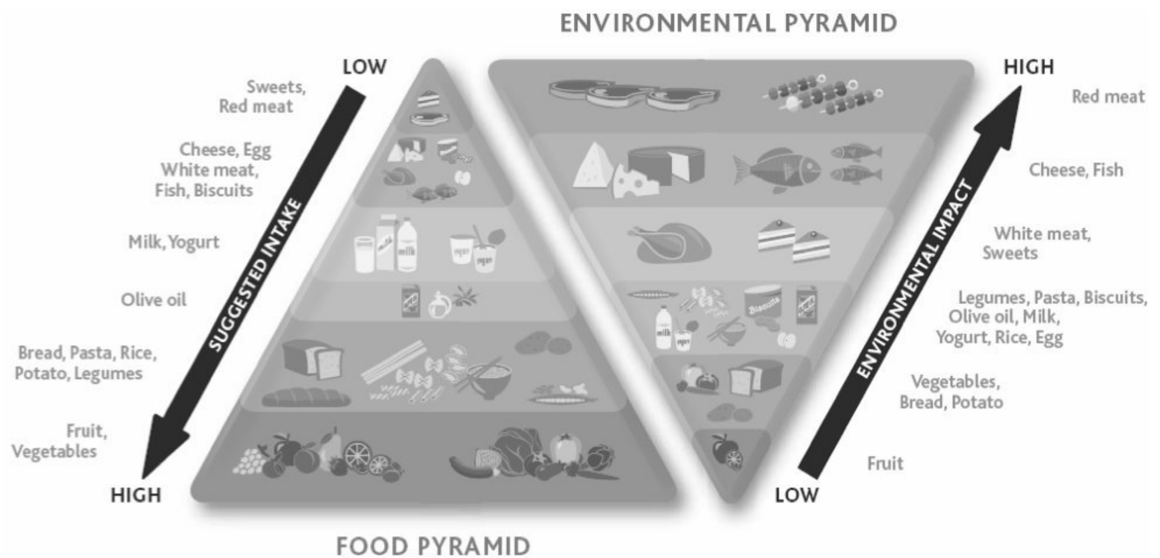

Encouraging Environmentally Sustainable Food Consumption: Limitations, Potential and Possibilities of Community-Based Consumer Co-ops

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Abstract

This thesis explores the conditions under which community-based consumer food co-ops can foster pro-environmental food practices. Case study methodology is employed to study five UK food co-ops and identify opportunities and challenges to developing capacities in those co-ops towards: building a shared sense of purpose around environmentally sustainable food consumption; making sustainable food choices accessible and affordable; and, encouraging member participation. Additionally, life history interviews were undertaken with 18 individuals who were already making environmentally friendly food choices to illuminate how community food co-ops can develop strategies to engage their members and promote sustainable food consumption.

Building a co-op community with a shared purpose around sustainable food consumption is more likely when there is clarity of focus on the prioritisation of environmental objectives among members and the leadership team; however, high overhead costs may shift the focus to commercial survival. Co-ops can be more price-competitive in the category of fresh produce and unpackaged wholefoods than in packaged and convenience foods. Members' labour can reduce overhead costs, but getting members to participate is a considerable challenge. Democratic structure alone is not enough. Participation was motivated primarily by the need to belong to a community and a commitment to co-ops' perceived values. There was limited evidence at the studied co-ops of systematic efforts to create opportunities for social learning and relationship-building among members towards strengthening volunteering commitment and developing practice-relevant knowledge and skills.

Life history accounts of sustainable food practitioners illustrated how factors such as parents and peers, work, education, books and media, living environment, and ethical concerns, worked through key mechanisms of influence, including direct experience, knowledge, social learning, facilitating contexts and personal agency, to shape sustainable food practices over time. Understanding these factors and mechanisms suggests a number of practical strategies for food co-ops to effectively engage their members with environmental objectives. As well as removing structural constraints, effective strategies will be alert to the bi-directional nature of attitude-behaviour relationships and the formative processes that underpin a range of self-transcendent values aligned with environmentally responsible food consumption.

