many people don’t have those kinds of opportunities, in fact the majority of the population I suppose doesn’t have that extent of opportunity and if you’ve never been exposed to this or that culture or fish or different diets and culinary habits why should you go looking for it?” (013 SE)

Trust in the retailer was a significant factor in shaping consumers’ behaviours and particularly in assuring consumers’ that the seafood they were buying had been responsibly sourced.

Independent retailers garnered the most trust with Supermarkets then being judged on a consistent sliding scale (Waitrose and Marks and Spencer were the most trusted, Tesco the least.)

The finding of the importance to consumers of the quality of the display is a reminder that consumer behaviour can be studied through a variety of different academic lenses. The majority of the academic literature takes a psycho-social approach but biological and psychological approaches that explore consumption as a physiological process are also numerous and need therefore to be borne in mind when attempting to understand human behaviours (Marsden and Littler 1998). Indeed, the literature on visual appeal in food choices is extensive (and beyond the scope of this study to cover in depth) but is, again, illustrative of the complexity of the consumer behaviour field and of the potential variables that influence consumer choices (Melton et al. 1996; Imram 1999; Jansen, Mulkens and Jansen 2010). Similarly, the finding that some consumers felt uncomfortable engaging in the kind of one-to-one interactions typified in independent fishmonger shopping, highlights the importance of understanding human emotions such as shyness and embarrassment in the retail context (Laros and Steenkamp 2005; Williams 2014).

“Product Availability”, “Time Available” and “Price” were all confirmed as important situational and contextual variables that could shape both intentions and actual behaviours. Additionally – and possibly uniquely to the UK retail environment, consumer behaviour was strongly influenced by having a choice of retailer. Consumers with relatively easy access to independent fishmongers (such as those living in coastal communities) were more likely to frequent them over Supermarkets as a matter of choice. In contrast, those without such ready access had to settle for shopping at a supermarket or, alternatively, to make a special effort to visit an independent retailer – which then brought into play considerations of the time available. Special Occasions were also significant in their effect upon seafood consumer behaviour – with consumers more likely to buy seafood when visiting the seaside; and when eating out in restaurants.

6.3 CONSUMERS AND SUSTAINABILITY

6.3.1 Introduction

In keeping with the preceding section, the analysis here is structured according to the potential variables described in the Conceptual Framework (Figure 29, section 4.5.5). This section begins with an analysis of consumers’ knowledge and awareness of sustainability and of sustainable seafood from the responses workshop participants gave in the sustainability game. It continues by analysing the interview data to discuss how the consumers defined sustainability in the

context of seafood and whether considerations of this concept were a feature of their seafood shopping. Further cognitive, psycho-social and demographic variables are identified as being important here.

6.3.2 Cognitive Variables

To explore consumer knowledge of seafood in general and its sustainability, during the second workshop participants were asked to first identify from a printed information sheet ten commercially available seafood products and to indicate whether they should be eaten or avoided, based upon current sustainability assessments (from the Marine Conservation Society's on-line good fish guide.) Observation of the workshop participants completing this task revealed that few correctly identified every species; and that most participants struggled to name more than one or two, something that they spontaneously expressed their embarrassment about.

“Do we have to identify them? (laughs)...probably not !” “This is going to be embarrassing!” (Cranbrook Workshop 2)

“I don't know the names for the damn things at all!” (Durham Workshop 2)

Production method (wild caught or farmed) had little impact upon the consumers' deliberations regarding sustainability. Instead, consumers relied solely upon what they felt they knew about specific species and made their assessments based upon this. Most people had some awareness of the overfishing of Tuna, for example, and were able to identify a Tuna from the images. However and unsurprisingly perhaps given that consumers will very rarely ever see a whole Tuna upon a UK fish counter, most were unable to distinguish between the two different species displayed (Skipjack and Albacore) which have very different sustainability ratings. Thus, the consumers tended towards declaring the Tuna as unsustainable, whereas in fact Skipjack is assessed as safe to eat. Despite its quite distinctive appearance and regular presence on fish counters, Seabass was not routinely identified by participants, with some incorrectly guessing that it was Cod and Salmon. Similarly, very few correctly identified the Hake or Anchovy and no-one was able to name the Pouting. More consumers recognised the Monkfish, possibly because these fish are often displayed for shock value on fresh fish counters (Figure 38), a feature remarked upon positively by one participant.

“There was a complete full Monkfish there the other week which was just an extraordinary thing to see, on display you know....I think that they do a good job in marketing themselves.” 013 NE

All of the participants were able to identify the crab and the Prawns but confidence in the sustainability ratings for these species was not high.

The reasoning behind the choice of the ten particular species for the sustainability game was to provide an interesting mix of commonly and less commonly-seen items in order to provide a genuine test of participants' knowledge (which, as self-confessed seafood lovers, was anticipated to be relatively high.) It transpired that their knowledge was not as high as had been thought and, in retrospect, it might have been instructive to have included all five of the "Big 5" in the game to gauge consumers' awareness of their sustainability status. The big five *were* subsequently discussed in the one to one interviews, however, wherein most consumers referred to concerns regarding the sustainability of Cod (from overfishing), Tuna (method of capture) and Salmon and Prawns (from farming) – concerns that had, to an extent, translated into changed buying behaviours (see below).

6.3.2.1 Credibility of the Information / Source

A prominent theme arising from the interviews concerned the range and credibility of the information sources that consumers used to inform themselves about sustainable seafood. Participants regularly cited (a select few) celebrity chefs in addition to certain print and on-line media as sources of reliable information that they drew upon (consciously or otherwise) to gain greater insight into sustainability issues affecting seafood. TV chef and seafood campaigner Hugh Fearnley Whittingstall was most frequently mentioned in direct relation to sustainability, with his Fish Fight campaign on combatting discards and on encouraging the stocking of only pole and line-caught Tuna, mentioned by several of the interviewees.

"Probably Hugh Fearnley Whittingstall, I've seen him doing it [talking on TV about sustainability]." (015 NE)

"So where do you get your information from about those sorts of issues?" (Interviewer)

"Apart from Hugh Fearnley Whittingstall?!" (016 NE)

"I'll watch like Saturday breakfast cooking, Rick Stein, the evening cooking shows, so I'd listen to them, like Hugh Fearnley-Whittingstall and their comments on sustainability and things like that." (017 NE)

"I know Hugh Fearnley Whittingstall did a series didn't he, particularly discards was his big thing as I recall...I tend to pick up on the headlines and absorb it and move on really." (002 SE)

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Consistent with the link consumers made between localism and sustainability discussed in the preceding section, chefs who promoted buying and preparing local produce were also singled out as reliable and inspiring sources, with Rick Stein, James Martin and Hugh Fearnly Whittingstall all featuring prominently in consumers descriptions of respected chefs who had encouraged them to try new things and think about food in different ways.

“I don’t really like cookery programmes on television but I do actually quite like watching Rick Stein and Hugh Fearnley Whittingstall. Rick Stein because he does fish so much so I particularly watch him for that, you know, predominantly for that reason and I would watch someone like Hugh and after that I just can’t be doing with cookery programmes on the television...but I do watch them because I feel as though I’m learning something good from them.” (015 NE)

“Hugh Fearnley Whittingstall, who we also have a lot of time for..... Hugh is forever talking about sustainability.” (009 SE)

“James Martin was at Hastings and he actually cooked a dover sole straight off the Trawler, on the beach, and I watched the programme and I’ve never cooked a dover sole before and I realised how easy it was and we’ve had it twice since then.” (006 SE)

“Rick Stein and some of the Saturday kitchen chefs who come on and do dead simple things with a piece of fish that looks so easy to do, you think “ok I will try it.” I don’t do it all the time...but it’s sort of taken away the fear, the apprehension of cooking fish.” (010 NE)

Interestingly, the youngest consumers quoted the influence of more populist forms of TV entertainment, namely “Come Dine with Me” and the travelling TV chefs/entertainers, The Hairy Bikers – programmes that are more solidly positioned as light entertainment rather than educational and arguably, therefore, have a greater reach than dedicated cookery shows.

“If it was Come Dine With Me, for example, and one of the guys said, “actually I chose this fish over that one because it’s more locally sourced and actually I like to support the economy and, you know, eat what’s readily available in the country...” then whilst I’ll be watching that it will kind of trigger something and “oh right, yeah, readily available, what does that mean...?” because it’s not even something that I’ve thought about really.” (026 SE)

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Given the *expected* higher than average level of awareness of seafood issues amongst the study group and the relatively recent and high profile media coverage given to the Fish Fight campaign, however, awareness was by no means equivocal among the study participants.

“Oh yes [I] have heard of him [HFW]...I know about Tuna there’s something to do with, there’s a bit of a health risk with Tuna I think?” (001 NE)

Rather, and as demonstrated in the sustainability game discussed above, awareness could best be described as patchy and was limited to a relatively narrow understanding of the issues pertaining to both fishing methods (specifically line versus net-caught) and of species of concern (Cod and Tuna).

Further, people’s use of and awareness of multiple information sources, often created a sense of confusion rather than clarity with respect to the kinds of seafood that they should be eating - a phenomenon that has been reported in the past with respect to seafood awareness campaigns (Jacquet and Pauly 2007) and, more widely in respect of messaging surrounding sustainable diets (Oken et al. 2012) and sustainable consumption overall - Markkula and Moisander referring to this as “discursive confusion” (Markkula and Moisander 2012).

“Obviously I understand there’s a lot more to it [fish farming] than that so I know that wild caught could be a good thing as well, again it’s about sustainability and where it’s been caught and how it’s been caught, so I understand it’s not as simple as that, but possibly yes, I don’t know if I think it’s anything to do with mercury and stuff so it’s one of those things literally where I know a tiny little bit about quite a lot of things but not very much about most of them [laughs].” (002 SE)

“I used to eat trout quite a lot and I’d think, is this all farmed now, you know, [laughs] and I was buying sea bass for a while and I thought, hang on, I think I’ve just read or seen something about this being farmed now or it’s from Greece or something and I’d think oh [disappointed sound].” (015 NE)

A handful of respondents talked about using mobile apps to guide their shopping decisions - the obvious benefit of these tools being their real time application. The majority, however, relied upon books and TV shows - the disadvantage here of course being that these sources can quickly become outdated. One consumer described how she derived all of her sustainable seafood information from a book that had been published in 2008, for example. This can lead to misguided demand for products that have subsequently and in some cases rapidly been (re)-assessed as being unsustainable, such as Mackerel (McGrath 2013) and/ or that are unavailable

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due to seasonal variations in supply. With respect to seasonality, for instance, one fishmonger in the North East, described how delays between the filming of cookery shows and their air dates created demand for products that were unavailable, resulting in dissatisfied and frustrated customers and fishmongers alike. He called for TV chefs to have a greater awareness of their impact upon seafood sales and to give clear instructions to consumers about using alternative species at different times of the year.

In talking about their confusion, consumers again drew analogies with free range eggs and meat and the contrastingly simple message involved in choosing these over non-free range products.

“With meat and eggs it’s quite a simple message. If you say free range egg you know what a free range hen is...on fish I find it particularly confusing, I find it hard to differentiateI don’t know how to make the best ethical choice for buying fish basically.” (001 SE)

“I think with something like chicken it’s pretty easy to distinguish, OK you’ve got free range or you’ve got your mass produced battery run chicken. So it’s fairly easy to distinguish whereas with fish I think you need an awful lot more knowledge and I will admit to quite a lot of ignorance around fish and perhaps the way it’s fished, the way it’s produced, whether it’s farmed or wild or whatever...I don’t think it’s as easy to distinguish and unless you start researching and deliberately looking all that stuff up on line, or whatever, or reading and doing things like that, the information isn’t readily available when you are looking at fish in the fish counter or whether it’s in the fridges or whatever. I don’t think that information is as obvious.” (008 SE)

One consumer also made the link with the impact of negative media publicity surrounding health concerns and suggested that “free range” in the minds of the British public is associated not just with higher standards of animal welfare but also (and perhaps more importantly) with higher standards of human health. The lack of any kind of comparable health care issues surrounding fish meant that engagement with the issues was low.

“Because there hasn’t been any health scare. I think with eggs partly what drove that was Salmonella and listeria ..because the people started to think well, maybe I’ll get free range then I won’t get Salmonella.” (001 SE)

It was notable that only a few respondents overtly mentioned ethical labelling schemes such as those operated by the Marine Stewardship Council (MSC) and the RSPCA, again in contrast to their behaviours with respect to meat and eggs.

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"I'd look for the Farm Assured or sometimes the Soil Association, so I do pay attention to the meat labels but I've never bothered really with the fish labels." (017 NE)

One respondent did, however, describe how the presence of an MSC label helped her transition away from a strict vegetarian diet toward one including seafood – a position that she was able to defend on the grounds that the stock was being managed sustainably.

"I started craving mussels and seafood... and a lot of fish at that time, you know, it was starting to be MSC certified and things and so I was able to morally justify it to myself [laughs]." (005 SE)

Where labels did exist they weren't always that helpful in enabling consumers to make what they felt were good choices. Amongst a plethora of competing labels, the terms used in seafood labelling weren't necessarily clear or were otherwise (as in the case of products labelled as being farmed) potentially misleading with respect to animal welfare.

"There are so many labels. Over the years I'm getting to know some of them but some of them are still a bit of a mystery to me. When you are going shopping you could spend hours just studying the labels on things and sometimes you just haven't got time, you just want to throw something into a bag and off you go." (017 SE)

"So what does Pelagic mean? Because sometimes it says "pelagic" and I'm like, "ok, good...?" [laughs]...what is it? But you see how much knowledge you need to make an informed decision because they have these terms but they just stand alone they don't tell you anything about the alternative." (001 SE)

"I wouldn't buy the caged stuff and we don't see "caged" they call it "farmed"....if it's farmed you think oh that's not too bad...but then you know that they've got this bacteria on their fins and there's something on their scales or...so you really don't want it." (001 NE)

On the whole though (and as discussed above), consumers seemed to have a reasonably good understanding of the relevance of the "pole and line-caught" label – at least as it applied to Tuna and, to a lesser or greater extent, they sought it out when making their purchases.

"If I want Tuna and I can't get to Mr Ridley, or he isn't selling any at the moment, then I will always go to Waitrose because I know what it is, it's Yellowfin, it's not cut in advance and it's caught on line." (014 NE)

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“At the supermarket you see whether it’s line-caught or where it comes from ...I certainly wouldn’t buy anything that was not line-caught... you know, if I buy Tuna it’s got to be line-caught.” (026 NE)

“I would definitely go for line-caught.....I don’t fully know what line-caught is but as far as I know line-caught is better than non-, so I would go for that one...I think that’s when it’s more humanely caught?” (026 SE)

Interestingly, the same consumer (026 SE) who expressed a strong preference for line-caught was also critical of the plethora of responsibly sourced labels that he felt lacked meaning and (thereby) influence.

“I think for me there’s a lot of “responsibly sourced” but I’m not sure whether that’s a legal definition or whether that is a marketing definition...so at the moment it doesn’t make that much difference.” (026 SE)

This suggests that labels that tell consumers something *specific* about the product, in this case a specific fishing method, may be more influential over certain consumers than generic labels such as those currently used by the Marine Stewardship Council and the UK Fishing Industry through the Responsible Fishing Scheme that give general impressions of sustainability. The message is simple – it is either pole-and-line-caught or it is not and, in this way, it is as clear a distinction for a consumer to make as between free range and mass produced meat and eggs.

In the absence of such simple labels, consumers generally reported relying upon their retailers to make responsible sourcing decisions and, in the case of independent fishmongers (but notably not the majority of supermarkets), of expecting to be able to talk to the staff about where the seafood had come from and, indeed, about trying alternative species.

“Our fishmonger in Yarm he’ll tell you where it’s from.... I was killing a bit of time in Morrisons two or three weeks ago now and I made a point of going to the fish counter and they had some really big Cod on there and I wasn’t aware of any labels to say where they were from. I wasn’t aware of any at all.” (009 NE)

“I think if there’s something that looks interesting I will try it and certainly if Mr Ridley recommends something I will always try it. I don’t go so much by the recommendations of anybody in a supermarket because often they are not really experts in fish.” (014 NE)

“Well some signs say, “line-caught”, especially on the Tuna. Or it’ll say “deep Atlantic something”. Sometimes but not always you’ll get a label telling you what it is and where

it's from but not always. Sometimes when you ask [at supermarkets] I don't think they know themselves." (011 NE)

"Tesco's will have swordfish, they'll have shark, they'll have Tuna and if you ask where it's come from or how it's been caught the chap won't know. But Waitrose do put labels on some of theirs that they think customers are going to be sensitive about." (014 NE)

Thus, chefs, retailers and, to a limited extent, dedicated on-line resources, were all used by consumers to inform their choices. As demonstrated in the previous section, however, knowledge was generally limited and consumer confusion about what they should and should not eat and why, was common-place. Labelling helped in some cases but there was a low level of awareness of them, with consumers instead relying upon their retailers to make responsible sourcing decisions on their behalf. Given these consumer expectations, the continuing disparity in sustainable sourcing decisions between the UK's five largest supermarkets is a cause for concern.

6.3.3 Psycho-Social Variables

Personal values, personal norms and social norms were all important in consumers' descriptions of sustainability and how it affected their buying behaviours. As theory would suggest, personal Values could be linked with the development of distinct personal and social norms.

6.3.3.1 Personal Values

6.3.3.1.1 Universalism

When asked to define sustainability with respect to seafood, the participants, with very few exceptions, provided a biological definition linked to their awareness of, and concern for, overfishing (as the most understood issue) and that reflects the strong importance these participants gave to the value of Universalism.

"Well when you say sustainable do you mean....you're not taking so much out that it can't replenish themselves...? It's no good taking 100% out of the sea till it's gone you've got to leave enough fish in there to breed and produce some more..." (001 NE)

"Sustainability to me is that if I take 100 fish in a season then there's enough fish left for them to breed and replace that 100 fish for me to catch again next season. Not being sustainable is if I took 100 fish and they could only reproduce to put another 10 fish back for next season." (009 NE)

"Well it just sort of means to me using resources in a way that doesn't deplete them so that they can continue to be used for future generations." (022 SE)

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Some consumers went on to explain their buying and eating behaviours in this context, arguing that their choice to include fish as part of a varied diet, as well as varying the amount and kinds of fish that they bought, helped them feel that they were doing their bit to avoid overfishing of any one particular species.

"I think, well OK, I have fish and chips maybe once a week when we go to the cottage, so two weeks from a fish stock that's maybe isn't sustainable, it's not [that] I'm raping and pillaging the fish stocks personally myself." (009 NE)

"One's trying to maintain a range of eating all the time so if Gurnard appears and it hasn't been there for several weeks, or John Dory appears and hasn't been there for several weeks, we may go for that on the basis of variation." (003 SE)

The fishing method used, specifically line-caught, was also mentioned by consumers in the context of the Tuna fishing industry and wanting to minimise harm to non-target species, Dolphins in particular (by-catch being the second most understood concept from the survey responses), indicative of high levels of concern for the environment as described by the value of Universalism.

"it's replacing net fishing which is where if they do net fishing or trawling or whatever they're going to sweep up whatever they sweep up, which I assume is why things like dolphins and other things get caught in the nets and then I imagine it's very difficult to save them after that...if they're line-caught then they're only going to catch what they're going for." (002 SE)

It was notable that, with the exception of farmed Salmon (see below), animal welfare concerns extended to other species but *not* the fish that were being harvested. Consumers expressed less affection for, and therefore concern for, the welfare of fish as opposed to mammals, for example, a factor that one consumer (013 NE) linked to the need for consumers to be made more aware of the facts around commercial fishing in order to change behaviours.

"If people don't understand then they are more likely not to care. I think when you understand that gives you the facility to care. You're not really going to develop a caring attitude because you've got nothing to base it on." (013 NE)

"For some reason fish don't really seem like living creatures in my mind, if that makes sense, so whilst when I see photos of dolphins etc. horrendously killed, that's really bad and it's really upsetting to see, if it's Prawns or if it's Cod or little fishes like that then it doesn't quite resonate with me in the same way." (026 SE)

One consumer was particularly notable, however, in her dislike for the term farmed, with respect to Salmon, believing that it misled consumers about the harsh conditions in which the fish could be kept. She likened the practice to the battery-farming of chickens, an analogy which recurred frequently, particularly with respect to consumer confusion about ethical buying practices.

“I would never buy a caged egg, if a pack says caged egg I don’t want it...not because I think it’s healthy for me but because I don’t think it’s healthy for the animal... we don’t see “caged” [seafood] they call it “farmed”.... if it said “caged” or processed someway or “intensely-reared caged”, if they said that, I wouldn’t touch it.” (001 NE)

Wanting to reduce food miles was another environmentally-driven concern that consumers linked directly with *aquaculture* - being aware that commonly-available and consumed species such as Seabass, Bream and Prawns were farmed abroad and imported for sale in the UK. In contrast, it was notable that consumers had very little awareness of the food miles associated with wild caught fish, other than in extolling a preference for local fish. Workshop participants were shocked to learn that the UK imported thousands of tonnes of Cod from China, for instance.

6.3.3.1.2 Benevolence, Hedonism and Security

Salmon farming and aquaculture in general, albeit to a lesser extent, was the third most prominent aspect that consumers brought into their discussions of sustainability. However, while consumers had some awareness of the animal welfare problems associated with overstocking, their concerns about these practices tended to relate more to the potential negative impact upon *their* (and their families’) health than for the fish themselves (being concerned about the practice of using antibiotics to curb the spread of disease, for example.) Such concerns could be motivated by consumers possessing a high regard for the value of Benevolence (the preservation and enhancement of the welfare of people with whom one is close) as well as Security (Safety, harmony and stability of society, relationships and self) and Hedonism (Pleasure, sensuous gratification.)

The health concerns arose in consumers’ descriptions of the diets of farmed Salmon and in their perceptions of unhygienic practices in commercial aquaculture for Salmon and Prawns, with consumers having the least confidence in foreign farming operations.

“..stories about disease, lice and so on and who knows what else might go on in terms of antibiotic treatment for farmed Salmon...so those vague feelings about it...” (003 SE)

“..the warm water Prawns have probably been farmed and they’ll have come a long way and who knows what conditions they’ve been cultivated in, in southeast Asia, for example.” (003 SE)

“The Salmon...I know a lot of fish eat food that you prefer they wouldn’t for what you have to eat. When I’ve seen what [they] feed them it’s these pellets of refined waste from other food industries, to put it politely, and a lot of fish bits in it. So it’s partly cannibalism and isn’t that how the foot and mouth disease started with the last lot? So I don’t like that...it puts me off.” (011 NE)

While not strictly speaking a sustainability issue, this finding of the importance of minimising harm to *human* health as opposed to animal welfare, resonates with the theory that the conservation-focused, US-based “Give Swordfish a Break” campaign was primarily successful because it coincided with a health campaign linked to concerns about heavy metal accumulation in the flesh of this species (Jacquet and Pauly 2007). It is also consistent with research that finds positive associations between aging, increased consumption of seafood and an increased interest in health matters (Olsen 2003; Pieniak, Verbeke and Scholderer 2010); and research into consumer acceptance of farmed fish which finds both low levels of awareness of production issues pertaining to fish-farming and low levels of concern regarding fish welfare (Honkanen and Ottar Olsen 2009; Pieniak, Vanhonacker and Verbeke 2013; Vanhonacker et al. 2011; Barrington et al. 2010). Arguably, then, attempts to convert consumers to alternative species from a sustainability perspective may stand a better chance of success if their favourites are also linked to negative health concerns. There is a precedent for this in UK consumer demand for meat, wherein negative media attention regarding the safety of beef had more impact in terms of shifting sales of beef alternatives than positive advertisements for white-meat alternatives (Fousekis and Revell 2004).

6.3.3.2 Personal Norms

6.3.3.2.1 Avoiding farmed seafood

For some consumers the above combination of value-based concerns for the health of both ones loved ones as well as the planet, in general, had been sufficient to alter their buying habits, creating new personal norms with respect to the consumption of both farmed and wild-caught seafood.

Thus, several consumers described avoiding farmed Salmon and Prawns for health and environmental reasons.

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“..so there’s a lot of Salmon and all of a sudden Salmon is very cheap ...and you start eating lots of Salmon and then you start hearing, well hang on a minute where they are producing the Salmon, the density of the Salmon is so great they’re having to put lots of antibiotics or whatever in with them to stop the disease, therefore then we’re all having far too many antibiotics entering the food chain...so you stop eating the Salmon. I’ve really reduced Salmon, I eat very little Salmon.” (015 SE)

“I tend not to eat Norwegian Salmon because of my food writer friend, who says that, having investigated it, she wouldn’t go near Norwegian farmed fish because of their standards.” (016 NE)

“I love Prawns but I would not be desperate to buy Thai Prawns simply because of the air miles issue.” (016 NE)

“If it’s saying that it’s farmed then I’m less likely to purchase it because it’s farmed than if I know that it’s lived in different conditions and has not been subject to the kinds of pressures that come through fish farming.” (013 NE)

Others, however, were less sure and were confused about whether or not it was acceptable from a sustainability perspective, to eat farmed fish – particularly as it pertained to the issue of food miles.

“I was really quite surprised at the discussion we had last time, all sorts of things that we had clearly got wrong vis a vis sustainability. For instance, it seemed to us that any fish that was farmed was obviously sustainable ...” (009 SE)

“I’m not entirely sure about the facts of the situation as to whether or not they have a negative impact on wild fish in the surrounding or on the seabed where they’re based or whatever, you know, I just honestly don’t know the sort of the hard facts of it very well.. so we’d tend to look for something like wild Alaskan Salmon but even then I don’t know if that’s a good or bad thing.” (015 NE)

“...so then I notice food coming from or labelled as being caught in Vietnam so then you’re thinking about “well that’s travelled thousands of miles”, you know, although it’s cheaper as well...and also tends to be fish types that haven’t heard of before ..and why should I buy stuff from so far away because then we’ve got the whole food miles thing...but that could be supporting people in Vietnam who’ve got a cottage industry which is why I buy beans from Kenya because it actually supports local farmers out in Kenya even though it comes on a plane.” (001 SE)

“I suppose there’s an attraction in it being local in a sense of that it may be fresher and hasn’t been frozen but in terms of things like food miles...the food miles debate is very complicated one. Is it better to be ...and the calculation of the food miles will depend on the season so, it’s a sort of instinctive rather than objective reason for going for local but it is, there is some degree of attraction.” (003 SE)

On balance, however, consumers were resigned to the realities of modern consumption patterns, arguing that if they wanted to continue to eat fish in the quantities that they liked to do so, some compromise was needed with respect to the amount of wild versus farmed fish that they ate – indicative of an additional personal norm within the study population of wanting to maintain a balance between the consumption of farmed and wild caught fish.

“If we want to eat fish and we want to have sustainable populations out there of species that are not being driven to extinction, we can’t be too precious about what is wild and farmed.” (003 SE)

“I would prefer to buy locally sourced things but if there’s something that I want and there’s nothing that’s local and it’s been flown in from Spain or whatever then you know I’ve got to get it because that’s the only option there is.” (008 NE)

6.3.3.2.2 Economic Considerations & Buying Local

Consumers rarely brought economic considerations into their definitions of sustainability. When they did it was to highlight what they perceived as tensions between making a profit and preserving the environment.

“So you’ve got the fishing industry but then you’ve also got wholesalers and retailers and they must play a big role in how these people survive or don’t survive...because they are the purchasers so they are crucial to that because these people, if they want to sell to them, are going to have to do it at a price that suits them so they will have to then compromise the environment possibly to get the fish at the price that these people want...and that’s how it then becomes.” (001 NE)

Consumer views regarding **localism** were important here, however, with a common distinction being made by consumers between what they perceived as the (more sustainable) practices of the UK fishing fleet in comparison to industrial (and foreign) fishing operations.

“There is fish left but it’s factory shops that do the damage isn’t it...they come in and they just scoop everything up and they are indiscriminate fishers [as opposed to]...the

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local man who goes out in his boat and might go over night or might even go for 3 or 4 days and goes for a particular fish and comes back with that fish.” (O11 NE)

“I’m a really strong believer in keeping the environment that you have. And I do think if you ask any man who has trawled he will say exactly the same. You know they are doing it for a living, not destruction. It just seems a shame that foreigners, who are doing it to ours, that it’s allowed to happen.....if you knew which countries were doing that, I would avoid that [fish] like the plague!” (005 NE)

Consumers’ definitions of what constituted local seafood were on a continuum where, at the most local end of the scale, consumers deemed seafood to be local when it was landed at their nearest fishing port (i.e. Hastings for the South East study participants and North Shields for the North East study participants.). At the other end of the scale, was seafood that had been caught in British waters by British boats and then into the waters beyond the northern British Isles.

“There’s a lot of stuff that the fish stall sells which they claim is North Sea based and I suppose if I feel as if I am supporting the local economy in that way, that’s a significant thing.” (O13 NE)

“Plaice, well it’s not local to up here I think it more comes from the South, East Anglia....oh we can get it as far north as here..?...oh then that’s fine then.” (002 NE)

“I know that when Cod being for sale locally, you know, in the past, but invariably it’s not a local Cod anyway, it’s probably shipped down, it used to shipped down from Hull, you know, [laughs], so I am aware of what people would believe would be local fish is probably, may not be local fish.” (007 SE)

“If there were sustainable stocks of fish from around, you know, within sensible range of the British Isles which could be landed in Britain and so on, I would give them priority if I knew what they were and where they were available.” (O15 NE)

“Well, local, truly local would be English channel. And then British Isles and then Iceland, Norway...” (003 SE)

Consumers frequently talked about wanting to support local businesses and even in being prepared to pay a premium for local produce. In doing so, however, the emphasis was typically upon fishmongers as opposed to fishermen – a distinction that may have implications regarding harnessing the benefits from any growth in demand for locally-landed seafood. It was notable that consumers also perceived a benefit to *themselves* of shopping locally, remarking that this

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meant that they got a superior, fresher, product than could be bought in a supermarket, for example. This again reflects the Values analysis which found that this group scored particularly highly for Hedonism.

“...it’s something different and it’s healthy and it tastes nice and fresh and it feels like you’re supporting local, you know, rather than going to the supermarkets.” (004 SE)

“I suppose there’s an attraction in it being local in a sense of that it may be fresher and hasn’t been frozen...” (003 SE)

“When I used to go to Waitrose and buy fish occasionally in there, there used to be all sorts of varieties, Madagascar, Cornwall, you know, loads of different sorts, but none of them had a very good date on and you couldn’t freeze any of it.” (006 SE)

“Interviewer : If it was described as “Whitley Bay Pollack” ...would that be something that would be of interest? “I think it would be, yes, because you’d know it was fresh.” (027 NE)

“In the Hartelpool Morrison’s it will sometimes say locally caught and whatever it is and we go...oh that’s, you know, that’s going to be fresher because it’s only just come off [the boat]...less than 200 yards.” (011 NE)

The large supermarket chains, and Tesco in particular, were mentioned by consumers as a reason for aspiring to buy more locally, thereby eschewing what they perceived as the negative practices of big business.

“I’d really like to try and do more of that [buying locally] because I’m getting more and more disillusioned by the supermarkets, I think the more I read about them, the more I think they’re not, you know, ethical the way they behave, not just from an environmental point of view but from a business point of view as well, I think the supermarkets, particularly Tesco, but others, others as well, they’re all up to the same thing aren’t they?” (004 SE)

“To me small is more beautiful than something big. I don’t like big companies, for example, whether it’s fishing or trying to appropriate huge things and bring it to me for cheap just because they can do it on a big scale.” (024 SE)

The ease with which local products could be accessed was relevant here, however, with consumers in Hastings and North Shields buying locally *because they could* with little effort on

their parts – with local in this context, very much meaning seafood that had been landed at those fishing ports.

“Working in Hastings Town Centre is really useful because it’s easy to get to these places so being in the town means I’m more likely to go along to the market at lunch time or something like that.” (004 SE)

“Being so close, I come down every week and get it from the fishmongers at the front so....all the time we can get down there I think we’ll have that.” (006 SE)

In contrast, consumers without access to independent fishmongers selling local produce had to settle for buying non-local (and arguably less interesting) produce from supermarkets, with varying effects upon product availability and buying behaviour as a result:

“Supermarkets tend to play it safe. I probably miss out on not going to the fishmongers but I haven’t got a fishmongers.” (001 SE)

“I suppose it’s like buying veg or growing you own veg or whatever, you feel you are nearer the source of the product rather than being at a Supermarket you don’t know what’s happened to it you don’t know where it’s been, but you tend to think you know where it’s been if you’re there.” (010 NE)

“The fishmongers counter in the supermarket it’s not actually local, they are bought aren’t they. Tesco’s don’t buy them off the local boat. They have a contract with somebody else to provide them and so it’s not actually local. It all goes to a dirty great supermarket somewhere and is centrally shipped out and you get whatever Tesco’s can get the best deal on. And all the supermarkets are the same in that respect I imagine.” (011 NE)

“They [the supermarkets] sell things like soft Herring roes which they import from somewhere like Canada, somewhere quite ridiculous, which we might be tempted occasionally to have for a lunch and Mr Ridley wouldn’t be stocking that.” (014 NE)

“It’s not that I particularly want to buy it in a local supermarket but to be fair to them they do seem to try and put on a range of fish in one of the supermarkets but I prefer to get it fresh if I can now but the problem with that is because I’m not there several times a week, I’m not sort of buying it as much so I would say we probably have it about twice a week at the moment.” (015 NE)

"I love to buy British and if it said on fish...if there was a choice and so often there isn't... but, if you do then I'd probably favour the British stuff as long as it wasn't much more expensive." (001 SE)

Wanting to buy local and actually being able to buy locally, then, were different things - a finding that reflects Carrington's concept of Actual Behavioural Control (Carrington, Neville and Whitwell 2010) and that can help to explain why consumers don't necessarily follow through with their convictions.

6.3.3.3 Social Norms : Seafood Taboos

A prominent theme arising in consumers' discussions of sustainability was the limited number of species that they associated with the term. Section 6.3.2 discussed how consumer understanding of sustainability was relatively limited and that this translated into uncertainty regarding what they should or should not buy. It was notable, however, that the least degree of confusion concerned Cod, with a high proportion of consumers directly referencing its overexploitation and their subsequent attempts to minimise their use of it. In their study of UK food habits, Future Foundation found that UK consumers had an aversion to eating beam-trawled Cod and suggested the eating of Cod as a modern day food taboo alongside eating mass-produced chicken and eggs (Future Foundation 2012). Few of the consumers in this study distinguished by fishing method, however, seemingly grouping all Cod under one category of "to be avoided" and frequently talked about buying alternatives to Cod. This finding supports the notion that eating Cod (in whatever form it has been fished) is now taboo for at least a proportion of UK society. The following quotes are illustrative of the views of the study population as a whole:

"Cod is the one that sets alarm bells ringing for sustainability whatever that means...I tend not to buy because there are alternatives, you know, and that's what the message is." (001 SE)

"Cod is not sustainable really is it, it's one of the fish that's been most overfished. I hardly ever buy Cod I'm more likely to buy Haddock than Cod, Haddock doesn't suffer quite as much as Cod but that's partly why I buy Hake. You are encouraged to buy these less common fish because they are not so endangered." (002 NE)

"I think I've got it in my mind, and I don't know whether I've understood correctly but I've got it in my mind that Cod is being over fished and it's not as sustainable." (004 SE)

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“We tend not to buy so much Cod.....Because of sustainability I’ve avoided Cod for the last few years.” (010 NE)

“When Cod was a real problem and other species too, I wouldn’t buy them unless, you know, there were particular extenuating circumstances to it...I would look for alternative things - for Coley, for Whiting, for Pollock rather than Cod and Haddock.” (016 NE)

“I don’t tend to buy Cod, just because of the press coverage really about Cod, and the fish stocks being depleted.” (017 NE)

“I think Cod has been [overfished] , I sort of heard that you’re not supposed to have Cod when you have fish and chips you know, I’ve heard that that’s, yeah, that’s the only one I can think of.” (022 SE)

Despite this strong awareness around Cod, recent changes in stock assessments and the media attention given to these (Smithers 2014), combined with the ubiquitous presence of Cod in fish and chip shops and fish counters, had generated some degree of confusion amongst the study participants.

“In a way I’ve given up because, you know, we’re told “stop eating Cod” and ok fine, and then I probably only buy it at chip shop to be honest...but then I think well, where are they getting it from?...and, I don’t know, I don’t get it, and the prices don’t seem to go up, so I don’t see how the market is working...it’s all a bit confusing.” (001 SE)

“If there was a real problem you would think that it [eating Cod and chips] would be actively discouraged and it doesn’t seem to be does it, it doesn’t seem to be hugely more expensive, if at all, than any other fish on offer, so you’d think it would be, yes it’s a strange one really.” (Hastings Workshop 1)

“I am quite well aware of the Cod stock situation but will still go and enjoy fish and chips so....but you know the talk is that the stocks are beginning to rise to a degree.” (009 NE)

“We get problems with Cod but, again and this is where I get confused, people are now saying that Cod from certain areas is OK now.” (010 NE)

The sustainability status of the other fish and chip shop staple, Haddock, was less well understood, with consumers having a vague sense of unease about choosing it but seeing it as a more preferable option to Cod in fish and chip scenarios.

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"I'm a bit wary of buying Cod too much because I keep hearing things about Cod stocks and I never know what the position is with Haddock either so I feel a bit uneasy every time I buy my smoked Haddock but we try." (015 NE)

"I think Haddock has been a wee bit more sustainable and that's probably the only [reason for choosing over Cod]." (016 NE)

"Haddock I think...I might think Haddock was ok." (008 SE)

Consumer concerns for Cod (and Haddock to an extent), then, derived almost exclusively from an awareness (however partial) of the species having been overfished. The only other fish that consumers readily linked with overfishing was Tuna, with Cod and Tuna often being mentioned in the same sentence.

"I'm aware of sustainability problems with Cod and Tuna." (008 SE)

"I think we are all concerned about the reduction in Tuna supplies, about the problems with Cod and how our seas are just being sucked dry of fish." (014 NE)

Consumer concerns relating to Tuna also encompassed their awareness of the links between the purse-seine method of Tuna fishing and high levels of marine bycatch, a factor that steered them towards choosing line-caught Tuna if possible.

"The only Tuna that I buy, in tins, are line and pole. So I would never buy a tin of Tuna that didn't have that on." (005 NE)

"I do still buy Tuna but I buy the pole and line-caught Tuna but I still do buy Tuna." (005 SE).

"I certainly wouldn't buy anything that was not line-... you know, if I buy Tuna it's got to be line-caught." (026 NE)

"Yes I would definitely go for line-caught....I don't fully know what line-caught is but as far as I know line-caught is better than non-, so I would go for that one...I think that's when it's more humanely caught, rather than the other way?" (026 SE)

"In terms of the Tuna I always try to buy the sort of, you know, the more responsibly sourced stuff, like the line-caught." (022 SE)

Indeed, one participant, clearly cognisant of the debate around the netting of Tuna, expressed the (incorrect) impression that this was the only legally-permissible capture method.

"I think he will only have line-caught Tuna. He won't buy stuff that's been caught virtually illegally, as it were." (014 NE)

While factually incorrect, her response was indicative of the strong feelings that consumers had about the Tuna industry and harm to Dolphins - suggestive of an additional seafood taboo (besides avoiding Cod) within contemporary English culture (Future Foundation 2012). Interestingly, one participant (inaccurately) referred to only choosing line-caught scallops evidence perhaps of an over-eagerness to impress the researcher with their environmental credentials or, perhaps more realistically, of an incomplete understanding of and / or confusion about how different wild seafood is harvested - an observation that was supported by the performance of the participants in the workshop sustainability game, as described above.

As discussed above (in 6.3.3.1) consumer responses to Salmon were more varied and included their concerns regarding the impact upon human health of unsanitary and potentially unethical farming practices; as well as the impact on wild populations from the spread of disease. However, few consumers overtly labelled these as sustainability issues, this term almost solely being reserved for overfished species, of which consumers really only knew Cod and Tuna as examples.

6.3.3.4 Social Norm : Reducing Waste

Consumers were also highly aware of and frustrated by the issue of discards - for its creation of unnecessary waste.

"I strongly disapprove of them throwing whatever they catch away because they've reached their quota or whatever. If they are going to catch them then, yes, don't fish so often, but for goodness sake don't throw what you catch away." (027 NE)

"...if you're catching fish and you end up getting one Cod more than your quota it's bonkers to throw it back because that's over the quota, you might as well bring the thing in and if it's there and it's dead and whatever you buy it and eat it." (016 NE)

Indeed, consumers were very pragmatic in their responses to the linked issues of overfishing and discards, taking the view that if it's dead it may as well be eaten, *"if it's dead you can't revive it by throwing it back"* (026 NE). Consumer-acceptance of a currently underutilised (and therefore discarded) species may potentially then be enhanced by emphasising its discard status.

6.3.4 Contextual/Situational Variables

6.3.4.1 Supporting UK fishermen

The social aspects of sustainability were the least well expressed by the consumers and were often conflated with the same considerations of buying local - with consumers' believing that by doing so they would be maintaining and creating jobs and keeping money within the local economy.

"I think it [the fishing fleet] is a really important part of Hastings, you know a pivotal part of Hastings culture. There was a campaign a while ago about supporting local fishermen and trying to encourage the local population to buy their fish more responsibly and move away from supermarkets and I think that's a really good thing to do."
(Hastings Workshop 1)

Typically, there was only a very limited articulation of concerns for UK fishermen but where they did arise consumers expressed a desire to support them as a sector, despite some concerns that they were perhaps responsible for overfishing.

"I would hate to have the life of a fisherman. It's a pretty hard life because they are risking their lives every time they go out and for very, I am sure, very small rewards. There is that issue about overfishing isn't there but you know it's a tough life." (006 NE)

Further, it seemed as if consumers had less awareness of the producers of their seafood than their meat. Tellingly, one consumer who had talked with some passion about the importance of supporting British farmers through the recognition of the Red Tractor logo on supermarket meat, expressed a negative view of the fishing industry borne, he admitted, out of a lack of awareness of the Industry as a whole.

"...it hasn't been on my radar to support the fishing industry, almost because in my head I don't think there is that big of an industry in the UK." (026 SE)

6.3.4.2 Restaurant Eating

When the consumers talked about eating out in restaurants, they were much less likely to ask about the provenance of the seafood - fearing the embarrassment of openly asking a question that (they felt) it was unlikely the server would have an answer for and / or that might severely restrict their options on the menu.

"That issue of where they've come from, how they have been farmed, but for the sake of variety [I] might well suppress that, in a restaurant....if the information was there which would be an attractant in terms of where the fish had come from or either locality or

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method of catching or farming then that information would be useful. But I probably wouldn't on an active basis question the Waiter as to where the Cod had come from, for example." (003 SE)

"I didn't ask anything about the fish, it was Cod and Hake, which both sort of come, I printed this off [brings out copy of the MCS's Good Fish Guide] not great on that..." (008 SE)

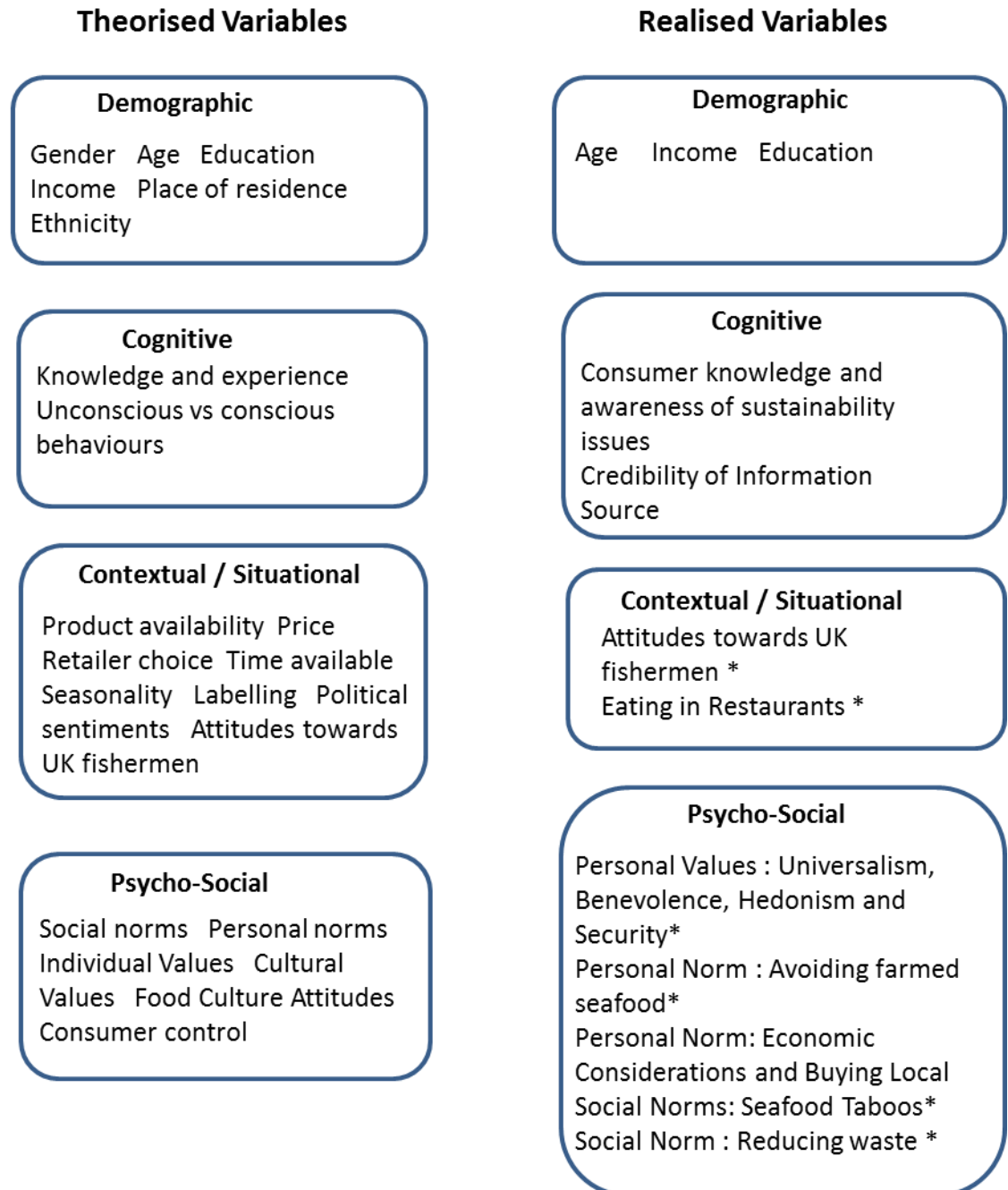
"No, I haven't actually but I really ought to...I'd probably sort of sit and eat this and think, "oh, I'm still not sure I should have, I'm not convinced I should have had that", you know. [Laughs]." (015 NE)

"Yes, the trouble in a restaurant is that you really don't know...there was a big scandal in France over the amount of particularly sea bass, gilthead bream...but essentially whether they've been wild or farmed because a lot of restaurants will say that they are wild and they're not - even in Marseille." (016 NE)

6.3.5 Summary

In considering the variables within the Conceptual Framework as possibly influencing sustainable seafood consumption, the following are identified as being important (Figure 40).

Fig. 40 Variables Affecting How UK Seafood Consumers Think about and Take Account of Sustainability in their buying behaviours (variables marked with an * are new variables with respect to sustainable seafood consumption)



Consistent with the academic literature, age, income and education were all significantly associated with increased knowledge on sustainability issues (Verbeke et al. 2007). Yet there was no discernible gender difference, in contrast with previous research that has found a link

between femaleness and increased concern for the environment (Stern and Dietz 1994; Schwartz and Rubel-Lifschitz 2009).

Overall, however, the study participants had a patchy understanding and awareness of sustainability issues relating to the fishing industry. Overfishing was well understood, as were problems associated with seine-netting versus the line-capture of Tuna. There was less awareness and understanding of the issues surrounding commercial aquaculture, although all of the participants knew that their Salmon and Prawns tended to be farmed.

Celebrity chefs and their associated media (books, TV programmes and websites) were a prime source of information for consumers regarding sustainable seafood, many of whom had derived almost all of their knowledge through the work of Hugh Fearnely Whittingstall and Rick Stein. These chefs were respected and trusted but inevitably their advice has become outdated as sustainability assessments of global fish stocks are under constant review. They were also less well known by younger consumers, who favoured more popular, light entertainment-type cooking shows. Further research that seeks to quantify the effect of such media upon actual consumer behaviour is suggested. Through such research, it may also be possible to determine the extent to which chefs are encouraging the consumption of alternatives to the Big 5 – sales of which remained high even amongst this group of consumers, despite them talking openly about their concerns for four of these five (i.e. Cod, Tuna, Salmon and Prawns.)

The concept of local food was important in so far as it pertained to supporting UK fishermen, who are generally perceived as responsible and not overfishing (but who suffer from a lower public profile than British farmers); and, in supporting independent fishmongers who sell local, i.e. British, produce. The suggestion from this finding is that there is demand for British-labelled seafood. Consumers were, however, also confused about the extent to which it was really better (in their words) to eat locally landed wild produce versus, for example, farmed produce from overseas. There was a definite conflation of the terms “local” and “sustainable” in the discussions with study participants suggesting that, in consumers’ minds at least, the two are becoming interchangeable concepts. Further research is needed to determine if this is, in fact, the case and before any kind of regional or national branding is developed.

At the same time, consumers were not particularly aware of existing eco-labels for seafood, with few openly mentioning the impact of the Marine Stewardship Council label, for example. Consumers complained about the multitude of labels (for other food products) and the meaningless to them of some of the information contained on seafood labelling, e.g. “pelagic”,

“caught in the North East Atlantic”- illustrative of the phenomenon of discursive confusion described elsewhere in the sustainable consumption literature (Markkula and Moisander 2012).

In seeking clarity, there was a repeated comparison with the free range label – the differences between a free range and caged chicken being easily understood, from both an animal welfare and (as consumers’ perceived) a human health perspective as well. Equivalent labelling for seafood – with simplistic messages about overfishing, bycatch and human health, could be more effective than generic “sustainably-caught” labels. In the absence of such simple messages, the consumers reported relying upon their retailers to make responsible sourcing decisions on their behalf – linking back to the notion of Trust in the Retailer which was discussed in section 6.2.3.3. This was also evident (to an extent) in consumer behaviour when eating out, with consumers far less likely to ask about the provenance of their seafood but rather to take it on trust that the seafood had been responsibly sourced, or (more commonly) to ignore the issue, for the sake of avoiding confrontation.

A strong concern for the environment (as reflected in high scores for Universalism), coupled with knowledge and awareness gained from sustainable seafood campaigns spearheaded by Chefs such as Hugh Fearnley-Whittingstall, meant that consumers’ understanding of the term sustainability, almost exclusively involved an ecological definition relating to safe harvesting levels. The implication from this analysis concerns communicating about sustainability and seafood to consumers because this ecological view is largely at odds with policy usage that additionally incorporate social and environmental domains. Interestingly, however, it *is* consistent with the only extant academic definition, which was developed by an environmental social scientist

“...the meaning of which [sustainable seafood] is generally broad, covering ecologically responsible fishing that minimizes the bycatch of non-target species and brings acceptable levels of ecosystem and environmental impacts.” (Jacquet et al. 2010a, p. 45).

Any attempts to integrate social and economic issues under the banner of sustainable seafood may, therefore, be met with confusion amongst consumers.

Evidence for the influence of personal values upon seafood consumer behaviour was also provided in consumers’ concerns about the potentially negative health impacts of farmed seafood (Benevolence, Security) but their equally strong commitment to keeping seafood as a key part of their diets (Hedonism). With respect to the former, individual strength of feeling was

such that, for some consumers, new personal norms had been established that meant the avoidance of farmed Salmon and Prawns.

To an extent, awareness of overfishing and bycatch had also led study participants to change their buying behaviours, avoiding Cod and buying only line-caught Tuna, such that there is an argument for the existence of new food taboo, and therefore social norm, within certain sections of UK society relating to the consumption of these species. A Taboo has previously been described for Cod (Future Foundation 2012). In finding very strong consumer dislike for non-dolphin-friendly Tuna, it is argued that the consumption of anything other than pole and line-caught Tuna is also now Taboo within the UK.

6.4 UK CONSUMER BUYING BEHAVIOURS : WHY THE BIG 5 ?

6.4.1 Introduction

The preceding sections have described:

- What the study participants bought, which was consistent with national trends in showing high levels of consumption of the Big 5 species - Salmon in particular, although the consumers did report buying a wide variety of other products and talked about a willingness to try different and new things.
- Where they bought their seafood, which (again consistent with UK buying patterns) showed a strong reliance upon the supermarkets but less so than the average UK population as a whole which suggested that seafood shoppers may be more discerning than the average. This was borne out in the interview analysis which found a number of consumers describing negative experiences of supermarket buying and a desire to, quite literally, go the extra mile to get high quality and (linked to this) local seafood, even if it was more expensive. Equally, however, other consumers perceived no difference in quality and were more likely to be influenced by the pricing and special offers that the Supermarkets routinely offered.
- Consumer motivations for buying what they did, which were numerous and resulted in both planned and unplanned behaviours – the latter in particular being in response to special offers as well as the visual appeal of a product.
- How consumers understood sustainability and what it meant to them in terms of their buying behaviours, specifically as it related to three of the Big 5 – Cod, Tuna and Salmon. It was shown that consumers were generally aware of the issues associated with the overfishing of Cod; the problems surrounding the bycatch of dolphins in the purse-seine Tuna fishing industry; and, of the animal welfare and human health implications associated with intensive aquaculture practices. However, consumers were also

confused about what they perceived as mixed messages regarding the things that they should and should not be eating (e.g. Cod), something that was not helped by relatively meaningless and /or non-existent product labelling, with the notable exception of the “pole and line-caught” label which consumers understood to be sustainable and, therefore, preferable.

This final section focuses upon the specific question: Why the Big 5? The analysis is drawn from two data sets - the repertory grids; and the transcripts of the interviews. Nine distinguishing product attributes are identified from the Grids which consumers used to describe the positive *attitudes* that they held towards the Big 5 over the other fish species considered in the exercise. This is therefore described as a psycho-social variable. The interview analysis then elicited further psycho-social and contextual variables that consumers identified as shaping their own - and their fellow consumers’ – behaviours.

6.4.2 Psycho-Social Variables Affecting Consumption of The Big 5

6.4.2.1 Attitudes

In accordance with Rational Choice-based theories and subsequent empirical studies exploring the effect of attitude upon behaviours (Bamberg and Möser 2007; Vermeir and Verbeke 2008; Vermeir and Verbeke 2006), the consumers in this study who held a positive attitude towards the Big 5 were more likely to consume them.

Table 29 summarises consumers’ responses to the ten species discussed in the Repertory Grid exercise. Nine common attributes could be identified from the constructs verbalised by each of the interviewees which helped to create positive attitudes towards the Big 5 over the other species considered. (NB The words used to describe these attributes are the Researcher’s – the ways in which the interviewees actually discussed each species (i.e. in their own words) are detailed further below.)

In the table, a tick indicates that the product has the positive attribute; a cross that it does not. In some cases the product possessed the attribute but this also had slightly negative connotations – hence a tick in a bracket. For example, Herring was recognised as being traditional and in some ways iconic to the diet of the English – but in poorer, harder, economic times.