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List of Abbreviations

AFOLU	Agriculture, Forestry and Land Use
CAT	Centre for Alternative Technology
CLG	Communities and Local Government
Defra	Department for Environment Food and Rural Affairs
DoT	Department of Transport, UK
DTI	Department of Trade and Industry, UK
ESRC	Economic and Social Research Council
EU	European Union
FAO	Food and Agriculture Organization
GHG	Greenhouse-Gas
ICA	International Co-operative Alliance
IFAP	Industrial Farm Animal Production
ILO	International Labour Organization
IPCC	Intergovernmental Panel on Climate Change
IPPR	Institute for Public Policy Research
NESTA	(formerly) National Endowment for Science, Technology and the Arts
OECD	Organisation for Economic Co-operation and Development
PAC	Public Accounts Committee, UK
POST	The Parliamentary Office of Science and Technology, UK
SCA	Stroud Community Agriculture
SCR	Sustainable Consumption Roundtable
SSG	Sustainability Solutions Group
TPS	The People's Supermarket
UNEP	United Nations Environment Programme
VFC	Voluntary Food Co-operatives
WCED	World Commission on Environment and Development
WMO	World Meteorological Organisation
WRAP	Waste Resources Action Programme
WWF	World Wide Fund for Nature

Chapter 1

INTRODUCTION

What is the impact of the food system on the environment and how can changes in consumption practices mitigate it?

Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice and rising global average sea level.
Intergovernmental Panel on Climate Change Report 2007

The issue of climate change is one that we ignore at our own peril. There may still be disputes about exactly how much we're contributing to the warming of the earth's atmosphere and how much is naturally occurring, but what we can be scientifically certain of is that our continued use of fossil fuels is pushing us to a point of no return. And unless we free ourselves from a dependence on these fossil fuels and chart a new course on energy in this country, we are condemning future generations to global catastrophe.
Barack Obama, President of the United States of America, April 3, 2006

Climate change is one of the biggest threats facing the world and we must have a much greater sense of urgency about tackling it.
David Cameron, Prime Minister of the United Kingdom, April 20, 2006

In view of the now recognised impact of global agriculture and the food system on climate change, this study explores the potential of community-based food co-ops to foster pro-environmental food consumption practices. First, I use case study methodology to learn about the opportunities and challenges at some existing food co-ops in the UK that pursue environmental objectives. Second, to understand how such food co-ops can more effectively influence their members' food consumption practices, I draw upon life history interviews with people who have made pro-environmental dietary choices.

In this chapter, I locate my research in the larger context of climate change and highlight the significance of the agricultural sector's contribution to greenhouse-gas (GHG) emissions and to other adverse impacts on the environment. I also discuss key opportunities to mitigate the food system's environmental impact by changing food consumption choices. The role of individual responsibility in mitigating carbon emissions is then considered within the UK policy context. Finally, I outline the structure of this thesis and offer a brief introduction to its chapters.

1.1 Impact of the food system on the environment

Climate change is now widely recognised as a significant global challenge by the scientific community and by major political leaders across the world. Evidence of climate change has been documented in reports by the Intergovernmental Panel on Climate Change (IPCC 2007), which brings together the world's leading climate researchers under the aegis of the United Nations Environment Programme (UNEP) and the World Meteorological Organisation (WMO). The IPCC Fourth Assessment Report (2007: 5) concludes that human activities have played an important role in causing climate change:

> Most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic GHG concentrations. It is likely that there has been significant anthropogenic warming over the past 50 years averaged over each continent (except Antarctica).