“[I’ve] never eaten it [Herring]I just have the idea of baskets....” Interviewer : “What like the old scenes of fishwives on quaysides?” “Yes, indeed, that’s the only link I have with Herring – nothing else.” (003 NE)

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Similarly, while most of the consumers were familiar with Herring as a food fish (which in other species, such as Cod and Haddock was an overwhelmingly positive attribute because consumers knew how to cook it and that they liked it) their attitudes towards Herring were mixed. On the positive side consumers knew and liked its flavour and oiliness; on the negative side were the bones and difficulty in eating.

"...Herring have got essential oils in them haven't they and Cod hasn't. Herring are actually very oily, I quite like Herring occasionally." (026 NE)

"The trouble is Herrings, unless you have them as filleted as kippers, they are very bony, too many bones...more fiddly to eat." (002 NE)

Hence Herring had both positive and negative associations for people. Likewise, while some considered Prawns a light and healthy meal option, others were concerned about their cholesterol content and the possibilities badly-prepared Prawns presented for food poisoning.

Table 29 Attributes Associated with the Ten Species Discussed in the Repertory Grid Exercise

Attribute	Cod	Salmon	Tuna	Haddock	Prawns	Herring	Plaice	Coley	Pollack	Gurnard
Iconic to the English diet	✓	✓	✓	✓	✓	(✓)	X	X	X	X
Meaty / no bones	✓	✓	✓	✓	✓	X	X	X	X	X
Sustainable	X	X	X	✓	X	✓	✓	✓	✓	✓
Familiar	✓	✓	✓	✓	✓	(✓)	✓	(✓)	X	X
Weak Taste	✓	X	X	✓	(✓)	X	X	✓	✓	X
Versatile	✓	✓	✓	✓	✓	X	X	✓	✓	X
Healthy	X	✓	✓	X	(✓)	✓	X	X	X	X
Ease of Storage	X	✓	✓	X	✓	X	X	X	X	X
Convenience	X	✓	✓	X	✓	X	X	X	X	X

Thus, the Big 5 generally acquired positive attributes (and therefore engendered positive *attitudes*) in contrast to the less familiar species considered. The attributes described by the consumers are illustrated through their comments, below.

Attribute 1 : Iconic to the English diet

Cod, Haddock, Salmon and Prawns were each associated with an iconic English dish – fish and chips, smoked and unsmoked wild Salmon and prawn cocktail, respectively. In addition to being iconic in their own right, these dishes also generated a sense of nostalgia - with Cod and chips, in particular, strongly linking with consumers' early experiences of eating seafood and so further cementing its popularity. Indeed, the steady presence of these dishes to the British diet meant that their consumption had very much become a feature of habit – something that was just taken for granted - in essence, a social norm. This is discussed further in 6.4.2.2 below.

“Cod's tasty...I think it's iconic for one thing, I think it's iconic of the N Sea, iconic of the N E Coast...it's a nice fish to eat, it's chunky white fish, it's flaky..it's an all-round good fish.” (009 NE)

“Cod is very tasty fish, makes lovely fish and chips..... If we go for fish and chips it's always Cod.” (004 NE)

“Interviewer : would you say that Prawns are traditional ?” “Yes I would...well fairly, I mean thinking back to the 60s when prawn cocktail became very big, didn't it, I think people began to eat Prawns then.” (006 NE)

“Salmon fishing is a big thing back on our rivers so still one of my instincts is also to see Salmon partly as a local product.” (015 NE)

Attribute 2 : Meaty / no bones

The lack of bones was of real advantage to all of the Big 5, which tend to be offered as fillets and, in the case of Prawns, of course, come with no inherent bones at all. This factor was talked about by several of the participants in making the Big 5 (Tuna, Cod and Prawns, in particular) popular with children.

“I really hate bones in fish which is why I buy my Salmon like this, I can't stand it, if I take a mouthful of fish and it's got a bone in it it's going to put me right off, the whole of the rest of it, to the point where I might just stop eating it. So bones are probably the biggest issue.” (002 SE)

“I quite like a king prawn every now and again, because they are meaty.” (005 NE)

“I like Tuna, I like the texture and the taste ... it is a meatier texture, so I'd probably go for the Tuna I think.” (007 SE)

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“Cod and Tuna I suppose are both fairly meaty fish, Tuna obviously much more so. I like both, I would eat both I’m aware that neither of them are perhaps the best pick depending upon where they come from.” (008 SE)

“Salmon is tasty, it is a very tasty fish and again it comes down to if people don’t like fish with bones..Cod and Salmon, they don’t have bones when they are pre-prepared.” (008 NE)

“Well the Cod and Tuna are both or can be large flaky lumps of meat whereas the Herring is small, very bony and the texture is quite different and it’s oilier fish...the kids like the bigger fish because it can look like meat whereas the Herring is a much finer flesh and it’s a different texture in the mouth.” (011 NE)

“Yeah, I do, I think I like it meatier, which is what you get with the Prawns.” (017 NE)

“I suppose Salmon seems to be a more substantially meaty fish.” (013 NE)

“My scouts are also keen on Tuna... they like the Tuna in the steaks because it looks like meat so it looks like what they are used to.” (011 NE)

“I suppose for me Tuna is the vegetarian’s meat really, it’s very much like a steak – only better (laughs).” (026 NE)

Interestingly, however, some participants (and notably those with slight vegetarian leanings) were put off by the meat-like appearance and strong taste of Tuna.

“Well it’s big, it looks like meat but it’s not meat so....I do like meat but I know that’s not going to be meat so it’s a bit of a contradiction (laughs) it looks like meat but it’s not, I’d rather eat quorn than Tuna.” (001 NE)

“Tastewise Tuna is my least favourite, I don’t like meaty fish I like it to be soft and full of flavour.” (004 NE)

“I don’t like its flavour. I don’t like its texture – it’s too meaty. I like it tinned (laughs) but not [fresh] as it tastes utterly different.” (027 NE)

In contrast flat fish, such as Plaice were deemed as less substantial (and filling). To some this was appealing, to others not! There was a slight male skew to this position, but not to such an extent that it may be considered particularly notable.

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“There’s something about Plaice that in the end I always find disappointing I don’t know quite what it is.” (001 SE (Female))

“I think if I had a 100% choice Plaice would be my first for taste...Plaice I think is a nice sweet fish, delicate.” (004 NE (Male))

“I find these thin, flat fish really rather boring....there’s not really not very much you can do with them is there? You fry them in butter or you put some sort of sauce over them, which is sacrilege isn’t it because Plaice and Dover Sole and all these are very posh with the bechamels and so on, it doesn’t really do much for me.” (009 SE (Male))

“A wishy-washy fish. There’s nothing wrong with [Plaice] it’s just that it’s half way between the two isn’t it, there’s not a great deal to bring me to it.” (011 NE (Male))

“There are certain fish that to my mind, I suppose I’d describe them as kind of limp. I mean flat fish in the main I’m not very keen on.” (013 NE (Male))

Attribute 3 : Sustainable

In discussing the Big 5 several respondents voluntarily brought up their concerns about a species’ sustainability. As discussed in Section 6.3, however, this was typically restricted to just a handful of species that had been overfished (Cod and Tuna) and intensively farmed (Salmon and Prawns), supporting the notion of the avoidance of these species as an emerging societal (albeit sub-cultural) norm. There was fairly widespread acknowledgement that Herring was sustainable but, beyond this, consumer’s confidence in the understanding of the sustainability of the ten species within the grid was low, consistent with the findings from the sustainability game played in the second workshop and the responses consumers gave in the full questionnaire.

“I’m aware of sustainability problems with Cod and Tuna, the same. Herring I’m not aware. Haddock I think I might think Haddock was ok. Prawns I know depending on how they are...there are sustainability problems...and Plaice as well. Salmon I would think about the sustainability of Salmon, am aware of certain types, so that would be a bit in between. I would have no idea about Pollack. Coley I would feel that would be probably be one that is more OK, so more sustainable. Gurnard I wouldn’t know.” (008 SE)

“As far as the very big Prawns are concerned I just don’t buy those at all. I remember reading something at some point that said that basically for every pound of those that are caught there’s about 3 pounds of other fish and seafood that’s thrown back in the

sea and that just seems such a gross waste that I thought, no I'm not going to buy them."
(013 NE)

"We'll buy fresh Salmon although I'll be honest I've got sort of mixed feelings about what I'm doing with that in terms of where it's sourced and so on." (015 NE)

"They say about sustainability don't they, they say this Tuna is being fished sustainably or whatever, so yes I suppose one is aware vaguely." (006 NE)

Attribute 4 : Familiar

Familiarity referred to how the product looked (white fish, flaky) and having some knowledge of what to do with it. This can be linked to the concept of Perceived Behavioural Control within the Theory of Planned Behaviour (Ajzen 1991), in that increased familiarity engendered a greater confidence within the consumer that they could cook something that they would like to eat, thereby resulting in a continued likelihood to buy it.

"[Cod] looks like the fish I imagine fish to be ...it looks like the fish I know so it's familiarity really. Well is not just familiarity because I've seen other fish it's just that it my perception of what an edible fish looks like." (001 NE)

"I would choose Salmon because I know it..I'm not quite sure what Pollack tastes like...I've never bought Pollack!" (002 NE)

"I know what to do with [Salmon], to cook a meal, I don't really know what to do with Coley other than throw it in a pie and that's the only reason I know Coley exists." (003 NE)

"I'm going to be really predictable and go for the Salmon, it's just because it's more familiar and I know how to do more things with it." (005 SE)

"It would be Tuna out of those three. It would be safe and the Gurnard would be exotic. Simply because I don't know what it is." (001 SE)

"I like Tuna fish, I've eaten a lot of it and I would know what to do with it. It's similar to cooking meat basically so, yes, I think for ease of cooking I would pick up the Tuna fillet."
(026 SE)

"I think it's how well known they are. Even when we were talking about Gurnard, for example, I couldn't picture what it looked like in my head whereas if you said Cod or

Haddock there's something that I can relate to it. There's not a lot of things relating to Gurnard in our everyday lives." (026 SE)

Attribute 5 : Weak Taste

One of the few attributes where the species in the Big 5 were rated negatively was with regards to taste – with consumers often commenting upon the rather bland nature of Cod and Haddock; and others put off by the stronger tastes of Salmon and Tuna (although those who disliked the flavour of Salmon were in the minority.)

"I can't understand it at all, it (Cod) is just the most boring thing ever, well that and all white fish, depending what you put with it...whereas I could eat a pile of Prawns probably almost on their own just with a mayonnaise dip and it would be lovely." (002 SE)

"I think I find Cod quite bland as well so I think for me I think Haddock has got a more interesting, slightly more distinctive flavour than Cod but I mean there's not much in it is there." (004 SE)

"Cod is very easily digested, it's very bland." (006 NE)

"Everybody raves about Cod and everybody loves Cod but I just find it a little bit boring if I'm honest (laughs)...I do! I think it is a taste thing, I mean when you think about Tuna, Tuna has quite a lot of flavour to it and Herring has, but Cod? No, I just think it's boring." (008 NE)

"I tend to avoid Cod because it's a bit boring. I'll buy it if there's a nice big thick chunk of it." (012 SE)

"A lot of the Prawns come from the Far East don't they and actually don't taste of very much, you use them because they've got a pretty colour and quite a nice texture but they don't taste anything like what we expect shellfish in this country to taste like." (014 NE)

Scholderer and Grunert (2001) found that long standing eating habits were sometimes associated with a sense of discontent with the products involved which then led to consumers choosing alternatives to their old favourites. This certainly seems to have been reflected in the comments some of the participants made about Cod - perhaps part of their boredom with the fish is its everyday nature, something that doesn't appeal to these consumers who also highly value Hedonism and are more prepared to take risks with their food. In most cases, however, Cod's blandness had done little to diminish its popularity – its other positive attributes (meaty, boneless, iconic, traditional) all contributing in this regard.

Attribute 6: Versatility

Another positive feature shared by all of the Big 5, and that distinguished them clearly from the other species in the grid, was the extent to which the participants viewed them as versatile recipe ingredients.

“Cod is probably, next to Salmon, the most versatile fish.” (005 NE)

“We used to use the big Prawns and we do those in quite a variety of ways you know sometimes pan-fried to go with some roasted vegetables, sometimes in a pasta dish... they have [versatility] and you can use them as a starter or as a main course.” (006 NE)

“The Cod you can make it with a nice white sauce. You can fry it, you can steam it, you can have it in milk, you can bake it in a pie...or all your little bits you can mash together and turn it into a captains pie...we do all that...You can do lots with it.” (011 NE)

“I think Prawns are the most interesting because you can cook them in so many different ways.” (009 SE)

“All sorts of ways. I like to have [Prawns] in an avocado pear, which is a nice lunch, you know with a little bit of brown bread. Or I’ll put them in fish pies. Or I do a sort of rice concoction using bits of chicken and bacon and things like that, so Prawns will go in with that all mixed up with the rice and what have you - all sorts of different things.” (027 NE)

“Salmon you can eat hot or cold, entirely on its own it doesn’t need anything else whatsoever, if it is good quality Salmon it doesn’t.” (014 NE)

“Tuna...in terms of ease in preparing it and the fact it would go with lots of different things.” (005 SE)

Versatility is linked to the idea of Familiarity, discussed above, in that the consumers talked about the various ways in which they knew how to prepare the Big 5 (in contrast with the other less well known species.) As such, while Versatility may well be a distinctive feature of the Big 5 in their own right, it is hard to disentangle this from the fact that this versatility has been borne out of consumers getting used to the ingredients over time and building up a repertoire of recipes. This, then, reveals again the importance of an individual’s confidence in their cooking skills, as encapsulated within the Perceived Behavioural Control construct within the Theory of Planned Behaviour (Ajzen 1991).

Attribute 7 : Health benefits and concerns

As noted above, Prawns were viewed both positively and negatively with regards their health properties - with those in favour associating them with lighter salad-type meals; and those against having concerns about their high cholesterol content and their propensity towards food poisoning. Cod and Haddock were also viewed as unhealthy, mainly because of their association with being deep fried as fish and chips.

Pro-health

“Particularly in the summer time, get a handful of Prawns out of the freezer, defrost them and have them as a salad...anything like that, keeps you healthy.” (004 NE)

“[Salmon’s] easy to cook, it’s a really good price and it’s healthy ... it’s easy to cook and it’s easy to introduce flavours to and it’s not something that you would have with chips so it makes it a little bit more healthy.” (010 NE)

“Tuna and Herring have got essential oils in them haven’t they.” (026 NE)

Anti-health

“I’ve gone off Prawns lately and I’ll tell you why ...I was a reading a story about the digestive tract on the back and apparently sometimes that gets removed and sometimes that doesn’t and that’s basically that everything they’ve eaten is in that tract along their back bone which is kind of a... and I don’t know why, it just put me off a little.” (004 SE)

“I bought some Prawns locally many years back, and I was violently ill afterwards, and I put it down to that [not being de-veined]. So I’ve always been very, it’s something I’m quite mindful of. I don’t think a lot of people appreciate that when they’re buying Prawns and you just shell them and eat them as they are potentially they can make you quite ill.” (007 SE)

“The only problem with Prawns is that I have various friends who have got problems with high cholesterol or potentially high cholesterol and Prawns apparently are higher in cholesterol so I have to be careful who I do it for.” (006 NE)

Attribute 8 : Ease of storage

Being able to freeze something was also deemed particularly useful in a product and contributed significantly to the popularity of Salmon and Prawns in particular.

"If the Salmon looks good and nice then I'll have that, if not I'll buy the fillets....with having a freezer you're very adoptable you can buy as you choose rather than as you actually need - thank god for freezers !" (005 NE)

"I have realised over the years that the white fish freezes less well, it seems to get quite wet... whereas the Salmon, it's more solid, more dense and so it doesn't take in all the water it freezes well." (006 SE)

Attribute 9 : Convenient

The study participants highlighted the relative ease with which the Big 5 products could be stored, cooked and eaten, all factors that made the Big 5 particularly *convenient* as food products. In the UK in both supermarkets and independent fishmongers, Salmon, Cod, Tuna and Haddock are invariably all sold as de-boned and filleted products that require minimal preparation and, in the case of Prawns, Smoked Salmon and tinned Tuna and Salmon, that can be eaten straight from a packet/tin with no need for cooking. Salmon and Prawns were also routinely described as being well suited to freezing (and thereby linking with the "ease of storage" attribute), making them a regular standby ingredient, i.e. something that people always had available and that could be used in a variety of ways (which also links "convenient" with the attribute "versatility", as reported above.)

"It's fast food - shellfish, you can just pick it up and eat it there and then whereas with other stuff you have to take it away and prepare it." (Hastings Workshop 1)

"Instant food, oh that'll be the Prawns....and the Salmon – in the car park if necessary (laughs) – smoked Salmon. And Tuna - it'd be a tin though." (001 NE)

"Well I use [tinned] Tuna because I like it in sandwiches and stuff, or I add it to things like pasta sauce and stuff...I know that in the cupboard I will always have the cans of Tuna and in the freezer there will always be a few Salmon fillets, there will always be Prawns." (002 SE)

"Things like Cod and Salmon, they don't have bones when they are pre-prepared. Prawns are obviously dead easy to eat and I think that's always a big factor for people." (008 NE)

"they can be cooked quickly ... it's not something you've got to think hours ahead of when you've got to eat, that is a factor. You know you can have a quick delicious meal with some pasta or something like that...I've got some nice recipes that I will go to." (008 SE)

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“Prawns I suppose are easy, you know, if people are working and they want to make sandwiches for themselves or a salad, you know, they’re very easy to prepare aren’t they.” (015 NE)

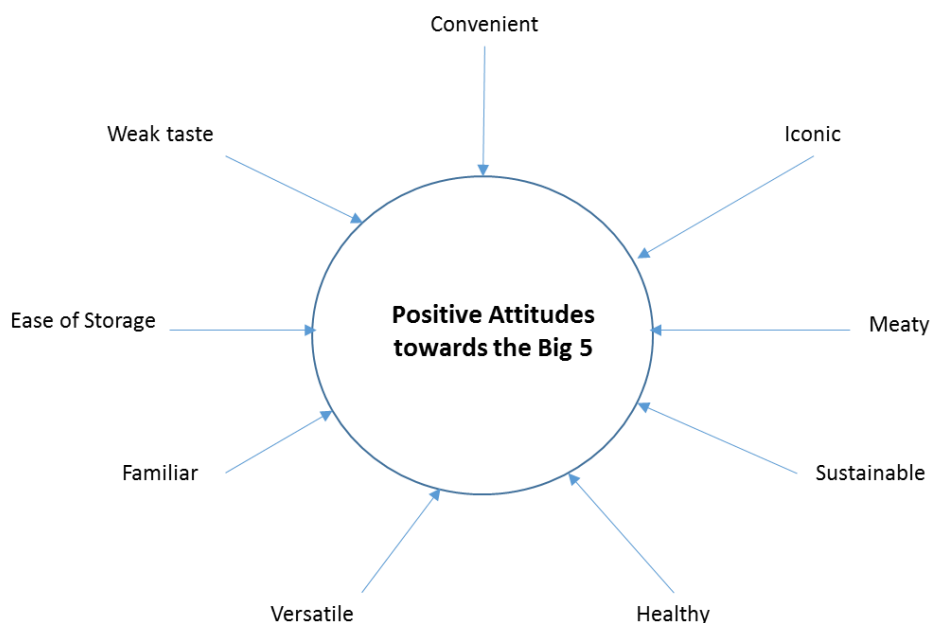
Conversely, less popular products, such as Herring and whole fish in general were described as being too fiddly, or “a faff” – the effort of having to remove the bones, or to eat around a bony fish putting consumers off. Consumers also described what they felt was a general squeamishness amongst the British public for whole fish versus pre-prepared fillets – an indication of a wider preference in the British diet for sanitised food products that look as least like the host animal as possible.

“There’s still a lot of weird squeamishness which I’m sure some people on the continent wouldn’t understand at all....so it often comes prepared...it’s been already chopped up into neat pieces that don’t look anything like the real fish and therefore there’s nothing to put people off it as much.” (015 NE)

“You would be hard pushed to go to a restaurant here and just find a whole octopus on your plate because people would just look at it and go “urrrggh” whereas in Portugal that’s perfectly natural. When they eat sardines over there they don’t mess around with heads and bones, they just eat the whole lot, head and everything. And I think we are quite picky here compared to places like that.” (008 NE)

Thus, nine attributes accounted for consumers’ mainly positive attitudes towards the Big 5 (Figure 41).

Fig. 41 Positive Attributes Creating Positive Attitudes towards the Big 5



6.4.2.2 Social Norms : Habit and Tradition

In addition to positive attitudes, social norms also featured strongly in consumers' support for the Big 5.

"Habit and Tradition" encapsulates the UK's enduring love of fish and chips (which consumers largely posited as the reason for the popularity of Cod and Haddock) as well as their views that shoppers (including themselves) tended not to think too much about their purchases and simply bought what they were both used to *and* un-challenged by.

"I do buy the Cod, I buy smoked Haddock, Kippers, Salmon, Trout – I like Trout, but I'm not adventurous really, that'll be about it....but smoked Haddock with onion, you see that's traditional, smoked onion and Tattie." (001 NE)

"I tend to buy the same things at the same price, once I've found something I'm happy with then I will tend to buy it every month more or less." (002 SE)

"I think it's primarily for cultural reasons because if you are brought up to believe that these are the right things to eat you don't eat other things like we don't eat horse and I can get totally sappy about woolly baa lambs but I still love eating lamb, you know, I find horses in a field very attractive but I don't want to eat one, thank you. So I think if you're brought up feeling, believing that Cod and Haddock are the only kind of things you have." (016 NE)

"I think it's just because I go for Cod it's so easy...I have that sort of fish fairly frequently...if I don't buy Cod I buy Haddock." (027 NE)

"I very rarely buy "fish fish" unless it's in batter....usually Cod. I like Plaice but I know what Cod is, I know it's Cod because the way it comes apart, you know what you are getting with Cod which with another fish you possibly don't know what you are getting. But at the end of the day a lot of that is habit because you go in and ask for Cod and chips" (Hastings Workshop 1)

"It's because it's what you are used to isn't it? It's always been put in front of you. I think probably Tuna got really cheap, it's been put into a tin, it's easy to do and it's always there and that's been pushed by the supermarkets and I think it's down to habits isn't it." (009 NE)

"Ignorance is the worst of the thing. "I'm eating Cod because my dad did...I vote Labour because my dad did" it's the same attitude." (011 NE)

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“When we have fish and chips with my family my dad gets Haddock and I keep meaning to try that, but just, I guess at the time I keep forgetting.” (022 SE)

In the case of Cod and Haddock, then, specific product attributes (flaky, firm, white flesh, iconic) combined with habit, tradition and childhood experiences to influence behaviours, as invariably, consumers’ first and most enduring experiences of eating seafood involved fish and chips, setting a pattern of behaviour that had persisted throughout their lives with little deviation.

“I grew up in a village near the N Yorkshire Border. Fish when I was a kid was, when I was a little kid it was Saturday lunchtime - fish and chips, a sort of weekend treat. And then I suppose when you are on holidays, again, fish and chips from the chippie and the seaside. Nothing too exotic just Cod and chips basically.” (010 NE)

“I think it’s purely cultural really. I think I’ve grown up that way, although there’s always been Plaice and various fish like that around, I think everyone just, you know, Cod and chips, it’s just, that’s what we’ve known.” (007 SE)

“[Choosing Cod is] just something that you’ve always done and, yes, I can’t give you an answer really why but it’s just one of those things that you’ve always done.” (009 NE)

“I don’t ever remember going to a posh restaurant when I was a kid but the fish we had.....we had fish and chips like everyone does.” (012 SE)

“Of course the British are mad on fish and chips and those two fish [cod and haddock] are the absolute staple for fish and chips, you rarely get offered anything else” (014 NE)

“Fish and chips” for UK consumers equated to Cod in batter first and Haddock in batter second, with these fish species being interchangeable white fish with little to distinguish them on the grounds of taste or texture.

“If you go to a fish and chip shop, they’ll ask do you want large or small chips? He won’t say to you do you want Cod or Plaice, Haddock, Huss...he’ll assume you mean Cod.” (011 SE)

“I wouldn’t know the difference [between Cod and Haddock], I’d as easily have one as the other if that’s what I was faced with, I wouldn’t express a preference for one over the other.” (002 SE)

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"I think white fish, we somehow seem to have evolved this sort of habit of eating white fish...and because I suppose of the power of the traditional fish and chips I think it's channelled some people's thinking in terms of that." (015 NE)

As discussed in 6.3, however, it was notable that concerns about overfishing had led to some consumers choosing Haddock in preference to Cod when at the fish and chip shop.

Further, as with the general patterns of consumption described in section 6.2 (and echoed in the academic literature (Birch and Lawley 2014)), current eating habits regarding the Big 5 could also be traced to childhood experiences, with those who ate these fish as children likely to eat them now as adults.

"I grew up in Manchester in a family that had a religion so it was the done thing to always have fish on Friday. So that was a staple element of weekly eating and it was always that fish was cooked in the house and it was probably Cod every time." (013 NE)

"Fish as a child I remember fish fingers, after you'd been ill, parsley sauce, so it's a sort of combination of tastes really. I can remember my mother cooking Coley for the cat and making fish pie." (008 SE)

"The meals I remember from my grandparents were either Sunday dinner or fish and parsley sauce. Fish and chips on a Friday as well, cos they would always have that as well." (018 SE)

Tradition was also reflected in persisting attitudes amongst some, but not all, consumers towards Salmon as a somehow classier fish than others, because of its original (i.e. pre-farmed) status as a wild caught, seasonally-available, fish that was typically only accessible to the wealthy. To a degree Prawns were also viewed in this light - as something novel and therefore that bit more luxurious. In this sense, then, Tradition is also inextricably linked with notions of social class – a finding that positions this research within wider treatments of UK food consumption patterns (Warde 1997).

"Yes I will do Salmon for a dinner party or something whereas I wouldn't do a slice of Cod, you know?" (027 NE)

"I suppose out of all of those [Salmon] probably is the treat fish isn't it...the one that I would probably choose in a restaurant if it was done nicely." (001 SE)

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“Prawns I think was the only extra luxury or delicacy that people could afford and they became readily available quite early on so that Prawns were available and people thought that that was something a bit special that you could add in.” (014 NE)

“Yes you feel that you are having a little bit of a luxury even though it isn’t...I don’t think we ever had Salmon as a child.” (002 NE)

“It was more of a rare, more of a special occasion thing when I was a child, I don’t remember us having [Salmon] that often whereas now it does seem to be in all sorts of amounts, proportions and in things.” (005 SE)

“Oh it [Salmon] probably would have been something that you felt was way out of your reach and smoked Salmon and things tie in with, yes, sort of smart eating, you know...” (008 SE)

“When I was a child tinned Salmon was a real treat I never got fresh Salmon, tinned Salmon was a treat on a Sunday and then Salmon became....it became more prevalent, fresh Salmon I mean. I’m thinking now perhaps to the 80’s and people, you know, it, again, it was considered very special but now it’s very common isn’t it, very very common.” (006 NE)

“Salmon was a luxury – very expensive....now it’s farmed Salmon, it’s made it affordable....I don’t think 10 years ago I’d have bought as much Salmon as I do now.” (027 NE)

6.4.2.3 Cooking Confidence

Respondents’ confidence in their cooking skills and recipe knowledge also strongly supported the preferential consumption of the Big 5, with those with less confidence opting for these more common products. Confidence here is very closely linked with the product attributes of “familiarity” and “versatility” described above – with these creating a virtuous circle, wherein increased familiarity led to greater confidence in how to cook and prepare meals and a perception, therefore, of the greater versatility of the Big 5 versus other products.

“Plaice I don’t do...I think it’s probably a difficult fish to cook a nice meal, I would feel that it probably required a chef to do Plaice.... I think every time I’ve done it I’ve come away thinking “you’ve messed that up.” I mean it must be a nice fish because people eat it - but me? I can’t get it right so I just avoid wasting my money. Stick with what I know.” (003 NE)

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"I know how to do more things with Haddock. Plaice I find such a delicate fish that I really need to, you knowI'm not as confident cooking Plaice, that's the only reason really."
(005 SE)

"I think it's a case of knowledge – knowing how to cook things, has a big effect on what people buy. And the lack of bones [in the Big 5], you do get the occasional bone but...people want something that's quick to cook that doesn't need an awful lot of faffing around with." (017 SE)

Although increased familiarity brought with it greater confidence in preparing the Big 5, only a handful of the consumers talked to were really confident enough to experiment outside of the Big 5, citing the influence of cooking programmes as giving them the courage to give new recipes and species of seafood a go.

"Interviewer: so you'd have slightly less confidence [preparing Herring]? "Yes. But if it was Salmon it would be easy." (010 NE)

"If you are somebody who experiments with cooking and looks for new recipes then I think you would be cooking more fish whereas if you're somebody who's not interested in cooking or does it because you have to then maybe you wouldn't." (006 NE)

"...if you look at the whole fish in the fishmonger and you've got the head and they don't know what to do with it so again it becomes more difficult...I wasn't taught to cook anywhere and I know our granddaughter isn't being taught to cook and she's 16 now and it doesn't feature in school, so you know, it isn't until you get brave enough to experiment that you think about it...or watch cooking programmes." (006 SE)

"I think the cookery programmes do tend to do something, but if they made it simpler to cook fish and you can buy it as a fillet and you can cook it simply, I think people are more confident about taking on that challenge, if they have to do something like chop the head off or fillet it or whatever then it's just really complicated, people get scared." (017 NE)

Alternative lifestyles, such as being a vegetarian, were also argued as being associated with a more adventurous outlook with respect to food, largely as a necessity.

"I suppose people buy what they are used to. We like to experiment but a lot of people don't. Partly because we are vegetarian so in a way there is more pressure or interest in trying new things." (026 NE)

Cooking confidence could therefore be equated to the role of Perceived Behavioural Control within the Theory of Planned Behaviour, with a clear relationship emerging between a person's confidence in cooking and preparing the Big 5 (versus other products) and their likelihood to consume them (Ajzen 1991).

6.4.3 Situational and Contextual Variables

6.4.3.1 Product Availability and Price

A prominent contextual factor influencing buying behaviours with respect to the Big 5 in particular concerned their constant and obvious availability – a factor that was also closely linked to the second key contextual variable - product price.

“You tend to buy the fish that is on the stall – they are always on the stall.” (027 NE)

“Farmed Salmon fillet is normally available, Tuna is there 50 % of the time.” (003 NE)

“You go in a supermarket and if you look at the display there is like loads and loads of Cod and loads of Haddock ...and then you find these other little things sort of on the top shelf kind of hidden away where they are not so obvious. They are not in peoples' line of sight, they are just kind of pushed to one side...” (008 NE)

“It's [Salmon] more available. It's always on the stall. Even when, you know, we had these awful storms, because (it was) farmed Salmon it was available.” (027 NE)

Further (and as previously described in 6.2.4.2), Salmon and Prawns were also often promoted as special offers that then lent themselves to bulk buying and their subsequent storage in the freezer. The following quote is illustrative of many of the shoppers' behaviours:

“I only buy them if they're on offer. Because eventually I will find them on offer. And I will buy enough of them to put in the freezer so that I don't have to look every day I know I've got the fish and then when I've had a couple of fish pies or started to use it up then off we go again, we go around the supermarkets and we'll find it's on offer and we'll buy some. But it's always down to price really, it's the same fish.” (003 NE)

The constant availability and (still relatively) cheap price of Cod in fish and chip shops, however, confused those who had also been led to believe that Cod had been overfished and should be avoided.

“If there was a real problem you would think that it (eating Cod and chips) would be actively discouraged and it doesn't seem to be does it, it doesn't seem to be hugely more

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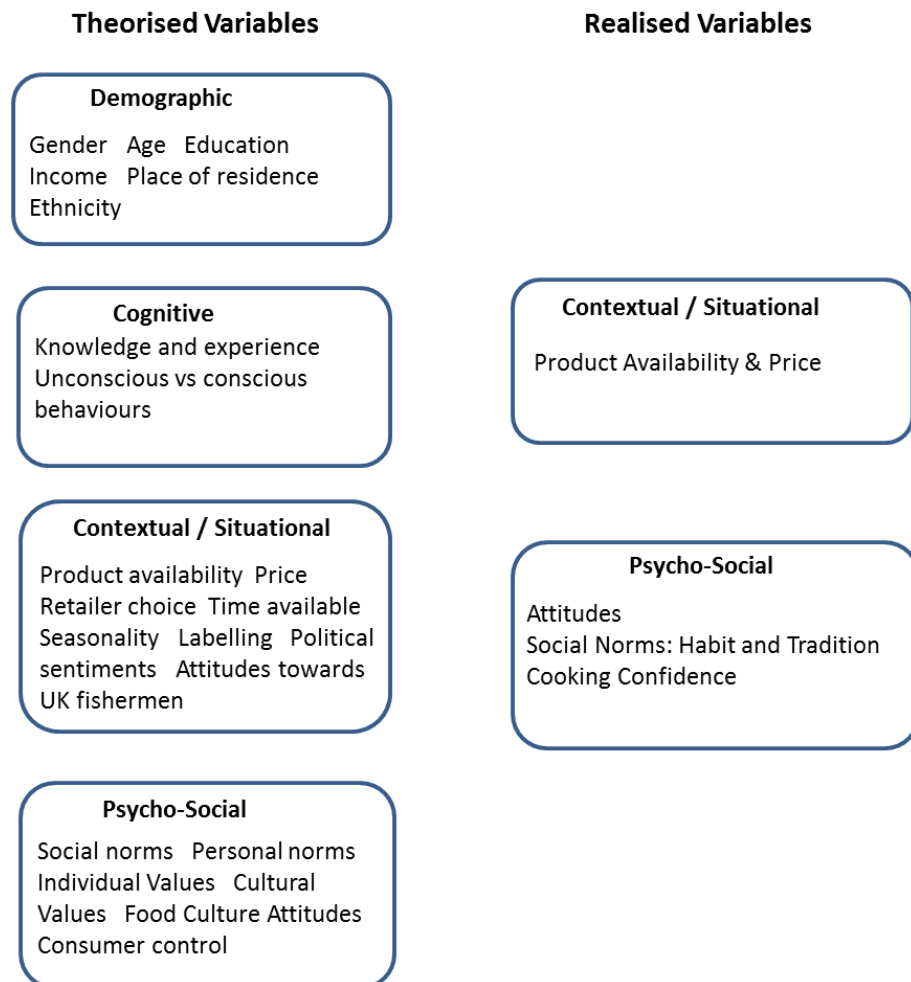
expensive, if at all, than any other fish on offer, so you'd think it would be, yes it's a strange one really." (Hastings Workshop 1)

In making this observation the consumers highlight the (seemingly counter-intuitive), inelastic demand for seafood that has been reported elsewhere in the Literature – wherein, contrary to prevailing economic theory, increased prices as a result of reduced supply do not translate into decreased consumption (Wellman 1992; Myrland et al. 2000; Dey et al. 2008).

6.4.4 Summary : Why the Big 5 ?

Reflecting upon the variables theorised as influencing UK consumer seafood behaviour, then (as described in the Conceptual Framework), the following can be concluded as being significant in driving consumption of the Big 5 in particular (Figure 42).

Fig. 42 Variables Realised as Being Particularly Important in Influencing Consumer Demand for the Big 5 (Salmon, Cod, Tuna, Haddock and Prawns)



Positive attitudes, social norms (i.e. the effect of habit and tradition), cooking confidence (which could be likened to Perceived Behavioural Control) and situational factors relating to retail behaviour, combined to create strong intentions to consume the Big 5 versus other less commonly eaten products. With the exception of Salmon and Prawns, neither of the Big 5 was particularly popular from a *taste* perspective. Other fish, particularly oily fish like Mackerel and Herring, were more likely to be described as having a good flavour. Rather it was the convenience issues (ease of storage, no bones (and therefore easy to cook) and their constant availability that had made them as popular as they were. This resonates with the findings from previous studies into barriers to seafood consumption, which finds that taste and texture are

less important attributes for seafood consumption than situational factors such as convenience and price (Leek, Maddock and Foxall 2000; Olsen 2004).

It was informative that the consumers, themselves, also had a good degree of awareness of the influence of these factors on their (and their peers') behaviours. This is both illustrative of the credibility of the study participants (as regular consumers of seafood) as well as emphasising the relative importance that these few factors appear to have in shaping overall UK consumption patterns. The following quotes exemplify participants' views regarding the overwhelming popularity of the Big 5.

"There's going to be a price issue there, there's going to be a familiarity issue, and maybe playing with the familiarity on the other end of the scale, there is some ignorance about what else might be available or easy to deal with." (003 SE)

"I think probably availability and the second is tradition – they copy what their parents have been brought up to supply them with and I think that takes a very long time to change. I was lucky that parental wise I was taught to choose. I think a lot of parents stuck to what was available, what was cheap, because obviously money and food was not so plentiful, post war years into the fifties, so they made do with whatever was the cheapest available fish option and I think that's just gone on. It's stuck this tradition...I think it has changed to some extent over the last 10 - 15 years as people have gone abroad on holiday I think that's a big influence as well ...people have had to try new-fangled things in other countries and I think that's widened our variety quite a bit but it's still a lot of tradition and keep doing what your parents did and what's available locally and what's cheapest." (004 NE)

"I get the impression we're not terribly adventurous about taste in this country and I wonder if that might have something to do with it, those five species are sort of, they're not terribly strong flavours and they go with a lot of things I suppose, you can put them with a lot of things so you can quite happily have something like Haddock with, in a pie or you can put it in with chips or it goes with all sorts of things. So that's the first thing that springs to mind I suppose. I guess certainly there's probably a cost consideration as well, maybe it's kind of the availability of them means that they're kind of, you know, they're quite readily available and therefore they're going to be relatively affordable so I think that that's kind of, I guess would be a consideration. I don't know if preparation is another thing, whether those things are sort of relatively easy to prepare, that I don't

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know to be honest because I never buy them in a state where I need to prepare them so..." (004 SE)

"It's the adaptability, what you can actually do with those things... a foreign fish that you've never heard of you haven't got a clue what to do with it, so if they are going to use foreign fish they are going to have to educate." (005 NE)

"I think a lot of it is just habit and then it's a never ending circle because the shopsit's like men's shoes, you kind of get them in black or brown because that's all men buy and the only reason men buy them is because that's all that's available and then on it goes... I think that cycle could be broken." (012 SE)

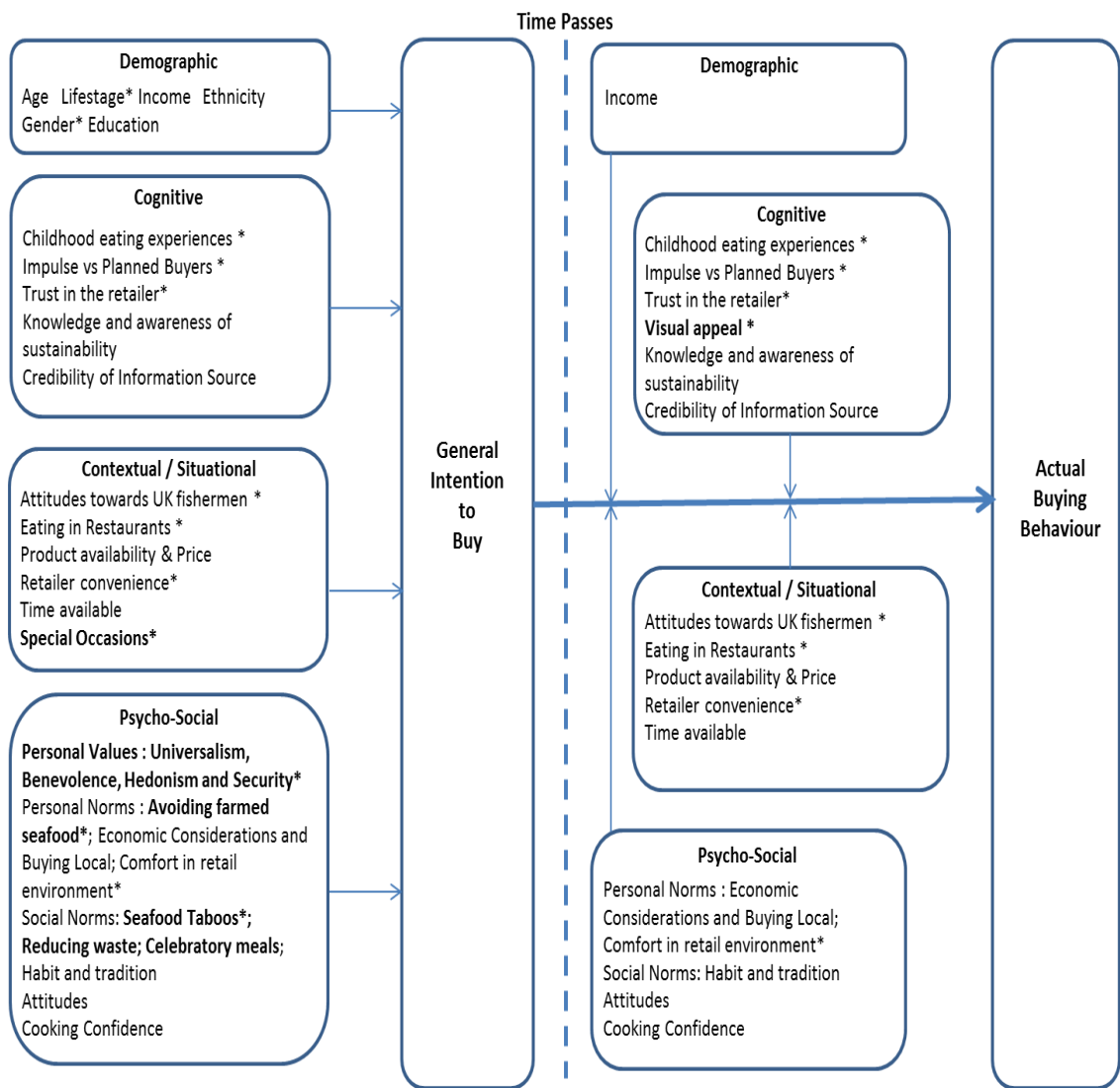
"I think that people feel that it's either traditional and they know what they're going to get or in the case of Salmon they know that it's something that was expensive which is now affordable and it's easily consumed, all those fishes don't tend to present problems with bones or gutting or tails or eyes or mouths or anything else like that. So I think it's easy to consume." (013 NE)

6.5 A COMPREHENSIVE MODEL OF UK SEAFOOD CONSUMER BEHAVIOUR

Combining the findings from the preceding sections, a revised framework of UK Consumer Seafood Behaviour can be developed (Figure 43). For the most part, the identified variables had an impact on both forming consumers' intentions *and* influencing their actual buying behaviours. Indeed, from the consumers' descriptions of their buying behaviours it was often difficult to separate out the effect upon their *general* intentions as opposed to their actual behaviours (NB The term, general intentions, is used here to mean the intentions that the consumers held prior to embarking upon a shopping trip and so represent their typical views regarding seafood. Actual buying behaviour is what happened when the consumer arrived at their retailer of choice.)

Taking this approach, only one variable - "visual appeal" (highlighted in bold) was found that solely operated in the context of the current shopping trip. In contrast, a number of variables could be identified (highlighted in bold) that were limited to their influence upon shaping general intentions to buy, including demographics such as lifestage and ethnicity; shopping for a special occasion; the personal norm to avoid farmed seafood; and the social norms associated with seafood taboos and reducing waste. The remaining variables could all be argued to influence both the formation of general intentions and the enacting (or not) of those intentions on the actual shopping trip (Fig. 43).

Fig. 43 A Revised Framework of UK Seafood Consumer Behaviour



In their study into UK consumer understanding of sustainable food consumption, Owen, Seaman and Prince (2007) concluded that *“time, convenience, access, habit, offers and availability are the main barriers to consumers adopting more sustainable practices in relation to food”* pp 24. The findings from this study into UK seafood behaviour have found that these same variables also play a significant part in shaping current UK consumer preferences for the Big 5 (and for seafood consumption more widely.) Thus, while intrinsic variables such as demographics, values and personal norms have all been shown to be important in shaping intentions and influencing behaviours, **this research has found that it is the combination of consumer ignorance of sustainability issues, positive product attributes (relating to convenience and ease of preparation), social norms relating to habit and tradition and retailers ensuring the constant availability of these products at low prices, that have the greatest effect upon UK seafood consumer behaviour.**

The following chapters discuss the implications of these findings in more detail.

CHAPTER 7 : SO, WHY THE BIG 5?

7.1 INTRODUCTION

This thesis has explored UK seafood consumption patterns in the context of global concerns about the unsustainability of seafood production practices in general and the UK's current preferences for the Big 5 of Cod, Haddock, Salmon, Tuna and Prawns - preferences which are putting excessive demands upon both wild and farmed production systems. It has positioned the research in a complicated and expansive academic and policy context, wherein there is no consensus on the reasons for, or solutions to, the problem of unsustainable consumer behaviour.

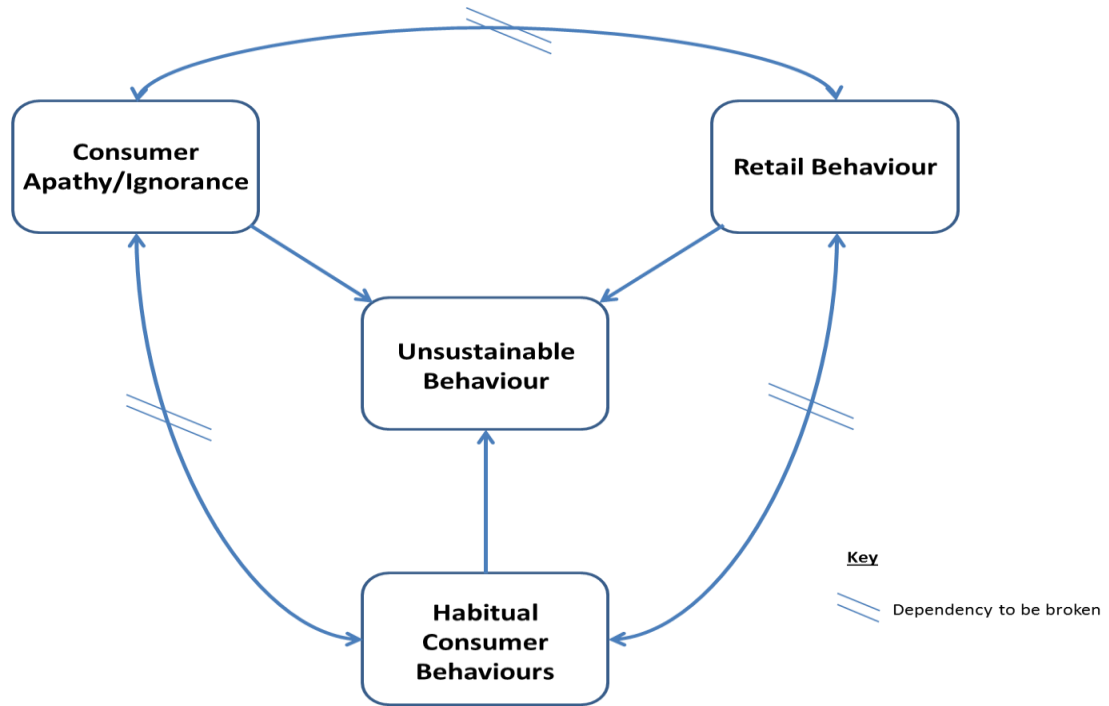
This research identified twenty eight different variables that influence a UK consumer's seafood buying behaviour - both in terms of shaping general intentions to buy and actual behaviours in a real-time shopping situation (Figure 43). This therefore provides a potential conceptual framework with which to further explore – both qualitatively and quantitatively, UK seafood consumer behaviour. Yet, as a model it falls into the trap of being so comprehensive that it will likely never be able to be fully operationalised (Peattie 2010); and causality will be very difficult to determine (Jackson 2005b).

Drawing upon consumers' own accounts of their buying behaviour, however, it is possible to combine several of these variables to identify three overarching constructs that help to answer the overarching Research Objective : Why the Big 5?; and, that address the central problem of the unsustainability of UK consumer behaviour. They are: **UK Retail Behaviour; Habitual Consumer Behaviours; and Consumer Ignorance and /or Apathy** regarding sustainability.

This research has found that these factors reinforce the effect of the other. Thus, because consumers generally have a low level of awareness of the issues pertaining to Salmon farming, for example, retailers feel little incentive to stop offering it. Similarly, consumers have got used to buying their Salmon as a ready to take away fillet and now expect this kind of product wherever they go (habit); and preferences for easily-prepared foods coupled with ignorance of sustainability issues creates little incentive for consumers to seek out alternative products from the Big 5 or to put pressure upon their retailers to offer such alternatives. Taken together, these three factors, then, cut through the complexity surrounding the issue of unsustainable consumer behaviour – bringing clarity and simplicity to a challenging behavioural problem. The constructs are presented here as **The Trifold Model of Unsustainable Consumer Behaviour** (Figure 44).

7.2 THE TRIFOLD MODEL OF UNSUSTAINABLE CONSUMER BEHAVIOUR

Fig. 44 The Trifold Model of Unsustainable Consumer Behaviour



The evidence from this research, then, is that these three factors : consumer apathy/ignorance; retail behaviour; and habitual consumer behaviours, work together to drive and maintain unsustainable consumer behaviours within the UK. Each factor depends upon the other, such that a break in any one dependency has the potential to upset the cycle and so address sustainability concerns. The three factors are discussed in more depth below.

7.2.1 Retail Behaviour

This research has shown that unsustainable seafood consumption is heavily dependent upon the practice of British supermarkets and, to an extent, restaurants, of constantly making the same Big 5 products available, despite concerns about their sustainability. The Big 5 are regularly promoted as special offers, encouraging their purchase and, in the case of Salmon and prawns which lend themselves well to freezing, their over consumption. The Big 5 are consistently offered for sale as pre-packed products in varying weights and quantities that make them easy for consumers to pick up and take away, with little conscious thought needed on the part of the consumer. The absence of any informative labelling on many such products maintains consumer ignorance and apathy regarding the sustainability of their choices. Further, the manner in which the Big 5 are presented for display on wet fish counters, wherein the less popular (usually more sustainable) species are displayed at the periphery and the Big 5 are positioned centrally, is a conscious tactic informed by decades of marketing research, to encourage consumers to choose the Big 5 over other products. As a construct, then, “Retail

behaviour” encompasses the variables “visual appeal” and “product availability and price” described in Figure 43.

As shall be demonstrated in the next two sections, however, it is also inextricably linked to the other two variables in the Trifold Model – Habitual Consumer Behaviour; and Consumer Apathy/ignorance – such that it becomes evident that Retail has perhaps the largest part to play in shaping and maintaining unsustainable consumer behaviours in the UK. Consequently, the Trifold Model (and the position of Retail within it) links to several strands of academic debate, notably the role of business in encouraging sustainable consumption and the benefits of market-versus alternative –based approaches to addressing the problem. These aspects are discussed more fully in 7.3 below.

7.2.2 Habitual Consumer Behaviour

“Habitual Consumer Behaviours” in the Trifold Model encapsulates the variables “childhood eating experiences”; “habit and tradition”, “attitudes”, “cooking confidence”, “time available” and “retailer convenience” described in Figure 43.

As an overarching construct, “habitual consumer behaviour” reflects the finding from this research that UK consumers are frequently trapped into repeating patterns of behaviours because of experiences gained as children and a (potentially corresponding) lack of confidence in their abilities to change those behaviours, wherein confidence, in this context, equates to cooking skill. Children who had been introduced to seafood at a young age were more likely to eat it in adulthood; and, to have passed on their love of seafood to their own children. In contrast, those who had not had much exposure to seafood beyond fish and chips and fishfingers, tended to be far less adventurous in their adult eating habits. Similarly, confident cooks ate a wide variety of seafood and less confident cooks tended to stick with the Big 5. Celebrity Chefs including Rick Stein and James Martin had influenced a number of the consumers in this study to develop their cooking skills to the point that they now routinely ate a wider variety of fresh fish which they had the confidence to both prepare and cook for themselves; but many consumers also spoke of their lack of ability when it came to preparing seafood a factor that prevented them from experimenting at home but which also encouraged them to try alternatives to the Big 5 when eating out. Consumers were often let down by the Restaurant sector in this regard, however, by their typically only offering the Big 5 plus a limited range of alternative, usually farmed species, such as Seabass, for consumers to try (a finding which reinforces the proposed inter-dependence between Habit and Retail Behaviour described in the Trifold Model).

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Consumers' positive attitudes towards the Big 5 primarily related to their familiarity and ease of preparation (which, again, links with the Retail Behaviour construct) – a factor that made them perennially popular and thus led to an understandable degree of automacity on the part of the consumers. For why would they even think of asking or looking for other formats when they have been so used to (and satisfied by) their seafood being offered to them in this way? Whether consumers would be willing to broaden their horizons if alternatives to the Big 5 were similarly prepared and packaged is open to debate. The reality uncovered by this research is that few alternatives to the Big 5, beyond a handful of mass-produced, farmed, species such as seabass and bream, are presented in a similar way, creating barriers to their purchase by the less confident consumers.

The inclusion of the variable “habit and tradition” in the overarching construct “Habitual consumer behaviours” primarily relates to consumers' ongoing love of the British culinary icon that is “fish and chips” and their overwhelming preferences for Cod and Haddock as the main ingredients - even though most consumers admitted they probably wouldn't be able to tell the two apart! Retailers were again complicit, however, in maintaining these habits by rarely offering alternatives to Cod or Haddock and, in the case of most fish and chip shops, of assuming that an order for fish and chips means “Cod and chips” – thereby providing no challenge to the automacity of consumer behaviour. How might consumer behaviour be changed if, instead of passively assuming that a request for fish and chips always means Cod, the server asked the customer to state what they wanted with reference to the (hopefully slightly more extensive) range of species offered on the menu?! Theory would suggest that this could raise the decision into the realms of conscious thought and, by so doing, to enable consumers to make alternative choices (provided they are available) (Wilk 2002).

“Time available” is included under the construct “habitual consumer behaviour” because it pertains to consumers' normal patterns of shopping behaviour, i.e. whether they are likely to carry out one large weekly shop at a supermarket or to shop around in independent stores. This research found a very strong relationship between how much time a person had available and the effort they were willing to expend in travelling to possibly multiple independent retailers as opposed to making a single supermarket visit. The more time they had, the less likely the consumer was to shop at supermarkets, particularly for items, such as seafood, which they felt had some kind of premium attached to them – supermarkets being reserved for the purchase of standard, mundane household items only. In contrast, time-pressured consumers were more likely to shop at supermarkets out of necessity and, consequently, to be more exposed to the behavioural practices of the large retailers that induce the habitual, unsustainable, behaviours

described above. Consumer age was typically, although not exclusively, also linked with “time” in that several consumers reported having changed their behaviours upon retirement – enabling them to shop around in a way that was impossible while they still worked. Time is perhaps particularly pertinent to seafood buyer behaviour because, unlike the independent butchery or fresh vegetable sector, fishmongers are in much rarer supply, meaning that consumers have to make an even greater effort to buy their seafood from an independent retailer than from a Supermarket. In this way, then, retail behaviour (or, more accurately, retailer *convenience*) is again driving and helping to maintain patterns of unsustainable consumer behaviour.

Habit is a significant component in several other extant models of consumer behaviour and its importance has been discussed from a number of different academic positions. Section 7.3.4 discusses how the “Habitual Consumer Behaviour” construct within the Trifold Model connects with and contributes to this body of academic knowledge.

7.2.3 Consumer apathy/ignorance

The construct “Consumer Apathy/Ignorance” brings together the variables “knowledge and awareness of sustainability” and “credibility of information source” described in Figure 43 and discussed extensively in Section 6.3.