This report warns that unless urgent and significant measures are taken to reduce emissions, rising global temperatures of an average 2°C or more will have disastrous consequences, making severe food and water shortages increasingly likely. Additional impacts from climate change may include putting millions of people at risk from coastal flooding and other extreme weather events, endangering lives through increased incidence of life-threatening health conditions, and the extinction of a great number of animal and plant species.

Agriculture, land-use changes associated therewith, and the energy used by this sector, account for around 25% of global greenhouse gas (GHG) emissions (IPCC 2014a; see Figure 1.1). Moreover, as demand for more animal-sourced foods increases, especially in the emergent economies, by 2030 the share of agricultural emissions is expected to increase by 36-63% (Smith et al. 2007). In addition to GHG emissions, agriculture is implicated in loss of biodiversity and soil degradation. It also accounts for about 70% of all water used by humans and is a prime source of water pollution (IPCC 2014b; Vermeulen, Campbell and Ingram 2012).

In the UK, as in the European Union (EU), the food sector is a major contributor to GHG emissions. One report calculated that food accounts for 31% of total GHG emissions in 25 EU countries, not including an additional 9% from the hotel and restaurant sector (European Commission 2006). In the UK, the food system accounts for around one-fifth of total greenhouse-gas emissions (Garnett 2008). Including emissions from land use

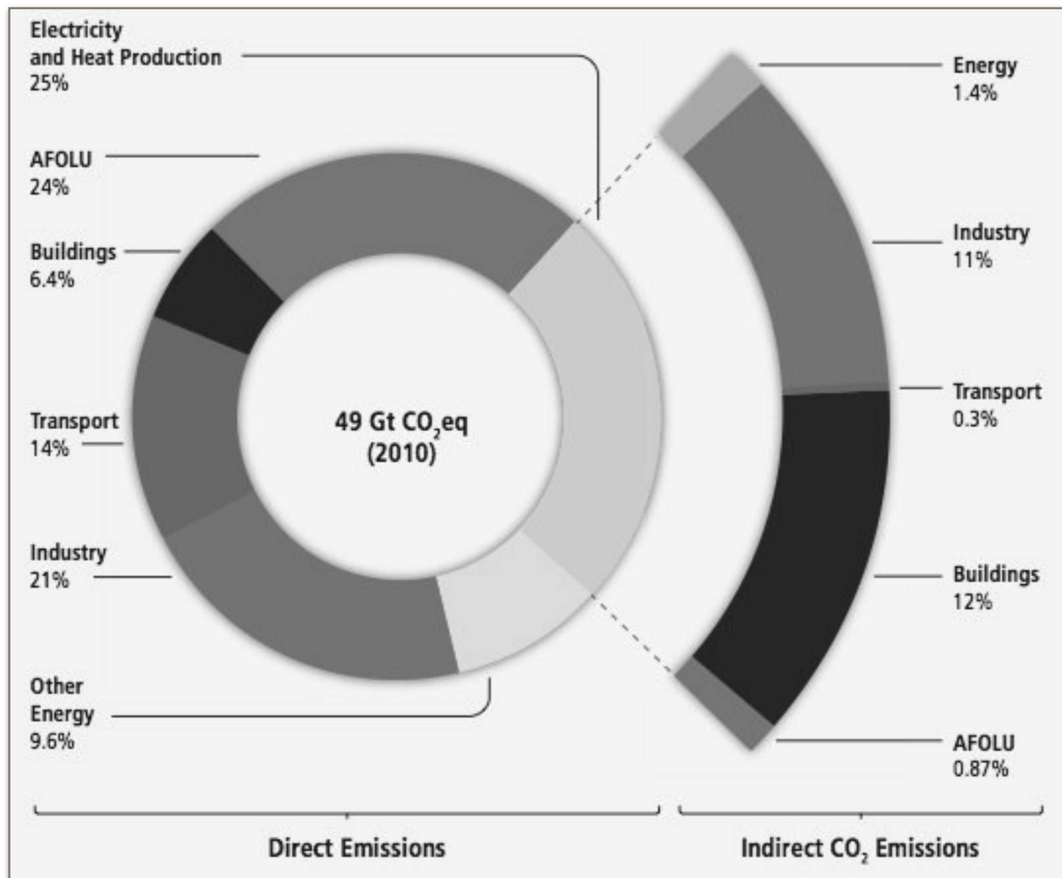

FIGURE 1.1 GHG Emissions by Sectors (AFOLU: Agriculture, Forestry and Land Use)
Source: IPCC (2014a: 8)