Consumer knowledge of sustainability issues pertaining to seafood was almost entirely limited to concerns about the overfishing of Cod and (to an extent) Tuna; and of the dangers to other marine life of netting, as opposed to line-catching, Tuna. It was encouraging to find that many of the consumers had reported changing their buying behaviours to avoid these species and / or production methods, such that new food taboos around Cod and Tuna could be described. However, their very limited knowledge of sustainable seafood beyond these two issues meant that their choices were largely influenced by their retailers – with independent retailers being perceived as offering a more sustainable offering than the supermarkets (although this perception may be unfounded, particularly for Supermarkets such as Waitrose and Sainsbury which have a demonstrably higher commitment to sustainable sourcing than their competitors.) Product labelling was very inconsistent in both supermarkets and independent retailers - although a consistent *finding* was the appeal of the term “local” to consumers who equated the term with “sustainable” (rightly or wrongly). Consumers’ recognition of, and interest in, established eco-labels for seafood was very limited indeed.

It was notable that the primary information source with respect to sustainable seafood were celebrity chefs – with Rick Stein and Hugh Fearnly-Whittingstall, being particularly influential. Yet their relevance to differing consumer segments was variable, such that their overall (i.e.

population-level) influence is arguably much diminished. No other reliable sources of information were identified by the consumers (with the infrequent exception of the general news media) – the inference here being that such information is usually only available sporadically and is consequently also easy to miss. In the absence of any form of systematic, wide-reaching communication regarding sustainable seafood, it was not surprising that the consumers in this study knew as little as they did, particularly about aquaculture which has received the least media attention of any seafood production issue. Faced with this lack of knowledge, it was equally unsurprising that consumers defaulted to their Retailers to make choices on their behalf. As has already been argued, however, this trust may be misplaced and Retail could rightly be challenged for not doing enough to educate customers about the sustainability of its products. Given the varying degrees of consumer trust in large retail, however, it could also be argued that any such communication would be ill-received and / or ignored – a factor that further supports the need for regular, credible consumer information regarding the problems of sustainable seafood supply, that is over and above what can currently be achieved by the handful of credible celebrity chefs working in this area.

The relationship between this construct and the academic literature on sustainable consumption is discussed further in 7.3.2 below.

7.3 THE CONTRIBUTION OF THE TRIFOLD MODEL TO THE EXISTING ACADEMIC LITERATURE

7.3.1 Introduction

Chapter 4 described the extensive academic literature with respect to Sustainable Consumption and Consumer Behaviour; and concluded by presenting The Conceptual Framework for Understanding the Sustainability of UK Seafood Consumption (see Fig. 29, section 4.5.5). Through the research carried out in this study, twenty eight variables were found to be relevant to UK seafood consumption patterns. Of these variables, eleven were found to be particularly important and could be grouped into the three constructs described in the Trifold Model, and discussed above.

The following sections discuss how the constructs in the Trifold Model connect with and contribute to the three broad areas of academic literature pertaining to sustainable consumption; business ethics; and behavioural models. It also explains how the results from this research have identified novel theoretical avenues worthy of further exploration.

7.3.2 Contribution To Theory 1 : Sustainable Consumption

The issue of consumer knowledge and awareness (and deficiencies within it) is a central theme in the mainstream / alternative sustainable consumption debate (Peattie and Collins 2009; Seyfang 2009; Lorek and Fuchs 2013), with scholars and practitioners in support of the mainstream agenda arguing that consumer ignorance lies at the heart of unsustainable consumption and should therefore be addressed through education campaigns and initiatives such as labelling (Verbeke et al. 2007; Hopwood, Mellor and O'Brien 2005). Opponents who support alternatives to the mainstream, largely rational-choice based approach to consumption, argue that this emphasis is misplaced and that attention needs to be paid to educating at a collective level that will facilitate genuine citizenship (Casimir and Dutilh 2003). Still others suggest that the exclusive focus upon the individual consumer ignores the significant leverage that exists through large-scale Institutional purchasing and by making changes further up in the supply chain (Iles 2004; Iles 2007; Hobson 2002) – factors that suggest a prime role for the UK's largest retailers in addressing sustainability challenges pertaining to food (although there is disagreement on this aspect – see 7.4 below.)

This research has shown that expecting consumers to make sustainable choices with respect to their seafood is currently unrealistic and unfair – the issues are significantly more complex and less understood than for other food products (free range chicken, for example) and consumers suffer from a paucity of information from which to inform their decisions. Even the most informed and engaged consumers in this study struggled to make sense of the numerous and sometimes conflicting messages regarding sustainable seafood, such that (with few exceptions) they defaulted to relying upon their retailers to make sustainable sourcing decisions on their behalf (something that might not always result in a sustainable end choice being made.) This suggests that seafood sustainability campaigns that solely rely upon the behaviours of the “heroic consumer” (Moisander, Markkula and Eräranta 2010) are almost certainly bound to fail, at least in terms of achieving the large scale changes in behaviour that are needed to overturn current patterns of over-exploitation and over-consumption of the Big 5. Further, while consumers continue to demand (and pay higher prices for) the Big 5 and retailers are able to meet that demand through their considerable buying power, there is little economic incentive for retail practices to change albeit that the social and environmental arguments are sizeable (see 7.4).

The evidence from this research and the wider academic literature is that the UK's Big Supermarkets are able to exercise their significant market control to source products, cheaply, from all over the world, ensuring a continued supply of popular products for their customers. In

so doing, however, consumers elsewhere are being deprived the opportunity of eating the product. The UK consumes 9% of the total global catch of Cod every year yet accounts for only 0.89% of the world's population, for example (Seafish 2013b; ONS 2014b); and, already over-exploited world stocks are continuing to be targeted (FAO 2014). This finding therefore contributes to the academic Literature that argues against a purely Market driven approach to ensuring sustainable consumption (Lorek and Fuchs 2013; Sanne 2002).

It might therefore be concluded that the current market-based approaches to achieving sustainable consumption are not working with respect to seafood and that different approaches are needed if these unsustainable patterns are to be addressed. This research suggests that paying attention to information sources, labelling and the definitions used in communicating sustainability, may be key in the context of seafood behaviour. These issues are discussed below.

7.3.2.1 Source Credibility

A sizeable literature has developed that explores the effect of various variables upon consumer uptake of information (and therefor consumer apathy.) Key amongst these is the perceived credibility of (and consumer trust in) the information source – be that an individual (such as a family doctor) or an Institution (such as the Government), such that the higher the credibility the more likely it is that the message will be received and acted upon (Pornpitakpan 2004; Pieniak et al. 2007) found that trust in information sources varied demographically - women were more likely than men to heed the advice from health professionals and mass media than men; and ageing increased Trust in professionals. At a cultural level, their research also found higher Trust amongst European consumers in personal sources of information compared to mass media.

This study also found high levels of trust in the personal relationships with fishmongers – but equally that a few Celebrity chefs held very high status amongst the consumers. While previous studies have explored the effect of mass media on consumer behaviour, little, if any, research has explored the effect of information source upon the uptake of information regarding sustainability – most studies instead focusing upon healthy eating (Pieniak et al. 2007). Similarly, only a handful of studies directly examine the influence of the celebrity chef phenomenon and where it has been explored the focus has been health-related. Caraher, Lange and Dixon (2000) looked at their potential influence with regards healthy eating and concluded that they had had little effect; and Rousseau (2012) argues that, while the allure of celebrity chefs lies in their ability to teach us how to cook and eat well in the midst of an obesity epidemic, their impact upon eating behaviours has been limited. Yet, in talking about their knowledge of seafood and

sustainability, the consumers in this study were almost unanimous in their discussion of the importance of Rick Stein and Hugh Fearnley-Whittingstall. These chefs were singled out for their credibility in a crowded scene - a factor that may be due to their having less of a brand than contemporaries such as Jamie Oliver and Gary Rhodes, who may espouse sustainability but also actively encourage consumption through their endorsement of cookery products and the expansion of their international restaurant empires (Lewis and Huber 2015), as source integrity has also been found to be important in consumer acceptance (Pornpitakpan 2004).

This research suggests that both men and women (but intriguingly, perhaps, slightly more men) **were** significantly influenced by these individuals. This then marks a departure from the existing literature on both source credibility and the impact of celebrity chefs by finding that, in the context of UK seafood consumer behaviour, a select few individuals *have* had a direct influence on consumer behaviour and that men were potentially more influenced than women.

The gender profile was particularly interesting and unexpected. A number of possible explanations exist for this. Firstly, it was notable from the interviews that some of the male participants were (or had been) sports fishermen, who derived a great deal of pleasure from the whole process of catching, preparing and then eating their catch. In so doing, they demonstrated a high degree of respect for the species they favoured and the environments within which they lived.

Sea angling is one of the most popular recreational activities in the UK, with between one and two million people (predominantly males) taking part in it each year (Kenter et al. 2013). Being a relatively small island blessed with a reasonable transport infrastructure, UK inhabitants are able to access coastal (and inland) fishing opportunities with relative ease, ensuring the continuing popularity of the sport and possibly also explaining why, in this study, there was no discernible difference between the coastal, urban and rural populations with regards to the frequency of seafood consumption.

The rise in interest in cooking from men has been linked with both health concerns and the need for men to assert themselves in a hunter-gatherer-type role, wherein cooking (particularly something like fish and meat on a barbecue) represents something quite “primeval and manly” (Gough 2007; Nath 2011). However, this group of consumers also appeared to eschew another male attribute (stereotype?) regarding food, by seeing fish in a positive light as a healthy food, rather than (as other commentators have found) something that is somehow un-masculine (Gough 2007; Nath 2011; Beardsworth et al. 2002). Age probably plays a part here, as several of the participants commented that they ate more fish now that they were older and their tastes

were changing (and, perhaps, were also less concerned, subconsciously, about appearing manly?) Equally, however, the behaviours of the men in this study could largely be contrasted with the women in being concerned with trying new things, learning new skills and cooking in bold ways - in essence, in taking a masculine, controlling, approach to cooking that was quite distinct from the everyday cooking that women described as a way of feeding their families (Gough 2007); and that, arguably, has been heavily influenced by the strong media presences of alpha-male celebrity chefs such as Gordon Ramsey and Jamie Oliver. Further research that tests this gender divide with respect to seafood and cookery within the UK celebrity-chef-culture is suggested.

Reisch, Spash and Bietz's (2008) mass communication experiment in Germany, demonstrated the benefits that "ecotainment" of the kind fulfilled by ethically-based TV shows can bring, particularly with respect to beginning the process of engagement of the masses of currently disinterested consumers. They found that consumers found the news articles on various sustainability topics of such interest that they actively sought additional information through dedicated websites promoted during the news segment. Since 2013, the UK cooking show Masterchef has been passively referring viewers to information on sustainable seafood by including a website address as part of the show's end credits "*Find out how to source sustainable fish* : www.bbc.co.uk/masterchef" Following this link then takes the viewer to the Masterchef main web page where a further link can be followed to the Marine Conservation Society's good fish guide. This is an exception rather than the rule, however, when it comes to UK cooking shows. Neither the Hairy Bikers, Saturday Kitchen or Come Dine with Me websites provide any obvious information on sourcing sustainable seafood (shows that this research found appeal more to younger consumers) – nor, interestingly, do Rick Stein and Hugh Fearnley-Whittingstall's.

Given the German experience, this omission would appear to be a significant wasted opportunity at engaging consumers on the topic of sustainability. In the absence of a body of academic literature that explores the impact of celebrity chefs upon consumer (ethical) behaviour, further research that comprehensively catalogues the advice given by cookery shows to consumers on sustainable sourcing is suggested; as is research into the extent to which viewers actively then seek further information through, for example, following recommended web links.

7.3.2.2 The Role of Eco-Labels

This research found that Consumers expressed interest in and concern for the sustainability of their seafood but that this interest had only manifested itself in changes to a few, very specific,

eating habits – namely, in choosing to avoid Cod and opting for only pole and line-caught Tuna, issues that consumers could understand and easily respond to. The latter, it is suggested, *because of* uncomplicated labelling; and the former because of the considerable media attention given to this issue over the last twenty years (Johnston et al. 2001). In this way, then, one could argue – (from a mainstream perspective) that the continued development of similarly uncomplicated labels could remedy the information deficit that appears to be behind this consumer apathy. Indeed, Pieniak, Vanhonacker and Verbeke (2013) conclude the value in developing a single logo for seafood covering quality, food safety and nutrition, similar to the idea of the traffic light scheme suggested by Forum for the Future (White et al. 2009). Yet the consumers in this study were generally not great label readers, preferring instead to rely upon their retailers to source sustainably; and when one considers the full range of issues with which consumers did (and *could* have) engaged with respect to seafood production (environmental, social and economic), the creation of a simple, catch-all label, may prove too challenging (Grigorakis 2010; Kaiser and Stead 2002).

Instead, this research has suggested that issue-specific labels may be more effective, such as “not overfished”. Indeed, one of the criticisms of labelling schemes to date has been their lack of specificity regarding consumer interests and interpretations (White et al. 2009). Sogn-Grundvag, Larsen and Young (2013), for example, examined the UK market for “line-caught” Cod and Haddock and found that, while consumers were paying a significant premium for these labelled goods, consumer motivations for doing so were unclear. This research has found that consumers understand line-caught as having a lesser environmental impact than other fishing methods. Linking this finding, then, with those of Sogn-Grundvag et al (2013), suggests that a certain section of UK consumers *are* consciously choosing to pay more for environmentally-friendly seafood products and that there is therefore a market for appropriately-labelled seafood products within the UK (a finding supported by recent research that shows comparatively high use of eco-labels by UK consumers compared to other European counterparts (Grunert, Hieke and Wills 2014)). The challenge will be in finding the right language to communicate their relevance to consumers. This research provides a starting point by identifying the range of concerns consumers have *in their own words*. Potential future labels might therefore include phrases such as “net-reared” or “antibiotic-free” Salmon; and “British-Caught in British waters”. Further research that tests the comprehensibility and relevance of such terms with consumers is suggested.

7.3.2.3 Interpreting sustainability

A further weakness of the catch-all-labelling line of thinking is that there are very few examples in the Literature of studies that explore consumers' understanding of the term sustainability, suggesting that labels using this term could easily fail. Those studies that have looked at the issue typically conclude that consumers have a one-dimensional view of the term that is in contrast with academic and policy perspectives that typically adopt Elkington's Triple Bottom Line definition (Elkington 1998; Kagawa 2007; Simpson and Radford 2012; Hill and Lee 2012). A distinct environmental bias has also been found in studies into European consumer food label understanding (Grunert, Hieke and Wills 2014). Further, even when there is a general awareness of a term, such as organic, consumer knowledge on the specifics of the issue can vary wildly (Owen, Seaman and Prince 2007). In a rare exploration of UK food consumers' understanding, Owen, Seaman and Prince (2007) found that consumers largely equated "sustainable" with buying British, in-season and minimising waste. Interestingly, rural participants seemed more attuned to the issues than their urban counterparts - a finding that could not be extended to the coastal/rural/urban participants in *this* study.

Consistent with this limited body of research, the consumers in this study primarily associated sustainability with overfishing, such that the social and economic dimensions were largely irrelevant to them in this context, although these concerns did arise through the course of the interviews such that it was possible to determine distinct ethical hierarchies with respect to seafood consumption as observed elsewhere in the Literature (Jacquet and Pauly 2007; Fousekis and Revell 2004). When these ethical concerns were explored more fully, consumers' motivations became more concentrated upon effects upon their and their family's health (as opposed to any major concern for animal welfare.) This then adds to the consumer behaviour Literature that suggests that health scares can be more effective in changing behaviour than any kind of positive advertising and / or environmentally-motivated campaigning regarding sustainable consumption (Jacquet and Pauly 2007; Fousekis and Revell 2004). It also supports the contention outlined above that future labelling initiatives can be successful provided they better reflect consumers' understanding and concerns.

An additional insight into consumer interpretations of sustainability is borne from their views regarding Herring - a fish that many correctly identified as being sustainable but which was, nevertheless, not a popular choice. Product attributes undoubtedly played a key part here - consumers unerringly referred to its boniness, for example, but this was also often offset by consumers complementing its flavour. The overwhelmingly negative response to Herring raises the possibility that its sustainability status is somehow linked with consumer dislike for the

product, along the lines of “if I don’t like it, others won’t and so there must be lots of it left out there”. The contrasting view (wherein a product is so popular that it becomes scarce and therefore expensive) has been documented as a key factor in driving demand for species such as blue fin Tuna - their very rarity makes them more appealing to consumers (Angulo and Courchamp 2009). It might therefore not be unreasonable to assume that the reverse is also true – that sustainable species are somehow *less* appealing. This was borne out in consumers’ discussions of Coley and Pollack – species that have been used as Cod substitutes and which consumers deemed inferior to the real thing, regardless of whether they had actually tasted them.

“It’s [Pollack] inferior and Coley – inferior to Cod or Haddock, I may be completely wrong, I suppose I’m narrow I haven’t experimented...” (001 NE)

“I think it would be a poor man’s Cod, if you like. If you couldn’t get Cod you might have to have Coley.” (004 NE)

For other less well-known species then, such as Pouting and Gurnard, there may be a danger in their being labelled as “sustainable” because consumers assume that they must somehow be inferior. Even the well-known, farmed version, of Atlantic Salmon, was rated by consumers as inferior to its wild-caught (but endangered and often untried) counterpart.

“I’ve never tasted a wild Salmon as opposed to a farmed Salmon and I think if I did I would probably give you the answer. It would be like tasting margarine and butter wouldn’t it?” (009 NE)

“I mean I guess 99% of the Salmon eaten in England is farmed... still, it has a better image than it might do because fresh wild Salmon is still very classy, nice, aspirational.” (010 SE)

Counter-intuitively, then, attempts to engage consumers to diversify their eating habits may actually backfire if their choices are being promoted as sustainable alternatives to the well-known, premium eating species encapsulated within the Big 5. As the Values analysis found that this group of consumers were far less Conservative and more Hedonistic than the UK average, any attempt to encourage the uptake of sustainable fish needs to be done in a way that emphasises novelty and pleasure versus boring or safe choices. This resonates with Kaplan’s analysis of the danger of basing environmental behavioural change initiatives around the concept of altruism – wherein the idea of giving something but getting nothing in return suggests that all environmentally-friendly behaviour must somehow be at the expense of one’s own

comforts (Kaplan 2000) or, as Ottman, Stafford and Hartman (2006) observe that “*green products don’t work as well as “non-green” ones*” pp 29. By finding a possible link between the term “sustainable” and consumer dissatisfaction, this research opens up a new area for discovery – namely, better understanding how consumers relate to the term and how that, in turn, affects their perceptions of products marketed under the sustainable heading. Arguably, those products that are associated with some degree of luxury – clothing, for example, may be more adversely affected than more prosaic items, such as toilet paper. Further research that explores consumer reactions to different sustainable products could inform future social marketing campaigns.

7.3.2.4 Understanding Local

The sustainable consumption literature has reported an increased interest by (predominantly western) consumers for “buying local” (Seyfang 2008; Seyfang 2006), with over two thirds of UK consumers expressing their support (White et al. 2009) and 20% of restaurant-goers citing this variable as a key determinant of their patronage (Lillywhite and Simonsen 2014). In this study, this sentiment was understood as wanting to buy from independent retailers, in whom consumers placed greater trust than the large supermarkets; and, having an interest in buying local produce in shops and restaurants.

In a similar vein to the above discussion regarding sustainability, however, consumers’ own definitions of local were generous, and typically included anything that had been landed by a UK fishing vessel at a UK port – regardless of how distant that might actually be to the consumer (and in many cases being way beyond the 30km-radius definition used by many farmers markets (White et al. 2009; Local Foods.org.uk)) There was, however, a clear preference for seafood that had been landed as near to the consumer as possible – something that encouraged keen seafood consumers to make special trips to the coast to stock up. This lack of specificity was also found by White et al. (2009) who observe that few academic studies adequately define the term. In a similar vein to consumer interpretations of sustainable, then, future research that explores the meaning of “local” from a consumer perspective could provide new insights that might enable the more effective marketing of new seafood products, particularly, perhaps, genuinely local and currently under-utilised species.

The interest expressed by consumers in this study for local products mirrors the findings from previous investigations into UK demand for locally produced farm products (vegetables, meat, fruit etc.) which have found high levels of preference for local and British produce (White et al. 2009; Weatherell, Tregear and Allinson 2003; Chambers et al. 2007). Choice experiments with UK seafood consumers have also found higher levels of support for labelling that emphasises

sustainability, quality, origin and mode of production, although in these experimental designs the consumers were given far more information than might reasonably be included in any real world label (Jaffry et al. 2004). Recent research from the United States has also shown consumer willingness to pay extra for “locally-sourced” products in restaurants (Lillywhite and Simonsen 2014).

Given this seeming latent demand for labelled seafood, the lack of national differentiation of seafood in the UK retail sector seems like a missed opportunity for the Industry (as well as an ongoing one, given that some earlier DEFRA-commissioned research into consumer attitudes towards underutilised fish species also found high levels of support for UK produce (Reville Nation Ltd 2011).) What impact might an equivalent to the Red Tractor logo have upon sales of UK seafood? Interestingly, a French seafood version, “Pavillon France” was launched in 2012 with the aim of encouraging consumers to try less well known, French-landed, species (Tallaksen 2012). It has not been possible to find data on the success of the scheme but it remains in place indicating that it has had some effect (<http://www.pavillonfrance.fr/a-propos>) Further, is there scope for the regional branding of seafood, along the lines developed by the Breton seabass fishery (which resulted in increased sales of their line-caught, “premium product” over farmed supermarket alternatives (Erwann 2009).

The establishment of any kind of labelling scheme will require significant marketing and design expertise, however, something in which the UK fishing industry is sorely lacking. Chapter 2 described how the UK fishing industry is organised through local membership organisations. Arguably, this fragmented and voluntary approach has resulted in the low(er) profile of this food sector compared to its land-based counterparts, with the inevitable consequence that it also now lacks the capacity and capability to effectively promote itself to its customers. As an illustration of this, the lack of visible logos to distinguish British seafood products was commented upon by several participants, particularly as it contrasted with their experiences of buying other produce.

“So I’d look for the Farm Assured or sometimes the Soil Association, so I do pay attention to the meat labels but I’ve never bothered really with the fish labels.” (017 NE)

“I’d say that if you went to the greengrocers next door or whatever you’re probably getting far more detail about what the fruit is and where it comes from and how many he gets for the pound or whatever compared to the fish stall.” (013 NE)

7.3.3 Contribution To Theory 2 : Corporate Social Responsibility And Business Ethics

This research consciously chose to focus upon the consumer perspective of sustainability and, hence, has not reviewed the expansive literature on business ethics which might also be drawn upon in the context of understanding consumer behaviour. As “retail behaviour” emerged as a central theme in consumer choices, however, pertinent aspects of the Literature are reviewed below.

7.3.3.1 The Role of Retail in Sustainable Consumption

One of the central arguments debated within the business ethics literature is the role of business in driving (as opposed to just being a *player* in) sustainable consumption (Elkington 1998; Michaelis 2003a; Blowfield and Murray 2008). In this way, debates about the role of retail can also be positioned within the alternative / mainstream perspective – is it enough, for example, that retailers provide labels to enable consumers to make informed choices ? (and hence maintain their function within the dominant market-based paradigm); *or* should retail be doing more to pressure for changes elsewhere in the supply chain, such that choices are effectively made simpler for consumers *and* that consumption patterns overall are reduced (Jackson 2011)?

Arguing from the Mainstream position, Durieu (2003) is adamant that Retailers’ responsibility rests in responding to consumer demands, not in choice editing, such that increased public education is the key. Only Governments, he argues, have the power to legislate and thereby to restrict the foods that appear on retailer’s shelves. Some of the more overtly ethical retailers, however, such as Marks and Spencer, have accepted their wider role in the sustainable consumption challenge and have directly intervened in their supply chains to enhance the sustainable offer (and by implication reduce the unsustainable offer) to their customers (Barry 2003); and, as reported in Chapter 3, the UK’s largest food retailers have all made public commitments to sustainable sourcing and supply, although some argue that this is borne out of only a base motivation to deter governmental intervention (Jones, Hillier and Comfort 2011). However, as (albeit) large players in the current system, are the UK’s Supermarkets locked-in to patterns of unsustainable behaviour as much as consumers (Sanne 2002; Michaelis 2003a)?

The evidence from this, and previous UK-based research, suggests that they are. In their review into UK consumer understanding of sustainable food, for example, Owen, Seaman and Prince (2007), make 14 recommendations to the UK Government – half of which related to retail in general and five to Supermarkets in particular. These five recommendations urged direct intervention by Government to enhance the sustainable offer provided to consumers and remove barriers (such as pricing and availability) that have also been highlighted in this research as strongly influencing consumer behaviours. The Sustainable Development Commission’s

comprehensive review “Green, Healthy and Fair” also argued for Retail and Government working together to deliver a coherent sustainable food system (Sustainable Development Commission 2008). Yet to date, no UK Government has dared to directly intervene in the business of the Supermarkets and, given the recent change in political leadership within the UK, it is unlikely that this will happen for the foreseeable future.

Successive studies, including this research, have also found that consumers want their choices made easier for them, with retailers and other institutions acting to provide them with only sustainable options (Casimir and Dutilh 2003). Yet this research found that the UK’s largest supermarkets continue to stock unsustainable species and to offer products across the Big 5 when concerns about their sustainability continue to grow.

Further, and at a more abstract level, far from encouraging sustainable patterns of consumption, the evidence from this research is that the UK’s largest supermarkets actively encourage the over-consumption of seafood, particularly Salmon and Prawns, a practice that would appear to conflict with their sustainability commitments; and, that is consistent with the findings of previous studies that noted the effect of in-store marketing activities, such as special offers and Buy One Get One Free deals, upon consumer behaviours (Jones, Comfort and Hillier 2009; Moisander, Markkula and Eräranta 2010; Jones, Comfort and Hillier 2011; Jones, Hillier and Comfort 2011). The consumers in this study also reported upon the practices of “visible spatial arrangements”, wherein the display of seafood was carefully constructed to encourage them to buy more of what was on offer.

From an academic perspective, these findings suggest the need for those working in the field of Marketing to be attuned to how the impact of their research can (perhaps albeit unwittingly) contribute to unsustainable behaviour (Moisander, Markkula and Eräranta 2010). It also confirms the importance, at least within the UK context, of “retail behaviour” as a key determinant – *in its own right* – of sustainable consumer behaviour. As Jackson observes, “*simplistic exhortations for people to resist consumerism are destined to failure...for as long as all the messages about high street consumption point in the other direction*” (Jackson 2009, p. 11). Put simply, while the UK’s supermarkets are encouraging consumers, through well-honed marketing techniques, to buy more products, behaviours for the most part will continue to be unsustainable.

It is time that the UK’s supermarkets took these challenges on board by unilaterally, for example, only stocking certified seafood. In this way consumer awareness would become moot to the point that even labelling is redundant – the supply will be sustainable and the (aware) consumer

needs only to be assured of that. Yet, research into the ethics and practicalities of such responsible purchasing and supply chain management is in its infancy (Wiese et al. 2012; Seow et al. 2014). This study provides strong evidence of the need for further research that explores the opportunities for (and barriers against) the sustainable supply of seafood by the UK's retailers.

7.3.3.2. Consumer Trust in Retail

Very closely linked with the issue of responsible supply is that of Consumer Trust. Trust in big retail has previously been explored with respect to building brand loyalty (Hornibrook, McCarthy and Fearn 2005) and, latterly, food safety (Crane 2001). There is also a well-established relationship between consumers' perceptions of the values base of a supplier and the acceptability of their products (Crane 2001). This study is unique in exploring consumer perceptions of the relative ethicality of the UK's retailers and in determining the effect of these perceptions upon their behaviours.

The evidence from this research is that some consumers lacked confidence in the ethics of *some of* the big supermarkets and, given the opportunity to do so, made a conscious choice to shop in smaller, local, independent stores – much as those who choose to frequent farmers markets have been found to do. Tesco was perceived as having the lowest ethical standards and Waitrose and Marks and Spencer as the highest, with consumers stating that they trusted these stores to make the right decisions, *“I just assume that because it's [crayfish] come from Sri Lanka or somewhere [that it's not sustainable]but it's from my trusted M&S so I don't care, I'm going to go, “oh well, they must have made some decisions about it””* (005 SE). In contrast, the same products from a different, less trusted store, would not be bought. This differentiation on store grounds supports Crane's theorised position of ethical products as being *“a bundle of ethical attributes and augmentations”* (Crane 2001, p. 369), one such attribute being the perception of the *Corporation* offering the product for sale. This research suggests the importance of this factor in the context of UK seafood sales. At a time of diminishing profits for the big Supermarkets (Anderson 2014), then, this research is therefore timely in suggesting a possible link between falling sales and consumer concerns about ethical business practices.

Further, the study adds to the Literature on alternative food systems in the UK, in finding strong support for locally-sourced and provided *seafood* as more ethical products (Seyfang 2008; White et al. 2009). Unlike the fruit and vegetable sector (which has been the most studied), however, UK supermarkets currently provide little in the way of local seafood - a factor that potentially helps to maintain the higher status of independent fishmongers amongst consumers. Whether this preference would remain if Supermarkets began promoting locally-sourced seafood is open

to debate. Further, while some consumers were able to exercise a choice of retailers, others were not, for time and income reasons. A question therefore remains as to whether alternative food systems, such as are embodied by independent fishmongers, remain the sole preserve of the affluent and time-rich.

7.3.4 Contribution To Theory 3 : Theories Of Consumer Behaviour

7.3.4.1 In Support of Integrated Models of Behaviour

Chapter 4 discussed the existence of over 100 differing theories of consumer behaviour, which could be grouped as either belonging to the “rational choice”, “norm-based” or “integrated” schools of thought. Of the numerous behavioural models that have been developed, however, none has ever been found to accurately predict behaviours from intentions, although the integrated models that reflect the importance of both intrinsic and extrinsic factors upon behaviours have proven more successful (Klößner and Blöbaum 2010; Bamberg and Möser 2007).

This research has also confirmed the importance of taking an integrated view of consumer behaviour, in finding strong evidence for the effect of both internalised norms and external forces (such as retail behaviour) on consumer behaviour. The resulting Trifold Model of Behaviour can therefore be positioned in the relatively limited academic space occupied by those developed by (Klößner and Blöbaum 2010; Triandis 1977; Barr and Gilg 2007). It can also be compared to Olsen’s conceptual framework of the antecedents of seafood consumption, in demonstrating the importance of consumer knowledge, positive consumer attitudes and product availability and convenience in consumers’ intentions to buy seafood (Olsen 2003).

While each of these models was developed from a review of the theory, however, the Trifold Model represents a synthesis of consumers’ own reports of their behaviours with respect to seafood (and arguably other products as well.) As such it represents an *actual*, rather than a purely conceptual, model of the factors shaping unsustainable buying behaviours and does not, as the vast majority of models do, stop at intentions. Thus, this research has revealed specific areas of information deficit that consumers report influences their buying behaviours (e.g. not knowing if something is sustainable or not); similarly, “habitual behaviours” in this model is understood as referring to the specific practice of buying Cod in fish and chips; and “retail behaviour” is understood as encompassing price offers and visual display tactics that encourage the consumption of the Big 5 over all others.

As a specific model of seafood behaviour, it therefore offers the possibility of testing at a larger scale – with a wider and bigger group of consumers than were involved in this study, to

determine if the constructs identified here are generalizable to the British population as a whole. In doing so, it would also be informative to test the extent to which these constructs apply in other areas of consumer behaviour. It has previously been noted, that several of the consumers in this study referred to themselves as foodies indicative of a wider interest in food and cooking than just seafood. It might therefore be assumed that the same constructs will apply in other areas, albeit that their importance in the model may lessen relative to others. For example, the consumers in this study were collectively less well informed about the sustainability of seafood than might be predicted for organic food (the messaging about which has been around for longer and is arguably less complex to understand.) In exploring organic food choices, then, one *might* expect higher consumer knowledge to have translated into increased pressure upon retail to provide organic offers. Testing these assumptions within the context of other behaviours could determine the relative importance of the constructs in general and (hence) to influence future policy initiatives designed to address sustainable consumption. The very design of the model, however, already suggests that any future initiatives need to be multi-dimensional, encompassing both directly consumer-facing activities (such as enhanced labelling, as discussed above); as well as improvements to the supply-chain, some of which may require legislative support to enact (a position that has been argued before with respect to UK food (Sustainable Development Commission 2008)).

7.3.4.2 Relationship to other Behavioural Variables / Theories

It is also possible to see how the constructs in the Trifold Model link back to previously theorised constructs, or variables, within other theories of behaviour. Thus, consumers descriptions of the positive and negative attributes of seafood, the health benefits of consuming seafood and their personal values could be mapped to Means-End Chain Theory (Gutman 1982). This theory excludes any consideration of external influences, however, which this study found were key in shaping UK seafood behaviours.

“Retail Behaviour” in the trifold model could be compared with Triandis’s “Facilitating Conditions” (1977) and was found to be the key “situational context” that determined *actual* consumer behavioural control, as per Carrington’s theorised model (2010). The findings of the relative importance of retail behaviour also mirrors the conclusions of Leek, Maddock and Foxall (2000) and Olsen (2003) of the lesser importance of hedonic, sensory attributes, such as taste, in consumers’ motivations to buy seafood in contrast to other food stuffs.

The Trifold Model also provides evidence, overall, for the “virtuous circle” effect in the way that consumers’ positive attitudes towards the Big 5 could be seen to be reinforced by the behaviours of retailers and their own buying behaviours (Thøgersen and Ölander 2003). Thøgersen and

Ölander argue for the need for the activation of personal values through information-giving, such that attitudes and then behaviours are also changed. In arguing for such an approach, however, the effect of external forces are neglected, something that this study has found must be addressed in parallel with individual consumer consciousness-raising.

In consumers' descriptions of why they liked to "buy local" it was possible to confirm the theorised step-wise activation of norms and behaviour, as described in the Norm-Activation Model (Schwartz 1977). Thus, the consumers talked about why they felt it important to support local businesses and the part they could play in it (=Activation); how this had then translated into shopping behaviours (=Obligation); and why, for some, shopping locally was not always a feasible option for them (=Defense). Consumer denial was also evidenced in their defences of why they bought the things that they did, as per Neutralisation Theory (Chatzidakis, Hibbert and Smith 2007). Sticking with norms, it was also possible to observe the effect of both injunctive and descriptive social norms upon the consumers' behaviour, with the latter being particularly prevalent in consumers' descriptions of buying Cod in fish and chips, wherein Cod was always available and everyone else chose it, such that the (descriptive) norm was to follow suit, even when the consumer was aware of Cod as being overfished (i.e. the injunctive norm) (Cialdini, Reno and Kallgren 1990). Cialdini et al argued for further research to explore the interplay of social and personal norms. This study finds clear evidence for the dominance of a particular descriptive norm (eating Cod and chips) over both injunctive and personal norms as a key influencer of UK consumer behaviour.

Personal values were also found to have an association with seafood consumption. While several studies have chosen to explore the influence of selected values upon consumer behaviour with respect to Organic and Fair Trade foods, for example (Thøgersen and Ölander 2006; Doran 2009), this study is novel in mapping the *entire* values profile of a segment of society based upon their food preferences – in this case active seafood consumers. Schwartz's theorised orthogonal relationship between individual values was demonstrated in that consumers who scored highly in one values dimension scored low in the opposing dimension. The research therefore adds to the existing values Literature, in confirming the relationship between the 10 personal values and is unique in the application of Values theory to a sub-section of society and in comparing the values of this group with the wider population.

The findings from this study with respect to Values suggest areas for further academic research and present some interesting challenges for marketers of seafood products and those interested in encouraging changes in behaviour. The sample size in this study was small and (in theory at least) limited to consumers who had a particular interest in seafood consumption. The reality

was, however, that many of these same consumers also expressed a more general interest in food (seafood was but a component), in terms of where it came from, how far it had travelled and how it had been produced. Indeed, several referred to themselves as Foodies – a term that has become popular in recent years coinciding with the growth in farmer's markets and interest in food as entertainment (Johnston and Baumann 2010). To better understand this growing segment of society it would be informative to carry out a larger scale values study comparing self-identified Foodies with other populations in the UK and beyond. The European Social Survey provides an excellent opportunity for carrying out cross-cultural analysis and of generating a unique insight into the values of modern food consumers (Brunsø, Scholderer and Grunert 2004; Verain et al. 2012). Given this study's findings regarding the importance of local food to consumers, this proposed future research could also add value by incorporating an analysis of the extent to which consumers remain interested in localism, post its adoption (and possible tainting) by big retailers (Seyfang 2008).

The construct "Habitual Consumer Behaviour" in the Trifold model includes the variable "cooking confidence", which can be related to the "Perceived Behavioural Control" variable within the Theory of Planned Behaviour (Ajzen 1991). Thus, consumers repeatedly talked about particular recipes that they knew and liked that they stuck with because they had the confidence both in their cooking ability and in the fact that the resulting dish would be well-received. It was also notable that those with greater confidence in their cooking skills ate more seafood and were prepared to be more adventurous in their choices – confirming a relationship between confidence, subjective knowledge and seafood consumption that has been described previously (Olsen 2004; Pieniak, Verbeke and Scholderer 2010; Rortveit and Olsen 2007).

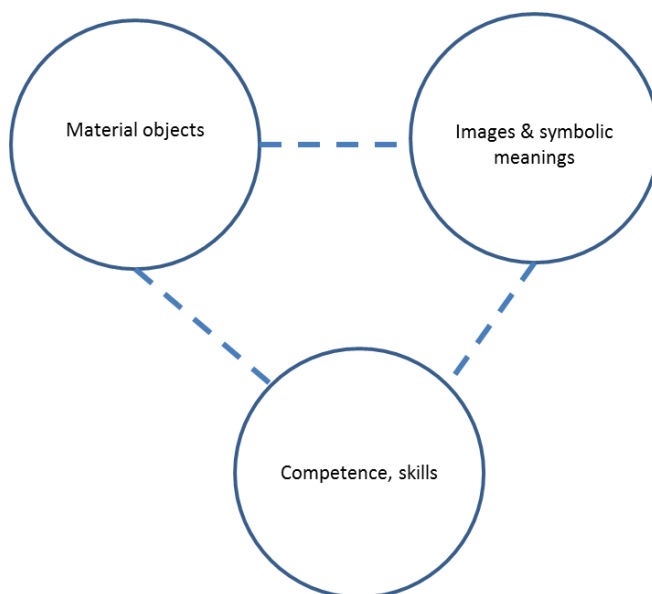
"Habit" as a stand-alone variable has also been found to be an important predictor of intentions (Verbeke and Vackier 2005; Triandis 1977). Indeed, 32% of consumers' intentions to choose seafood was explained by this single variable in one Australian study (Birch and Lawley 2014). Given its prominence in the "Habitual Consumer Behaviour" construct in the Trifold Model it is worthy of some additional explanation here.

The academic literature draws a distinction between habit as a *driver* of behaviour as opposed to an actual practice in a given context. The former definition is grounded in the Psycho-Social tradition that posits an individualistic basis for all behaviours; the latter is borne out of the Sociological position wherein habits are the *practices* that occur when an individual's own ideas, beliefs and competencies interact with their wider (enabling or disabling) environment (Darnton et al. 2011; Kurz et al. 2015). By conceptualising habit in these very different ways, academics and policymakers generate contrasting approaches to behavioural change. Thus the psycho-

social literature theorises that, in order to persist, habits “*require frequency, automacity and a stable context*” (Darnton et al. 2011, p. 3), such that changes to any of these factors can result in new behaviours. In contrast, social practice theorists argue the need for “*a mapping [and redesign] of the elements that currently circulate to allow particular practices to successfully recruit their carriers*” (Kurz et al. 2015, p. 122). Increasingly, the value of combining both approaches is being recognised - marking a continued shift towards inter-disciplinarity in consumer research that has also been exemplified by this study (Kurz et al. 2015).

“Habitual behaviours” in the trifold model therefore reflect both how repeated past experiences have shaped attitudes to the point that certain seafood behaviours have become automatic (such as buying Cod in fish and chip shops, even when there may have been an intention to do otherwise.) In this way the effect of habit can be understood from the psycho-social perspective. It also, however, reflects the *practices* of behaviour in noting that consumers routinely buy the same things because little has changed in their wider environment (or in how they perceive the products) to produce any change. In connecting Consumer Knowledge/Apathy with Retail Behaviour and Habits the Trifold Model also closely reflects Shove’s theorised model of habitual practices (Figure 45) (Darnton et al 2011).

Fig. 45 Three Elements of Habitual “Practices” (Darnton et al. 2011) quoting Shove (2008)



Here, “competence and skills” and “images and meanings” could be likened with the Trifold model’s constructs “consumer knowledge/apathy” and “habitual behaviour. “Material Objects” in Shove’s model is replaced by Retail Behaviour in the Trifold model, as a specific example of an object that is influencing consumer practices.

Theory suggests, then, that a disruption in either the stability of the context (for example, in retailers varying their offer with respect to the Big 5); or in the redesign of the elements of habitual behaviour encapsulated in Fig. 45, will result in behavioural change. Consumer confidence / knowledge could be addressed by increased information giving and through in-store demonstrations, for example, on how to prepare and cook less familiar fish. In a busy shopping environment, however, it is likely that such initiatives will only reach those with the time and interest to stop and watch – leaving the majority of shoppers unaffected. Disrupting the stability of the shopping context, however, has the potential to be much more impactful - if supermarkets stopped stocking uncertified Cod, for example, shoppers would have no choice but to think about alternative choices (thereby disrupting the automatic, habitual behaviour and potentially resulting in a lasting behavioural change.) However, as discussed above, the incentives for supermarkets to do this are weak, at best and the logistical and ethical issues arising from such a move are unknown.

Consequently, it must again be concluded that habitual food behaviours will only change if retailers, government, NGOs and citizen groups work together to develop solutions that can sustainably disrupt the currently unsustainable supply.

7.4 CONCLUDING REMARKS

The objective of this research was to gain an in depth, consumer-informed, understanding of the factors influencing the currently unsustainable pattern of seafood consumption in the UK. Why UK consumers seem to prefer the Big 5 of Cod, Haddock, Salmon, Tuna and Prawns over all others; what this means about UK consumers' knowledge of and concerns for seafood sustainability; and whether consumers are aware of the reasons behind their buying behaviours.

In doing so, the aim was to address the gaps in the current academic literature pertaining to seafood consumption which have typically been limited to a consideration of the effect of a small number of (mainly psycho-social) variables upon consumers' intentions; and that have taken a largely quantitative view of the problem such that explanatory, why and how questions have gone un-answered and there is a lack of academic clarity on the reasons for unsustainable behaviours.

Using mixed methods to engage with both consumers and the retail sector, the preceding chapters have demonstrated that, far from being a simple picture, UK seafood consumption has been (and continues to be) shaped by a myriad of forces – both as it effects consumer intention and actual buying behaviour. Foremost amongst those, however, when it came to explaining the current popularity of the Big 5 were:

- **Habitual Consumer Behaviours** – Consumers held very positive attitudes towards the Big 5 which were reinforced by the manner in which they are offered for sale as filleted, ready to cook/eat products; and by the association of Cod and Haddock with the traditional British dish of fish and chips;
- **Retail Behaviour** - the fact that every single supermarket continually has a supply of the Big 5 in a range of different, easy to use, formats (as above); and, linked to availability, that various of the Big 5 could be regularly found at reduced prices and / or in buy one get one free/half-price-type deals. This encouraged their over-consumption, with consumers stocking up with the offered goods, a behaviour that was facilitated by these products also being offered in packaging that made them easily freeze-able (which, in turn, reinforced consumers' positive attitudes towards them.) The evidence presented here is that the UK's supermarkets should and could be doing more to encourage the sustainable consumption of seafood by changing their own practices.
- **Consumer Ignorance/Apathy** with respect to sustainability - Consumers expressed interest in and concern for the sustainability of their seafood but this interest had only manifested itself in changes to a few, very specific, eating habits. Further, consumers had a very simplistic understanding of sustainability – associating it primarily with overfishing, such that the social and economic dimensions were largely irrelevant to them in this context. Consumers were, however, keen to “buy local” – wanting to access independent retailers, in whom they placed greater trust than the large supermarkets; and, having an interest in buying local produce. Definitions of local were also generous, with consumers typically including anything that had been landed by a UK fishing vessel at a UK port, although there was a clear preference for seafood that had been landed as near to the consumer as possible – something that encouraged keen seafood consumers to make special trips to the coast to stock up.

In describing these constructs and combining them into **The Trifold Model of Unsustainable Consumer Behaviour**, this research has generated important contributions to three contrasting areas of academia pertaining to Sustainable Consumption; Responsible Business; and Consumer Behaviour. The Trifold Model of Unsustainable Behaviour has relevance and application within each of these fields but, arguably, also has the most potential for impact at the intersection of all three. This reflects the view that has developed through this Study that sustainable consumption patterns will only ever be realised through a combination of consumer *and* societal-focused initiatives (the latter referring to institutions as well as society as connected groups of people) that draws on truly interdisciplinary research.

Why the Big 5? Understanding UK Seafood Consumer Behaviour

As an example of Critical, Interdisciplinary research, this study is therefore uniquely positioned within an emerging but contentious area of academia that seeks to bring coherence as well as comprehensiveness to the field of consumer behaviour (Macinnis and Folkes 2010).

The following, final, chapter discusses the numerous additional insights generated by this research that will be of benefit to Policy-makers and those working in the Seafood Industry. It concludes with an assessment of the limitations of the Study and suggestions for further research.

CHAPTER 8 : CONCLUSION AND RECOMMENDATIONS

8.1 INTRODUCTION

The previous chapter described the **academic contributions** made by this research. Specifically:

- Strong evidence that the mainstream, market-based approach to encouraging sustainable consumption is failing with respect to seafood, with consumers confused and / or apathetic about the sustainability of their choices.
- An important and previously under-researched role for Celebrity Chefs in communicating about sustainability – with male consumers seemingly more influenced than females.
- Confirmation both in favour of and against the use of eco-labels. The majority of consumers were oblivious to their presence and stated a preference, instead, for their retailers to make choices easier on their behalf (i.e. without the need for them to read labels.) There was, however, an interest amongst consumers for (eco)-labelling that reflects the issues that *they* understand and care about, e.g. overfishing, bycatch and human health hazards.
- Consumer concerns for overfishing and bycatch associated with Tuna that have translated into new food taboos within contemporary UK society.
- Strong support for local products and supporting local businesses – with consumers' definition of local varying considerably from accepted industry definitions.
- Evidence that consumers generally lack knowledge regarding sustainable seafood production and possess a one-dimensional, ecologically-based, view of what sustainability means.
- Evidence for an association between “sustainable” and “inferior” that may hinder initiatives aimed at encouraging sustainable consumption.
- Support for business ethics arguments that debate the role of business as a *driver* of sustainable consumption.
- Evidence that the UK's largest retailers effectively encourage the over-consumption of the Big 5, which challenges the legitimacy of their sustainability commitments.
- Proof of consumer distrust in large retail and for an associated shift in buying behaviours towards local and independently-run stores.
- Connections between the variables associated with UK seafood consumer behaviour and those described in other extant behavioural theories.
- Evidence for the theorised orthogonal relationship between Schwartz's 10 Universal values; and for intra-societal values differences indicative of UK cultural divides with respect to food behaviours.

- Strong evidence in support of integrated models of consumer behaviour, with the Trifold Model of Unsustainable Behaviour having the potential to be applied to other areas of consumer activity.

This final chapter discusses those insights revealed by the Study that could have benefit to policy makers and practitioners concerned with encouraging sustainable consumption.

8.2 FOR POLICY

The implications for policy makers are numerous. It has been shown, for example, that the complexity of the seafood production process introduces a myriad of ethical dilemmas that labels and consumer guides are unable to adequately address (even if the consumers were aware of and interested in them - something that this research has also shown is not a given.) Grigorakis identified forty five distinct ethical issues relating to aquaculture alone that it would be impossible for even the most ethically-minded consumer to be knowledgeable about and mindful of in their buying behaviours (Grigorakis 2010). As Crane observes, an “ethical product” will have addressed “...a whole set of issues and considerations that might impinge upon the purchase decision, such as product safety, environmental impacts, consumer privacy, employee welfare, discrimination, fair pricing, community action, charitable donations etc. The list is extensive and almost certainly growing...” (Crane 2001, p. 362). Between them, the consumers involved in this research demonstrated interest in the majority of these issues (although, as discussed, the primary concerns related to the environmental impacts) and so, potentially, could be motivated to choose an ethical seafood product on any number of grounds. The challenge for policy makers, however, is the sheer number of potential issues with which consumers might engage, such that the chances of creating discursive confusion are very real (Markkula and Moisander 2012). Consequently, this research has argued that actions aimed at the individual consumers are weak forms of sustainable consumption (Lorek and Fuchs 2013) and should not be the primary focus for policy-makers and practitioners concerned with behavioural change. Rather, interventions elsewhere in the consumption cycle should be targeted – a tactic that has also been suggested by Iles (2004; 2007).

Drawing on the work of Smith, Crane (2001) suggests four levels at which products can be differentiated on ethical grounds (and, thus, at which NGO or governmental attention might be focused):- at the level of the product itself, i.e. does the product (and the production chain) cause harm or generate good?; at the marketing level – is the way in which the product is marketed misleading to the consumer?; at the corporate level – does the company have a positive or negative ethical reputation; and at the national level – are there benefits or dis-benefits from supporting trade with particular nations? Approaches to behavioural change that

are focused at the latter three levels are suggested. Thus, more public attention might usefully be drawn to the discrepancies between the big retailers with respect to the naming and labelling of seafood. This research has found that there may be an argument, for example, of exposing the similarities between farmed fish and the battery farming of chickens. Corporate-level actions that highlight the inconsistent sourcing policies of the large retailers should continue (as per Greenpeace's supermarket's watch campaign) (Greenpeace 2006; Dorey 2005) but could also usefully be supplemented with a focus upon supermarket practices of putting seafood such as Salmon and Prawns on special offer, which encourages over consumption in a way that is at odds with stated supermarket CSR policies.

At a national level NGOs could put pressure upon retail to stop stocking produce that can be linked to illegal fishing practices, such as the use of slave labour which appears particularly problematical in the Thai fishing industry (EJF 2015). Although the consumers in this study had less awareness of (and confidence in) eco-labels for seafood, compared to, for example, the Free Range mark, there is, perhaps, scope for considering NGOs working with Industry to introduce other existing and understood labels, such as Fair Trade, into the UK seafood supply chain. American Tuna importer, Anova, for example, is to begin supplying selected Safeway stores in the USA with Fair Trade branded Tuna in 2015, making it the first such branded seafood product anywhere in the world (Undercurrent News 2015). It will be interesting to see if UK retailers follow suit, particularly in light of continuing media attention being given to the human rights abuses within the Thai fishing industry which produces fish meal for commercial aquaculture operations (Ramsden 2015).

While consumers lacked confidence in statutory mechanisms, they seemingly had greater faith in some – but crucially not all - market-based mechanisms. Thus, they felt that retail had a significant role to play in making decisions on their behalf (although, as above, Trust in the retail sector varied considerably.) In contrast, the big labelling schemes (MSC, RSPCA, Freedom Food) were all largely ignored by the consumers in this study. In the context of the dominant free-market paradigm, it seems unlikely that any future government will require retail to apply higher standards of sourcing. This again suggests the need for continued NGO pressure upon supermarkets using the name and shame tactics that have, so far, seemed to be relatively successful in encouraging the large supermarkets to pay closer attention to sustainability in their sourcing decisions (Greenpeace 2006; Dorey 2005; O'Rourke 2004).

8.3 FOR INDUSTRY

Several important opportunities and challenges are also presented for retail and the fishing industry.

Why the Big 5? Understanding UK Seafood Consumer Behaviour

The first relates, again, to the finding that consumers are relying upon retailers to make sustainable sourcing decisions on their behalf. The retail sector has perhaps the most significant potential to address the sustainability of seafood supply. Within the UK alone, 80% of domestic seafood sales take place through just 5 supermarket brands. Yet, with some exceptions (such as Sainsbury's FishSwap initiative) retailers seem reluctant to move away from supplying the Big 5 of Cod, Haddock, Salmon, Tuna and Prawns and the (relatively newly-arrived) farmed products of Bream and Bass. This pattern is also observed in the restaurant sector. The implication of this finding is that the Retail sector has a responsibility, through choice editing, to alternate the range of products available to the UK consumer in effect forcing a shift in eating habits away from unsustainable and over-exploited species and towards currently under-utilised and less heavily promoted (and available) alternatives.

Seafood consumers seem generally willing and eager to try new things – particularly if they have had the opportunity to try in a restaurant scenario before buying for home consumption. They also value pleasurable pursuits, while having an above-average appreciation for the wider environment and liking to feel in control of their decisions. The UK seafood market would therefore seem ready for the introduction of new products that have both pro-environmental and gourmet credentials. There is an opportunity for retailers and restaurateurs to work collaboratively to increase the range of seafood species offered for sale – once tried in a restaurant (and had a pleasurable experience), consumers are more likely to think about buying the new product for home cooking.

Scaling up the availability of new and exciting seafood products in this way, particularly, if they have been branded as British (see below), while simultaneously reducing the supply of currently over-produced (and imported) products (the Big 5) could result in a significant shift in buyer behaviour and, ultimately, a rebalancing of the UK's relationship with its seafood. Consumers seem willing to give change a go but will they *really* be prepared to give up their favourites? Further research is suggested that tests the acceptability to consumers of new and country-of-origin-branded seafood products - something that would represent a positive collaboration between the Industry and Academia.

This preference for local products is perhaps exacerbated by the current turbulent UK political climate, wherein support for the UK's continuing relationship with the European Union (which ultimately controls UK fishing effort) is fluctuating wildly. This research purposely avoided a focus upon the effect of national and international governmental regulation upon seafood consumption, wishing to primarily explore consumer responses. It was notable, however, that consumers freely expressed openly negative views of the European Union (and the Common

Fisheries Policy), for its effect upon stock depletions and creating waste through discarding. Whilst cautioning against the possibility of adding to this growing xenophobia within certain sections of the UK public, there does, nevertheless, seem to be an opportunity to be grasped by the UK fishing industry in developing and promoting British Fish as a distinctive, high quality and (ideally) sustainable brand. The capacity of the Industry to engage with such an initiative is, however, very limited and would likely require investment – something that may (ironically) be achievable via funding made available through the European Maritime and Fisheries Fund (European Commission 2015).

The findings from the analysis of consumers' experiences of the retail environment support the need for a mixed retail economy that includes both independents and big brand retailers. Arguably, there is currently under-met demand for the services that independent fishmongers can provide, particularly in those communities that meet the typical profile of keen seafood consumers (older, affluent, retired etc.) Consumers living by the coast were unusual in having more than one option to choose from compared to urban and rural consumers who felt lucky if they had an independent fishmonger near to them at all. There do then appear to be opportunities for the expansion of the independent sector into areas that are currently under-served, particularly, perhaps, if these retailers can connect with their nearest fishermen in order to provide genuinely local supply throughout the year.

The exploration of consumers' preferences for the Big 5 of Cod, Haddock, Salmon, Tuna and Prawns found that this was largely an effect of convenience and habit – not taste, with consumers generally willing to try new things provided that the additional work involved for them was minimal. The implications for encouraging greater uptake of less popular dishes would therefore seem to be relatively straightforward. If currently underutilised alternatives to the Big 5 can be processed and presented in the same formats as their more popular competitors, consumers may be more willing to try them. This assumes a ready market for the products, however – something that (as above) the Restaurant sector could facilitate by increasing the presence of underutilised seafood on their menus. This would enable consumers to try unfamiliar things in an environment where they can be fairly confident that the end result will be positive, in terms of the tastiness of the meal. Once introduced to a new product in this way, consumers may be more willing to take on the challenge of cooking them at home.