change induced by food consumption increases that figure by 66% (Audsley et al. 2010). From the UK household consumption perspective, food and drinks (including tobacco) are the largest sources of emissions when all stages of their lifecycles are considered (Francis 2004). These lifecycle stages include production on farms (and inputs such as fertilisers and livestock feeds), manufacturing, distribution (transport, refrigeration, storage, packaging and retail), use (cooking and storage) and waste (disposal and management).

A number of lifecycle-scale studies suggest that simple measures, such as 'food miles', cannot adequately represent the complex accounting of food related emission sources (AEA Technology 2005; Coley, Howard and Winter 2009). As different types of food vary in the amount of emissions released at various stages in their lifecycle, other factors may at times be more significant sources of emissions than the distance a particular food may have travelled to get to its consumer (Garnett 2008). These factors can include, for example, the use of energy-intensive fertilisers, direct and indirect land-

use in producing plant and animal-based foods, methods of food preparation and where food is consumed (at home or at a restaurant). This implies that a range of potential intervention mechanisms can help reduce emissions attributed to the food sector. Many scholars studying sustainable food systems agree that a comprehensive approach is needed in order to achieve the scale of emission reduction necessary to combat the threats posed by climate change. This approach involves technological improvements, an appropriate policy context, as well as changes in human behaviour (cf. IPCC 2014b; Garnett 2011; Audsley et al. 2010; Friel et al. 2009; Weber and Matthews 2008).

The behavioural approach is important since it has the potential to influence mitigation measures at various levels. For one, collective exercise of pro-environmental choices by consumers in the marketplace can create economic pressure on supply systems to transition to less environmentally damaging production and distribution practices. At the same time, environmentally significant consumer behaviour can express political support for appropriate policy level changes. To illustrate, the increase in organic food production in the last decade, in response to increased demand from consumers, has demonstrated the power of consumers to influence sustainable farming practices (Soil Association 2009). Consumer-led demand created a virtuous circle whereby economies of scale and increased competition in the organic sector drove prices down. Consequently, organic foods became more affordable for a greater number of people. Following the subsequent growth in consumption of organic foods, government institutions provided support and funding for conversions from conventional to organic farming (Stolze and Lampkin 2009).

That said, organic foods still command a premium in the marketplace, which acts as a deterrent for many consumers (Monk 2008; Dowler 2002). But environmentally sustainable food is not just about organic farming. Changes in consumption behaviour, such as buying more local and seasonal food, increasing intake of fruit and vegetables, and exercising preference for less packaging and waste, are not always driven by price considerations. Rather, prevalent cultural norms and habits, as well as market infrastructures that shape and constrain existing routinised practices, cause a behavioural 'lock-in' (Jackson 2005), which makes it difficult for individuals, even those with pro-environmental attitudes, to adopt new sustainable behaviours. Better understanding of the factors that influence environmentally responsible food

consumption is, therefore, essential to shifting people's practices in that direction. Also, to ensure that efforts are optimally directed to reduce the food sector's adverse environmental impact through change in consumption practices, both consumers and policymakers need to understand the relative environmental impacts of specific food choices. The next section briefly discusses the emerging consensus in the environmental studies literature about what constitutes sustainable food choices.