Consumers are currently missing out on the opportunities to try less well known species of seafood because the mainstream restaurant sector continues to offer only family, "safe", options. Consumers associated trips to the coast with the opportunity to both buy seafood for home consumption and to eat seafood in a restaurant. It is therefore suggested that there are

considerable opportunities to capitalise on this consumer interest by providing more locally-landed and unusual species on wet fish counters and on restaurant menus in coastal communities. However, these need to be well displayed in order to attract the eye of the impulse shoppers; and staff need to be sensitive to the needs of those consumers who may need some additional support in cooking, preparing and eating something for possibly the first time. Research to explore the feasibility of increasing local availability is, therefore, suggested, which should also explore the training needs of independent fishmongers and restaurateurs.

8.4 FUTURE RESEARCH

A limitation of the study was the small number of people who completed the full baseline survey ($n = 29$). It had been hoped that the baseline data would be collected at the beginning of each of the community workshops, to which it was planned to recruit c. 80 - 100 people. Recruitment and scheduling difficulties, however, meant that these workshops were far less well attended. Each workshop participant completed a questionnaire, as did those individuals who were able to be interviewed face to face. For the majority of consumers involved in the study, however, who took part in the interviews only, completion of the final questionnaire was not feasible. Consequently, the interpretation of the questionnaire data (notably the values analysis) needs to be treated with some caution and cannot be taken to be generalizable to the rest of the UK. As a starting point to exploring the relationship between consumer values and seafood buying behaviour, however, it is argued that the results do have significance. Future research that engages with a larger population is suggested.

A second potential limitation was in the use of the dunnhumby data to support the development of the key research questions. The dunnhumby database provides information on sales in Tesco UK stores only and, while Tesco is the UK's largest retailer (in terms of market share) and sales patterns here might therefore reasonably be expected to serve as a proxy for sales elsewhere in the UK's retail sector, this is not necessarily the case. Indeed, the results from this research strongly suggest that (seafood) consumers differentiate between the large supermarket chains on the basis of perceived quality and price, such that a large proportion of those interviewed for this research professed to never shop for seafood in Tesco. Had comparable sales data been available for the other large supermarkets, it is possible that the research might have taken a slightly different direction. However, the key finding that all of the Big 5 retailers routinely and consistently stock the Big 5 seafood products, suggests that, when it comes to the central question of "Why the Big 5" this limitation is probably not significant. Future research that takes account of actual sales data from all 5 of the big retailers (and that compares between them) would, however, be informative.

Finally, by limiting the scope of the study to two regions only (the South East and North East) it is possible that regional differences in consumer behaviour were not fully explored. This research found very little evidence for a regional disposition towards different types of seafood (despite the dunnhumby data showing significant variations in sales.) This may be explained, again, by the small sample size and by the fact that the consumers in this study were less likely than the average consumer to shop at Tesco. However, it may also be the case that other regions have a more distinctive relationship with seafood than was found by only comparing the NE and SE of England. The South West of England, for example, possesses the UK's most sizeable fishing fleet at Newlyn – a fact that perhaps creates a stronger relationship between the community and its fishermen (and the products that they land.) The decision to compare the SE and NE was based on sound reasoning – the SE is the highest consuming region and the NE is one of the lowest; and the fishing fleets operating in the areas were comparable size-wise, which was deemed important for exploring the relationships between the fishing industry and its catchment population. Logistically, limiting the study to two locations also made the research more manageable. Inclusion of a third community could have added an extra dimension to this research, however, and is an aspect of this study that should be rectified if further research into UK seafood consumer behaviour is conducted.

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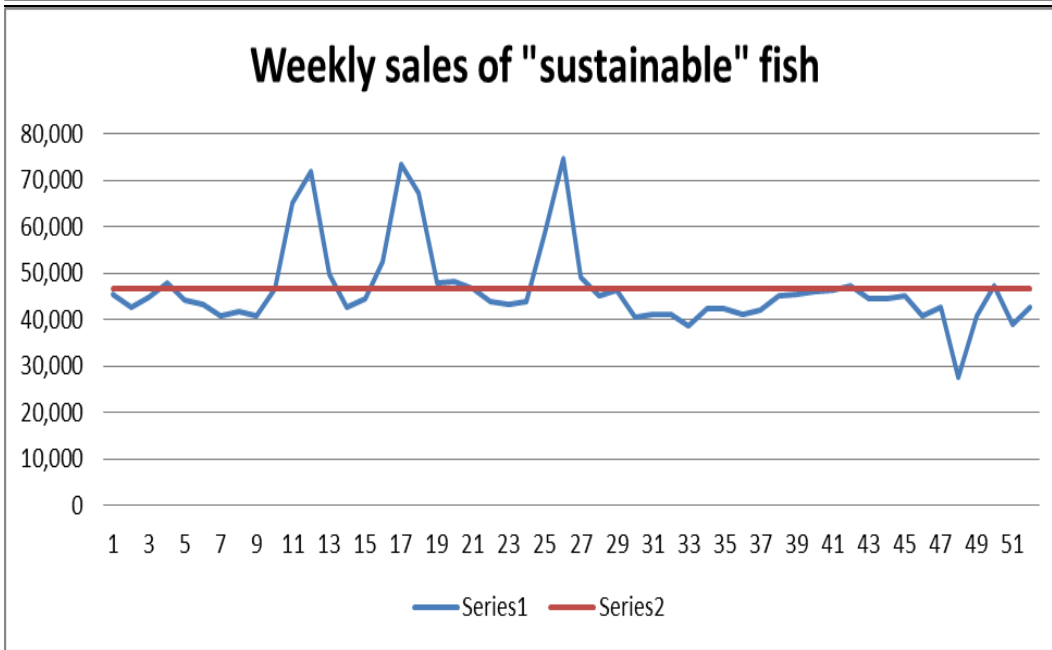
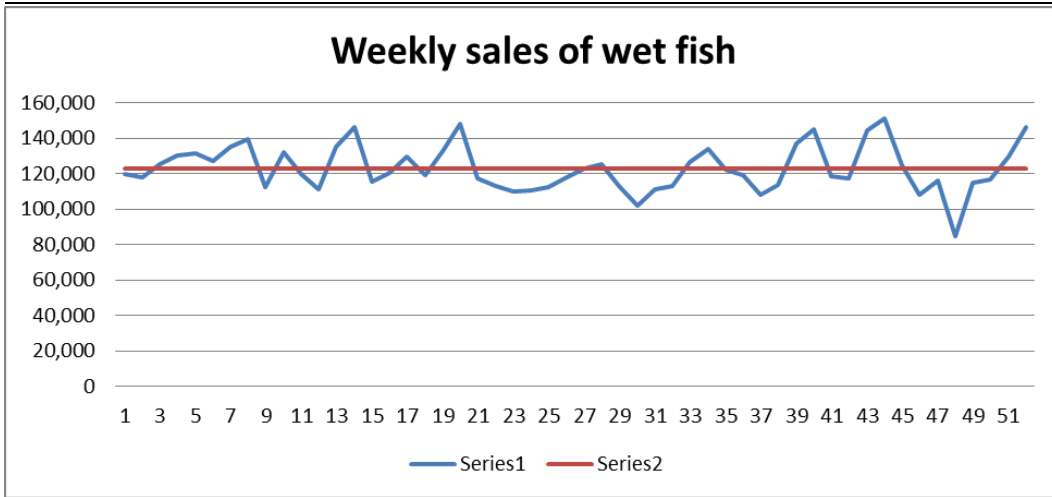
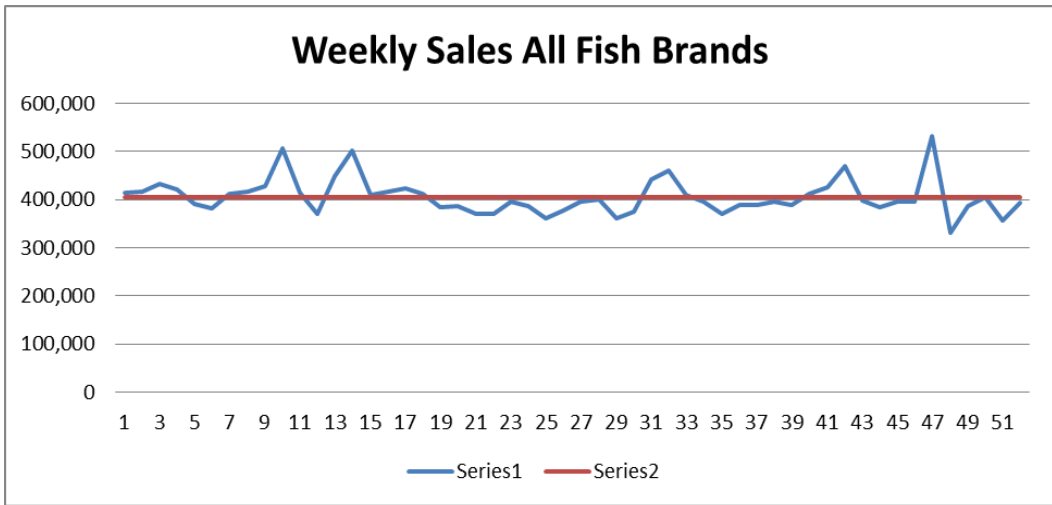
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Appendix 1 Seasonal Variations in Seafood Sales in TESCO UK Stores



Appendix 2 Community Workshop Programme

UNDERSTANDING UK SEAFOOD CONSUMPTION : COMMUNITY WORKSHOP STRUCTURES

SESSION 1 : UNDERSTANDING CURRENT CONSUMPTION PATTERNS

10 mins Welcome and Introduction

- Intro to the researcher
- Agenda
- The Research Context : UK consumption patterns historically and currently; overview of some of the environmental concerns – overfishing; discards; habitat loss through aquaculture
- The research process and the research questions
- Any questions

5 mins Expectations of participants

- Attendance at 2 sessions
- Remuneration in the form of vouchers
- Keeping a diary /record of shopping activities
- Completion of 2 questionnaires – baseline + post workshop evaluation
- 1:1 interviews with a selection
- Participants as co-creators of the research
- Any questions

10 minutes Completion of baseline questionnaire

30mins Group Icebreaker

Everyone in the room to write down the name of the last fish that they bought (have fishy-shaped cards for this purpose) Facilitator asks everyone who said “salmon” to stand.....then a bit of discussion about why and how often etc.. then cod, then haddock etc until everyone is standing up. Last person sitting wins some kind of small prize.

30 minutes – in smaller groups – grouped based upon the fish they most usually buy (?)

Answer the following questions briefly among yourselves

- I buy fish (in general) because.....
- I buy (salmon, cod, tuna etc) because...
- I tend to buy my fish from...
- Things I buy have changed (or not) because....
- Does anything stop me from trying different things ?

15 minute comfort break

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60 mins Plenary – feedback from all groups & general discussion

- Take each question in turn and get responses from the different “sub groups”
- Identify common themes
- Probe differences between “groups” – why the differences ?
- Keep asking some “why’s” to try and get to deeper seated reasons for choices

(use prompts re place, income, skills, environmental concerns etc if needed)

10 mins About the diaries

- Hand out notebooks
- Record what you bought
- Record what else was for sale
- Record *why* you bought what you did
- Any barriers / issues you encountered
- Any thoughts/ discussion with others since last meeting
- Contents are confidential to you and the researcher – UNLESS you want to share something that happened

2 mins 1:1 Interviews

- Explain the process
- Sign-up sheet at end of session

Thanks and reminder of next workshop date.

SESSION 2 – SUSTAINABLE SEAFOOD AND THE ROLE OF RETAIL

10 minutes : welcome and introduction to the session

Welcome back and recap on previous session – any outstanding issues / questions ?

Check in : how is the diary keeping going ? Anyone want to share anything ?

Purpose of this session : to explore a specific aspect of seafood consumption - notably sustainable seafood – your definitions and experiences of it; and how retail is supporting it, or not.

10 minutes : Plenary : What does “sustainable” mean to you ?

- Initially on own, write down a definition of “sustainable”
- Ask one person to share their definition
- Rest of group add contributions / critique this definition
- At end of this exercise, facilitator shares a slide of the “triple bottom line” definition

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10 Minutes : What does sustainable seafood mean ?

- In smaller groups, taking on board previous discussion and thinking specifically about seafood, can you define sustainable seafood ?
- Discuss and then write it down

30 minutes : Plenary : groups share and explain their definitions

Take each group in turn – ask them to read their definition. Other groups critique / ask questions

Subsequent groups asked to add any components not already covered

Facilitator takes down additional suggestions on flip chart

When each group has added their ideas, facilitator constructs a definition of “sustainable seafood” from all the group’s feedback and invites reaction to it as a definition.

(Have available the definition by Jacquet & Pauly to share for reaction)

40 minutes : Game : How sustainable is your seafood ?

Participants work in small teams to rate seafood into SUSTAINABLE or NOT SUSTAINABLE

Each group has set of laminated pictures of 20 fish species and is asked to group them according to the Marine Conservation Society’s criteria (vulnerable to over-exploitation; overfished; poorly managed fisheries; and caught using detrimental methods) Answers to be recorded in workbooks which will be collected in at end of the game.

At end of 20 minutes (or earlier if groups finish) whole group reconvenes and answers given via a powerpoint presentation – with reason for the ratings (eg method of capture, overfishing status) etc highlighted by the facilitator

Group asked for comments / observations following the exercise (including whether they recognised all of the species by the pictures, how much they knew about the issues, and whether this kind of information is usually available at point of sale..)

15 minutes : comfort break

10 minutes : Buying (sustainable) seafood

Facilitator now shifts focus towards shopping and the offerings of supermarkets & fishmongers

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Facilitator shares the results from comparing supermarkets across species categories to illustrate different offerings available and congruence with Supermarket policies on sustainable sourcing.

Facilitator also discusses labelling – MSC, Organic, dolphin friendly..and gauges participants' awareness of commonly known labels

30 minutes : Local shopping experiences and opportunities

Group asked for reactions to the preceding information

- On variability between stores (& is it something they were already conscious of)
- On types and range of species offered
- On how product information is given (or not)
- Where they usually shop – or if they shop around (and if its on species availability or other reasons)
- If where they buy and what they buy has changed over time ...and why

30 minutes : Shopping for sustainability

Referring back to the definition of sustainable seafood developed earlier, do the group think that they can find sustainable seafood in their current retail outlets ? What might be some of the issues.

- Here expect to prompt / probe re the impact and presence or absence of labels and species availability
- What should supermarkets be doing more of to ensure sustainability - as per the group's definition ?

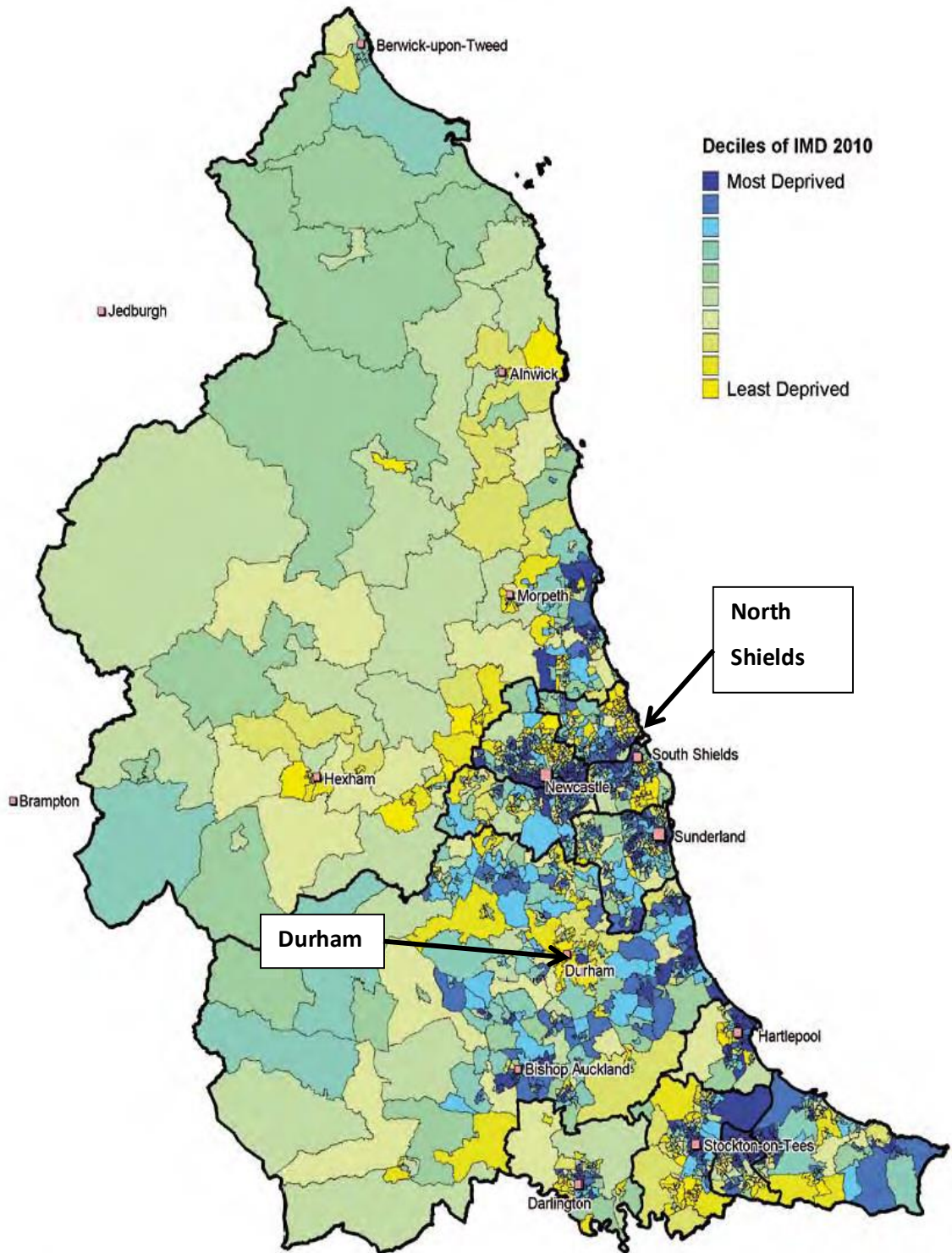
5 minutes : Reminder about diary keeping & 1:1 interviews

- Keep going for one more purchase (at least)
- Sign up for the interviews
- Please return diaries and post-workshop questionnaire by XXXXX in the freepost envelope provided

Thanks for participation and CLOSE

Appendix 3 Indices of Multiple Deprivation for the Chosen Study Sites

North East Region

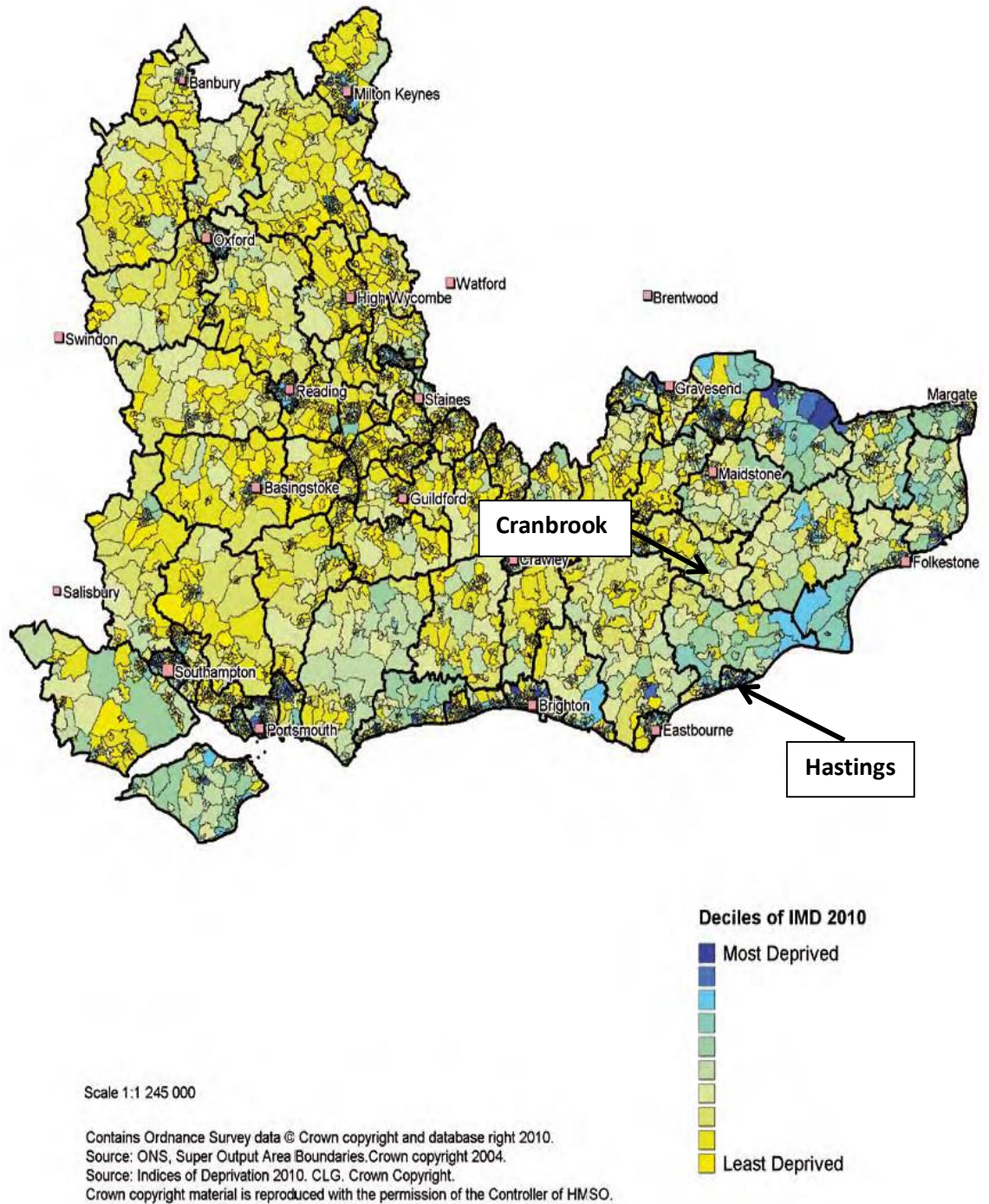


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Scale 1:690 000

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South East Region



Appendix 4 Demographic Survey

Section 4 About you			
Are you..			
Male <input type="checkbox"/>	Female <input type="checkbox"/>		
What is your age?			
19 – 29 <input type="checkbox"/>	30 – 39 <input type="checkbox"/>	40 - 49 <input type="checkbox"/>	50 – 59 <input type="checkbox"/>
60 - 69 <input type="checkbox"/>	70 - 79 <input type="checkbox"/>	80+ <input type="checkbox"/>	
What is your Ethnicity?			
English/Welsh/Scottish/Northern Irish/ British <input type="checkbox"/>		Asian British <input type="checkbox"/>	
White & black Caribbean <input type="checkbox"/>		White & black African <input type="checkbox"/>	
White & Asian <input type="checkbox"/>		Asian <input type="checkbox"/>	
Black /African / Caribbean Black British <input type="checkbox"/>		Other <input type="checkbox"/> (please state)	
What is your total, combined, household income (in £) ?			
Under 10, 000 <input type="checkbox"/>	10 – 15,000 <input type="checkbox"/>	15 – 20,000 <input type="checkbox"/>	20 – 25,000 <input type="checkbox"/>
25 – 30,000 <input type="checkbox"/>	30 – 35,000 <input type="checkbox"/>	35 – 40,000 <input type="checkbox"/>	40 – 45,000 <input type="checkbox"/>
45 – 50,000 <input type="checkbox"/>	50 – 60,000 <input type="checkbox"/>	60 – 75, 000 <input type="checkbox"/>	75 – 80,000 <input type="checkbox"/>
80,000 + <input type="checkbox"/>	Prefer not to say <input type="checkbox"/>		
What education do you have?			
No formal qualifications		<input type="checkbox"/>	
Left school at 16 with qualifications		<input type="checkbox"/>	
Left school at 18 with qualifications		<input type="checkbox"/>	
First degree		<input type="checkbox"/>	
Higher degree		<input type="checkbox"/>	
Other (please state)		<input type="checkbox"/>	
Have you any personal involvement with the Fishing Industry, e.g. through friends or family?			
Yes	<input type="checkbox"/> Please state....		
No	<input type="checkbox"/>		
Which words best describe the area where you grew up:			
Inner City	<input type="checkbox"/>		
Inland town / village	<input type="checkbox"/>		
Coastal town / village	<input type="checkbox"/>		
Rural town / village	<input type="checkbox"/>		

Appendix 5 Full Baseline Survey

UNDERSTANDING PATTERNS OF SEAFOOD CONSUMPTION IN THE UK

This research is being carried out to better understand why shoppers in the UK buy the kinds of fish and shellfish (seafood) that they do. This questionnaire should take approximately 10 minutes to complete. Please answer as honestly and completely as you can. All of the information supplied will remain confidential to me.

Thank you for your help.

Sarah Tetley
University of Kent

Section 1 Current Purchase Behaviour	
1.1 On average, how many times a month do you buy seafood to cook at home? (tick one)	
Once a month or less	<input type="checkbox"/>
Two to three times a month	<input type="checkbox"/>
Four or more times	<input type="checkbox"/>
1.2 What was the last piece of seafood that you bought ?	
1.3 Was the last seafood you bought wild or farmed? (tick one)	
Wild	<input type="checkbox"/>
Farmed	<input type="checkbox"/>
Don't know	<input type="checkbox"/>
1.4 Do you tend to buy your seafood from the same place or do you shop around? (tick one)	
Same place	<input type="checkbox"/>
Shop around	<input type="checkbox"/>
1.5 Where do you <i>usually</i> buy your seafood? (tick one)	
From a supermarket	<input type="checkbox"/>
From a fishmonger's shop	<input type="checkbox"/>
From a mobile fishmonger	<input type="checkbox"/>
A combination of the above	<input type="checkbox"/>
1.6 Do you think that your shopping habits for seafood have changed in the last few years?	
No (please go on to Section 2)	<input type="checkbox"/>

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Yes	<input type="checkbox"/>
1.7 If yes, do you now.....(please tick all that apply)	
Buy more seafood	<input type="checkbox"/>
Buy less seafood	<input type="checkbox"/>
Buy different things	<input type="checkbox"/>
Shop around more	<input type="checkbox"/>
Look for eco-labels	<input type="checkbox"/>
Other	<input type="checkbox"/>

Section 2 The Environmental Effects of commercial fishing			
2.1 Which of the following effects of commercial fishing have you heard about? (Please tick all that apply)			
Discards	<input type="checkbox"/>		
Unintended capture of dolphins	<input type="checkbox"/>		
Unintended capture of sharks, turtles and seabirds	<input type="checkbox"/>		
Damage to the seabed	<input type="checkbox"/>		
Overfishing	<input type="checkbox"/>		
Illegal fishing	<input type="checkbox"/>		
Spread of disease	<input type="checkbox"/>		
Loss of coastal habitats	<input type="checkbox"/>		
Other (please state)	<input type="checkbox"/>		
2.2 How much do you feel you know about these issues?			
	Nothing	A little	A lot
Discards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unintended capture of dolphins	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unintended capture of sharks, turtles and seabirds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Damage to the seabed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overfishing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Illegal fishing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spread of disease	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Loss of coastal habitats	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.3 Have any of these issues influenced what you buy?		
No (go to section 3)	<input type="checkbox"/>	
Yes	<input type="checkbox"/>	In what way...

Section 3 - Personal Values and Worldview						
3.1 Please read the following statements. For each one please indicate the extent to which they are VERY MUCH LIKE ME, LIKE ME, SOMEWHAT LIKE ME, A LITTLE LIKE ME, NOT LIKE ME or NOT LIKE ME AT ALL (tick one)						
	Very much like me	Like me	Somewhat like me	A little like me	Not like me	Not like me at all
Thinking up new ideas and being creative is important to me. I like to do things in my own original way.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important to me to be rich. I want to have lots of money and expensive things.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think it is important that every person in the world should be treated equally. I believe everyone should have equal opportunities in life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important to me to be able to show my abilities. I want people to admire what I do.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important to me that I live in secure surroundings. I avoid anything that might endanger my safety.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I like surprises and am always looking for new things to do. I think it is important to do lots of different things in life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I believe that people should do what they are told. I think people should follow rules at all times, even when no-one is watching.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important to me to listen to people who are different from me. Even when I disagree with them, I still want to understand them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important to me to be humble and modest. I try not to draw attention to myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important to me to be able to make my own decisions about what I do. I like to be free and not depend on others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important to me to help the people around me. I want to care for their well-being	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Being successful is important to me. I hope people will recognise my achievements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important to me that the Government ensures my safety against all threats. I want the state to be strong so that it can defend its citizens.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I look for adventures and like to take risks. I want to have an exciting life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important to me to always behave properly. I want to avoid doing anything people would say is wrong.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important to me to get respect from others. I want people to do what I say.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important to me to be loyal to my friends. I want to devote myself to people close to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I strongly believe that people should care for nature. Looking after the environment is important to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tradition is important to me. I try to follow the customs handed down by my religion or my family.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I seek every chance I can to have fun. It is important to me to do things that give me pleasure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.2 The following statements are about the relationship between humans and the environment. For each one please indicate whether you STRONGLY AGREE, MILDLY AGREE, are UNSURE, MILDLY DISAGREE or STRONGLY DISAGREE with it (tick one)					
	Strongly agree	Mildly agree	Unsure	Mildly disagree	Strongly Disagree
We are approaching the limit of the number of people the earth can support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Humans have the right to modify the natural environment to suit their needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When humans interfere with nature it often produces disastrous consequences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Human ingenuity will insure that we do NOT make the earth unliveable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Humans are severely abusing the environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The earth has plenty of natural resources if we just learn how to develop them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Plants and animals have as much right to exist as humans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The balance of nature is strong enough to cope with the impacts of modern industrial nations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Despite our special abilities humans are still subject to the laws of nature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The so-called “ecological crisis” facing humankind has been greatly exaggerated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The earth is like a spaceship with very limited room and resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Humans were meant to rule over the rest of nature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The balance of nature is very delicate and easily upset	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Humans will eventually learn enough about how nature works to be able to control it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If things continue on their present course, we will soon experience a major ecological catastrophe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section 4 About you					
Are you..					
Male <input type="checkbox"/>	Female <input type="checkbox"/>				
What is your age?					
19 – 29 <input type="checkbox"/>	30 – 39 <input type="checkbox"/>	40 - 49 <input type="checkbox"/>	50 – 59 <input type="checkbox"/>		
60 - 69 <input type="checkbox"/>	70 - 79 <input type="checkbox"/>	80+ <input type="checkbox"/>			
What is your Ethnicity?					
English/Welsh/Scottish/Northern Irish/British <input type="checkbox"/>		Asian British <input type="checkbox"/>			
White & black Caribbean <input type="checkbox"/>		White & black African <input type="checkbox"/>			
White & Asian <input type="checkbox"/>		Asian <input type="checkbox"/>			
Black /African / Caribbean Black British <input type="checkbox"/>		Other <input type="checkbox"/> (please state)			
What is your total, combined, household income (in £)?					
Under 10, 000 <input type="checkbox"/>	10 – 15,000 <input type="checkbox"/>	15 – 20,000 <input type="checkbox"/>	20 – 25,000 <input type="checkbox"/>		
25 – 30,000 <input type="checkbox"/>	30 – 35,000 <input type="checkbox"/>	35 – 40,000 <input type="checkbox"/>	40 – 45,000 <input type="checkbox"/>		
45 – 50,000 <input type="checkbox"/>	50 – 60,000 <input type="checkbox"/>	60 – 75, 000 <input type="checkbox"/>	75 – 80,000 <input type="checkbox"/>		
80,000 + <input type="checkbox"/>	Prefer not to say <input type="checkbox"/>				
What education do you have?					
No formal qualifications	<input type="checkbox"/>				
Left school at 16 with qualifications	<input type="checkbox"/>				
Left school at 18 with qualifications	<input type="checkbox"/>				
First degree	<input type="checkbox"/>				

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Higher degree	<input type="checkbox"/>
Other (please state)	<input type="checkbox"/>
Have you any personal involvement with the Fishing Industry, e.g. through friends or family?	
Yes	<input type="checkbox"/> Please state....
No	<input type="checkbox"/>
Which words best describe the area where you grew up:	
Inner City	<input type="checkbox"/>
Inland town / village	<input type="checkbox"/>
Coastal town / village	<input type="checkbox"/>
Rural town / village	<input type="checkbox"/>

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS SURVEY.

Appendix 6 Example of a Blank Shopper Diary

SEAFOOD BUYING DIARY

Diarist

Date of first entry

Date of last entry

**If you have any questions about your diary
phone Sarah Tetley on 07791 487855 or
email st361@kent.ac.uk**

**Please return your diaries by 6 January 2014
using the envelope provided or by email.**

Seafood Buying Diary

How to fill it in

Thank you for agreeing to help with this study. By filling out a diary describing when and why you buy fish or shellfish (“seafood”) you will be helping important research into UK consumer behaviour.

The following points should help you to fill in your diary as easily as possible :

- We are most interested in the seafood you buy from a shop (not in a restaurant) but if you do go to a restaurant and order seafood please tell us about it too.
- Please don’t worry about spelling or grammar but do try and write clearly – use a pen if possible.
- Try and fill out the diary every time you buy some seafood – starting a new page for each different occasion. Ideally, complete it as soon as you return home.
- Please record what you bought, where you bought it (name of supermarket or fishmongers) and why you bought it (eg wanted to try a particular recipe; family favourite etc.) Try also to record what other types of seafood were for sale at the time.
- If the shopping experience was unusual for you in any way, eg you were shopping for a special dinner party, please try and make a note of it.
- Please also let us know about any seafood-related discussions or personal thoughts that you have had since the previous entry.
- If you forget to record a shopping trip, don’t worry – continue to complete the diary until the return date and just note that one (or more) trips were not recorded.
- If you run out of diary sheets please make your own and attach them to the diary when you return it.
- This is YOUR diary and we are interested in finding out as much as we can about why people buy the things that they do. So please tell us as much as possible about your shopping habits and decisions, even if they seem trivial, or “common sense” to you.

If you have *any* questions about the diary please contact Sarah Tetley by email st361@kent.ac.uk or phone her on 07791 487855.

Seafood Buying Diary

Please use the space below to describe your shopping trip.

In doing so, please state, what you bought, where you bought it why you chose the particular thing you did and what else was for sale at the time. Please also try and recall any thoughts you might have had – in your head, or discussed out loud, relating to this shopping trip and your decision to buy what you did. The prompts are there to guide but not contain your responses.

Date...

I bought...

From....

I bought that (rather than something else) because...

Other seafood for sale at the time included...

Please continue on the other side of this page if you need to.....

Appendix 7 Semi-structured Interview Guide

Interviewee

Date

Can you start by telling me a little about yourself and any memories you have of eating fish as a child?

What do you buy now ?

How Often ?

Where do you buy from ? Why ?

Do you shop around ? Why ?

Has what bought or where changed over time ? Why ?

Do you try /want to try different things ?

What does sustainable mean to you - in general and then wrt seafood ?

Do you take "sustainability" into account when making your shopping decisions ?

Do you see your buying / eating habits changing on the future ? Why ?

Finally, given your experience, why do you think UK likes the Big 5 so much ?

WHY THE BIG 5? UNDERSTANDING UK SEAFOOD CONSUMER BEHAVIOUR

Appendix 8 Blank Repertory Grid

✓	COD	TUNA	HERRING	HADDOCK	PRAWNS	PLAICE	SALMON	POLLACK	COLEY	GURNARD	×

APPENDIX 9 Code Of Ethical Practice For Research

1 INTRODUCTION

The University of Kent expects that all research, and the application of research, carried out at or on behalf of the University, by staff, including persons with honorary positions and collaborators, and students, is conducted to the highest level of ethical standards and in accordance with current legislation and policy requirements.

The purpose of this policy is to protect the dignity, rights, safety and well-being of research participants; the safety and reputation of researchers; the reputation of the University; to ensure research carried out in connection with the University is lawful; to manage and mitigate the risks arising from research; and to ensure ethical awareness is embedded across all faculties and schools.

The policy sets out the required standards of researcher integrity and requirements for ethical review of research projects that must be complied with for all projects undertaken by staff and students of the University of Kent. Researchers are also subject to the ethical guidelines and codes of practice relevant to their own subject areas.

2 DEFINITIONS

For the purposes of this policy, research is defined as ‘the attempt to derive generalizable new knowledge by addressing clearly defined questions with systematic and rigorous methods’² and ‘a process of investigation leading to new insights, effectively shared’³. The policy covers all research involving human participants, their tissues or data, but it should also be applied more broadly, to activities such as enterprise and innovation, consultancy, the application of research, and service evaluation and audit where there are material ethical issues.

The policy applies to all studies carried out in connection with the University of Kent, by staff and students. For studies where external ethical approval has been secured, there is no need to duplicate this process. The relevant University Research Ethics Advisory Group (REAG) should

² *Research Governance Framework for Health and Social Care (2nd edition)*, (DH, 2005)

<https://www.gov.uk/government/publications/research-governance-framework-for-health-and-social-care-second-edition>

³ *REF2014 Assessment framework and guidance on submissions*, (HEFCE, 2011)

<http://www.ref.ac.uk/media/ref/content/pub/assessmentframeworkandguidanceonsubmissions/GOS%20including%20addendum.pdf>

be notified of the approval, and provided with a copy of the approval documentation in order that they can fulfil their reporting requirements to the University-level Research Ethics & Governance Committee. The REAG should be assured that the approving REC is constituted in accordance with recognised ethical standards and that the approval is valid. Where it is suspected that this is not the case then a further review should be carried out by the REAG.

3 RESEARCH INTEGRITY

Researchers should ensure they carry out all their research activities in compliance with the following good practice principles, drawn from the UK Research Integrity Office's Code of Practice for Research⁴, which sets out the responsibilities and values relevant to research. Adherence to good research practice can help researchers avoid allegations of research misconduct.

- **Principles**

Excellence: researchers should aim to conduct their research to the highest possible standards of research integrity in order to produce work of the highest quality.

Honesty: researchers should work honestly, ensuring the accuracy of their data and results and acknowledging the contributions of others. They should neither engage in misconduct nor conceal it.

Integrity: researchers should ensure they comply with all relevant legal and ethical requirements relating to their research area. They should be aware of and declare any potential or actual conflicts of interest relating to their research, and take steps to resolve them where necessary.

Cooperation: researchers should promote the open exchange of ideas, research methods, data and results, and their discussion, scrutiny and debate, subject to any considerations of confidentiality.

Accountability: researchers should ensure that their research activities are compliant with any agreements, terms and conditions relating to the project, ensuring and cooperating with appropriate governance and transparency. Researchers should be aware of and compliant with requirements and guidance of any professional bodies in their field of research, and those who are members of a regulated profession must follow the requirements and guidance of the body

⁴ See: <http://www.ukrio.org/publications/code-of-practice-for-research/2-0-principles/>

regulating their profession. In and through their work researchers are ultimately accountable to the general public and should act accordingly.

Training and skills: Researchers should ensure they have the necessary skills, training and resources to carry out research; they should take advantage of training opportunities provided by their host institution; and should identify, report and resolve any unmet training needs.

Safety: researchers should ensure the dignity, rights, safety and wellbeing of all involved in research and avoid unreasonable risk or harm to research subjects, patients, participants, researchers and others. Research should be initiated and continued only where the anticipated benefits justify the risks involved. Any concerns relating to the dignity, rights, safety and wellbeing of those involved in research should be reported and resolved.

4 STRUCTURE

At the University of Kent, Research Ethics Advisory Groups exist at School- and/or Faculty-level, dependent on the volume of applications. There is no hierarchy and researchers should apply to their local REAG, whether that is at Faculty- or School- level. It is the aim that REAGs are convened in accordance with the Economic and Social Research Council (ESRC) Framework for Research Ethics (FRE), but not all REAGs are currently in compliance with all elements of the FRE, and so a separate ESRC Committee, which is fully compliant with the FRE, exists to review research funded by the ESRC for which there is not a policy or legislative requirement for review by an NHS REC. All research involving non-human subjects must be reviewed by the University's Animal Welfare and Ethics Review Body (AWERB) which is convened on accordance with the Animals (Scientific Procedures) Act 1986.

There is a University-level Research Ethics and Governance Committee that sets policy and regulates and monitors the activities of the REAGs. Although this Committee does not review individual projects, it provides a forum in which the REAGs can share best practice, and can provide guidance to REAGs and reviewers where necessary. The Committee will also receive complaints and appeals against REAG decisions and will provide a final opinion in these cases. Committee membership includes all REAG chairs.

REAGs are required to report annually to the Research Ethics and Governance Committee, at the first meeting of the Spring Term, providing information on activity, the review process, training, problems and appeals, etc. in accordance with the published template.

5 RESEARCH REQUIRING ETHICAL REVIEW

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All research, staff or student, funded or unfunded, that involves human participants, their tissue or data must undergo ethical review before initiation. This includes studies such as questionnaires and internet research where the researcher may not have direct contact with participants; and also studies involving combination of anonymous data where there is a possibility that individuals could be identified by combination of the data with another dataset or other information that is already in the public domain. Appropriate ethical approval must be in place before any contact with participants, their tissues or data, begins. Research not involving human participants, but that raises other ethical issues, must also undergo ethical review before it starts. This could include research that has potential environmental implications for example.

For funded research it is generally accepted that ethical approval need not be sought until funding is confirmed, but REAGs can advise on methodological ethical queries that arise on funding applications, where necessary.

Researchers undertaking research activities overseas must ensure they are in compliance with legal and ethical requirements of the host country and must be able to demonstrate this with documentary evidence. Researchers intending to conduct research in which there is a possibility that legal requirements in the host country could be contravened must detail their plans in their application for ethical review in order that researcher and participant safety and risks to institutional reputation can be assessed alongside other ethical implications. UoK research taking place overseas must first be approved by the appropriate UoK REAG. It is the responsibility of the researcher to discover and comply with any ethical approval requirements in the host country. Researchers must only begin research activities involving human participants once final approval has been granted.

The ethical review process involves two stages:

- The first stage is completion of a research ethics checklist. The checklist asks questions about the type of project to be undertaken and will identify, by a 'yes' response to any of the questions, those projects that require further, full review. This may be by a University REAG, or an external research ethics committee, such as an NHS REC, dependent on the nature of the research and its participants. If all questions on the checklist are answered as 'no' then the form should be lodged with the relevant REAG and the researcher can continue with the project. For student research the checklist must be countersigned by the supervisor who, by signing, is confirming that the checklist responses provided by the student are appropriate. For all studies below doctoral level, it is the ultimate responsibility of the supervisor that ethical approval procedures are fully complied with. For doctoral level studies the ultimate responsibility lies with the student, with appropriate guidance from the supervisor.

- The second stage, full review for those projects that require it, involves completion of a more comprehensive application form, designed to gather all information about the study, relevant for a full review. The checklist and full application form, along with supporting documentation (consent forms; participant information sheets; research instruments; recruitment advertisements, etc. as appropriate) must be submitted to the relevant REAG, and the researcher must receive approval from the REAG before initiating the study.

6 RESEARCH REQUIRING REVIEW BY AN EXTERNAL COMMITTEE

Legislation and policy requires that certain types of research must gain approval from an external committee:

- **NHS and Social Care**
Any research involving potential participants identified from, or because of, their past or present use of NHS and adult Social Care; their relatives or carers; their tissues or data; or any Social Care research funded by the Department of Health, must be submitted for approval to an NHS REC or the Social Care Research Ethics Committee.
- **Human Tissue Act (2004)**
The HTA regulates 'relevant material': material which consists of or includes human cells. Where it is generally agreed that processed material is rendered acellular as a result of the process, the material will not fall within the Act. A Human Tissue Licence is required to store tissue for research purposes, except:
 - where it is stored for a specific research project which has ethical approval from a 'recognised' REC. For the purposes of the Act this must be a REC within the National Research Ethics Service, i.e. an NHS REC;
 - where it is received from a REC-approved tissue bank.

The University does not hold a Human Tissue License and so where it is planned to store relevant material for the purposes of research, for any length of time, approval by an NHS REC must be sought. Once approval is in place, a copy of the approval document must be forwarded to the relevant REAG for their records.

- **Mental Capacity Act (2005)**
The MCA covers 'intrusive' research, that is, any study that would normally require the consent of a person with capacity in order to be lawful. This type of research must be approved by an NHS REC before initiation.

In order to legitimately involve those lacking capacity, the REC will assess whether the study is related to the 'impairing condition' or its treatment, and could not proceed as

effectively with participants with capacity. In order to be approved, it must be evidenced that the study is likely to benefit the individual lacking capacity, or increase knowledge of the condition.

- **Health-related research involving prisoners**
Approval is required from an NHS REC for health-related research conducted within prison settings and any prison research involving adults unable to consent for themselves.

- **Clinical investigations of medical devices**
In compliance with the Medical Devices Regulations (2002) ethical approval must be sought from an NHS REC.

- **Clinical trials of investigational medicinal products**
In compliance with the Medicines for Human Use (Clinical Trials) Regulations (2004) ethical approval must be sought from an NHS REC.

- **Non-human subjects**
Research involving non-human subjects must be carried out in compliance with the Animals (Scientific Procedures) Act (1986). Three licences are required by the Act before testing on animals is permitted:
 - those carrying out procedures must hold a *'personal licence'*, which ensures that they are qualified and suitable;
 - the programme of work in which the procedures are carried out must be authorised in a *'project licence'*;
 - the place at which the work is carried out must hold an *'establishment licence'*.

The University has a committee established to oversee and monitor research involving non-human subjects and to ensure compliance with the legislation. Researchers intending to carry out work in this area must notify the committee and adhere to its procedures.

For further information about legislative and policy requirements in research, researchers can contact the Research Ethics & Governance Officer who can offer guidance and assist with the application process.

7 RESPONSIBILITIES

- **Researchers** are responsible for assessing the appropriate route for ethical review for their project, with guidance as necessary, making the application and waiting until full approval has been granted before initiating their project.
- **Research Assistants/Associates** are responsible for ensuring that any work they carry out on a research project has full ethical approval in place.
- **Supervisors of student researchers** are responsible for ensuring the student is aware of University research ethics review and approval procedures and that the appropriate ethical review procedure is followed by the student. Supervisors of student research are ultimately responsible for the ethical conduct of the research and the student researcher.
- **Students** are responsible for familiarising themselves with University requirements for ethical review and approval of research and for carrying out their study in compliance with good research practice and professional ethical guidance relevant to their subject area.

8 REFERENCES AND ADDITIONAL GUIDANCE

Researchers must be aware of and comply with all relevant research integrity guidance and policy, including University guidance and requirements, and their relevant professional guidelines. An inexhaustive list of research integrity and good practice guidance documents is included below.

General good research practice guidance

UK Research Integrity Office Code of Practice for Research:

<http://www.ukrio.org/publications/code-of-practice-for-research/>

Research Councils UK Policy and Guidelines on the Governance Of Good Research Conduct:

<http://www.rcuk.ac.uk/research/Pages/ResearchIntegrity.aspx>

Universities UK Concordat to Support Research Integrity:

<http://www.universitiesuk.ac.uk/highereducation/Pages/Theconcordattosupportresearchintegrity.aspx>

Professional codes of practice

British Psychological Society Code of Human Research Ethics:

http://www.bps.org.uk/sites/default/files/documents/code_of_human_research_ethics.pdf

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British Sociological Association Statement of Ethical Practice:

<http://www.britsoc.co.uk/about/equality/statement-of-ethical-practice.aspx>

Association of Social Anthropologists of the UK and the Commonwealth Ethical Guidelines for Good Research Practice:

<http://www.theasa.org/downloads/ASA%20ethics%20guidelines%202011.pdf>

British Educational Research Association Ethical Guidelines:

<http://www.bera.ac.uk/publications/Ethical%20Guidelines>

Market Research Society Ethical Standards: <https://www.mrs.org.uk/standards/guidelines.htm>

Social Research Association Ethics Guidelines: http://the-sra.org.uk/sra_resources/research-ethics/ethics-guidelines/

European Commission RESPECT project (Professional and Ethical Codes for Technology-related Socio-Economic Research): <http://www.respectproject.org/ethics/>

Medical research

Department of Health Research Governance Framework for Health & Social Care:

<https://www.gov.uk/government/publications/research-governance-framework-for-health-and-social-care-second-edition>

National Research Ethics Service: <http://www.nres.nhs.uk/applications/guidance/>

Research Councils

Arts and Humanities Research Council: <http://www.ahrc.ac.uk/Funding-Opportunities/Research-funding/RFG/Grant-conditions/Pages/Research-governance.aspx>

Biotechnology and Biological Sciences Research Council:

<http://www.bbsrc.ac.uk/organisation/policies/position/policy/joint-code-of-practice-for-research.aspx>

Economic and Social Research Council: <http://www.esrc.ac.uk/about-esrc/information/research-ethics.aspx>

Medical Research Council:

<http://www.mrc.ac.uk/Ourresearch/Ethicsresearchguidance/index.htm>

Natural Environment Research Council: <http://www.nerc.ac.uk/about/work/policy/ethics/>

Nicole Palmer

Research Ethics & Governance Officer

Last review: October 2013

APPENDIX

The UK Research Integrity Office's Recommended Checklist for Researchers can help researchers to consider good research practice and should be referenced at an early stage of the design of a research project.⁵

Before conducting your research, and bearing in mind that, subject to legal and ethical requirements, roles and contributions may change during the time span of the research:	
1. Does the proposed research address pertinent question(s) and is it designed either to add to existing knowledge about the subject in question or to develop methods for research into it?	<input type="checkbox"/>
2. Is your research design appropriate for the question(s) being asked?	<input type="checkbox"/>
3. Will you have access to all necessary skills and resources to conduct the research?	<input type="checkbox"/>
4. Have you conducted a risk assessment to determine:	<input type="checkbox"/>
a) whether there are any ethical issues and whether ethics review is required;	<input type="checkbox"/>
b) the potential for risks to the organisation, the research, or the health, safety and well-being of researchers and research participants; and	<input type="checkbox"/>
c) what legal requirements govern the research?	<input type="checkbox"/>
5. Will your research comply with all legal and ethical requirements and other applicable guidelines, including those from other organisations and/or countries if relevant?	<input type="checkbox"/>
6. Will your research comply with all requirements of legislation and good practice relating to health and safety?	<input type="checkbox"/>
7. Has your research undergone any necessary ethics review (see 4(a) above), especially if it involves animals, human participants, human material or personal data?	<input type="checkbox"/>
8. Will your research comply with any monitoring and audit requirements?	<input type="checkbox"/>
9. Are you in compliance with any contracts and financial guidelines relating to the project?	<input type="checkbox"/>
10. Have you reached an agreement relating to intellectual property, publication and authorship?	<input type="checkbox"/>
11. Have you reached an agreement relating to collaborative working, if applicable?	<input type="checkbox"/>
12. Have you agreed the roles of researchers and responsibilities for management and supervision?	<input type="checkbox"/>
13. Have all conflicts of interest relating to your research been identified, declared and addressed?	<input type="checkbox"/>

⁵ From: UKRIO Code of Practice from Research, 2009 (<http://www.ukrio.org/publications/code-of-practice-for-research/>)

14. Are you aware of the guidance from all applicable organisations on misconduct in research?	<input type="checkbox"/>
When conducting your research:	
1. Are you following the agreed research design for the project?	<input type="checkbox"/>
2. Have any changes to the agreed research design been reviewed and approved if applicable?	<input type="checkbox"/>
3. Are you following best practice for the collection, storage and management of data?	<input type="checkbox"/>
4. Are agreed roles and responsibilities for management and supervision being fulfilled?	<input type="checkbox"/>
5. Is your research complying with any monitoring and audit requirements?	<input type="checkbox"/>
When finishing your research:	
1. Will your research and its findings be reported accurately, honestly and within a reasonable time frame?	<input type="checkbox"/>
2. Will all contributors to the research be acknowledged?	<input type="checkbox"/>
3. Are agreements relating to intellectual property, publication and authorship being complied with?	<input type="checkbox"/>
4. Will research data be retained in a secure and accessible form and for the required duration?	<input type="checkbox"/>
5. Will your research comply with all legal, ethical and contractual requirements?	<input type="checkbox"/>

Appendix 10 Flyer used to Recruit Study Participants

So you like to eat Seafood ?! Did you know.....



- That over 80% of the fish eaten in the UK is either cod, haddock, prawns, tuna or salmon?
- That the majority of the fish that we eat in the UK is imported from places as far away as China and Vietnam?
- That UK fishermen catch over 40 different types of fish in our waters?
- That nearly one in five fish caught by UK fishermen are thrown back at sea because no-one wants to buy them back home ?
- That where you live can have an effect upon both the amount and type of fish that you eat ?

Why have these patterns developed ? **What** does it tell us about our tastes, our culture and how our retail system works ? **How** are tastes changing...or are they staying the same ?

If any of these questions interest you then please get involved in our research exploring the seafood buying behaviours of UK consumers !

We are now recruiting people to take part in the following ways :

- Attending two workshops at a local venue
- Taking part in some face to face interviews
- Keeping a seafood shoppers diary

You can choose to do just one or a combination of these activities & your **participation will be rewarded.**

If you are interested in taking part, please contact Sarah Tetley on 01227 827726 ext. 6438 or email st361@kent.ac.uk by 4 November 2013.

Why the Big 5? Understanding UK Seafood Consumer Behaviour

Appendix 11 Demographics of the Study Population (all figures are percentages)

	Whole Study Pop ⁿ (n= 64)	NE Study Pop ⁿ (n = 32)	SE Study Pop ⁿ (n = 32)
Gender			
Male	42.2	37.5	46.9
Female	57.8	62.5	53.1
Age			
- 19 – 29	7.8	-	15.6
30 – 39	6.3	-	12.5
40 – 49	14.1	18.8	9.4
50 -59	25.0	25.0	25.0
60 -69	23.4	18.8	28.1
70 – 79	21.9	34.4	9.4
80 +	1.6	3.1	-
Ethnicity			
White British	89.1	87.5	90.6
Other	10.9	12.5	9.4
Annual household income (gross, £)			
< 10,000	1.5	3.1	-
10 – 20,000	12.2	9.4	15.8
20 – 30,000	16.7	9.4	25.0
30 – 40,000	19.7	31.3	9.4
40 – 50,000	14.8	15.8	9.7
50 – 60,000	6.1	3.1	18.8
60 – 75,000	7.6	6.3	9.4
75 – 80,000	3.0	3.1	3.1
80 +	3.0	3.1	3.1
Prefer not to say	10.6	15.6	6.3
Qualifications			
No qualifications	4.5	9.4	-
Left school at 16 with qualifications	19.7	28.1	12.5
Left school at 18 with qualifications	12.1	6.3	18.8
1 st Degree	19.7	18.8	21.9
Higher degree	33.3	28.1	40.6
Other (e.g. Diplomas)	6.1	6.3	6.3
% with involvement with Fishing Industry	13.6	18.8	9.4
Area where grew up			
Inner city	13.6	21.9	6.3
Inland town/village	33.3	31.3	37.5
Rural town/village	24.2	25.0	25.0
Coastal town/village	25.8	21.9	31.3