1.2 Environmentally sustainable diet

The Brundtland Commission's report for the United Nations defined sustainable development as 'development which meets the needs of the present without compromising the ability of future generations to meet their own needs' (WCED 1987: 43). Its conceptualisation of sustainability includes at least three dimensions: environmental, economic and social. In addition, Tim Lang (2014, 2010), a noted food policy expert, has argued for the inclusion of quality, health and governance aspects in the concept of sustainable diets with a view to developing an 'omni-standards' approach for food policy. This approach encourages policymakers to offer a coherent set of dietary guidelines for people and regulatory bodies and resolve some of the tensions and confusions that may otherwise arise using a piecemeal approach. The Food and Agriculture Organisation's (FAO) position on sustainable diets is also broadly in line with Lang's multidimensional approach (FAO and Bioversity International 2010). While recognising the merits of this approach, for the purpose of this study I use the term 'sustainable', unless otherwise stated, to refer primarily to its environmental dimension.

Accounting for average GHG emissions for a particular food option using a lifecycle approach is notoriously complex (Garnett 2008). There are a number of food production systems in use under different geographical and climatic conditions. Additionally, the technological and infrastructural systems affecting each stage of the lifecycle can vary considerably between cases. Hence, estimates of GHG emissions calculated by lifecycle studies are rarely left uncontested. Nevertheless, a broad consensus has emerged on a few guidelines characterising sustainable food consumption. These guidelines recommend: substituting, to the extent possible, meat and dairy products by plant-based foods; buying local and seasonal produce; giving preference to organic and less intensively farmed produce; and reducing food waste.

1.2.1 Reducing consumption of meat and dairy products

Reducing meat and dairy consumption and replacing it by plant-based foods is by far the most important step individuals can take to reduce their food-related GHG footprint (cf. McMichael et al. 2007; Stehfest et al. 2009; Garnett 2011, 2009, 2008; Hedenus, Wirsenius and Johansson 2014; Carlsson-Kanyama and Gonzalez 2009; Tukker et al. 2011). Meat and dairy products contribute more than half of all emissions from the food sector in Europe (European Union 2006; Kramer et al. 1999). Livestock farming for meat, eggs and dairy generates around 15% of global GHG emissions (FAO 2013). It uses around 70% of agricultural land, including a third of arable land that could be utilised to produce crops for direct human consumption (FAO 2006). Moreover, the land required for producing 1 kg of beef is 15 times more than that required for producing 1 kg of cereals and 70 times as much as that required for 1 kg of vegetables (Gerbens-Leenes and Nonhebel 2005). In addition to its contribution to GHG emissions, growth of the livestock sector has driven catastrophic losses in biodiversity and increased coastal water pollution around the world (Gura 2010; FAO 2006; Kaimowitz et al. 2004). An estimated 70-80% of clearings in the Amazon rainforest are covered by pastures and the majority of the rest are used for feed crop cultivation (FAO 2006; Veiga et al. 2002).

The FAO's most recent assessment of livestock's impact on climate change found that beef and cattle milk production account for 40% and 21% of the livestock sector's emissions respectively, while pig meat and poultry meat and eggs contribute 8% and 9% respectively to the sector's emissions (FAO 2013). Feed production and processing, enteric fermentation from ruminants, manure storage and processing represent the bulk of emissions (around 94%) from this sector. Among the sector's GHG emissions, methane accounts for 44%, nitrous oxide for 29% and carbon dioxide for 27%. The FAO notes that, due to poor available data, the emission figures do not include changes in soil and vegetation carbon stocks, but these could be significant in assessing impact. The report focuses on improving production-related efficiencies to mitigate the livestock sector's climate impact. It suggests that up to 30% emission reduction is possible through technical improvements, but concedes: 'On a global scale, it is unlikely that the emission intensity gains, based on the deployment of current technology, will entirely offset the inflation of emissions related to the sector's growth' (FAO 2013: 100). Given that the FAO estimates a 70% increase in demand for livestock products by 2050, even a 30% improvement in efficiency through technological interventions will not result in net

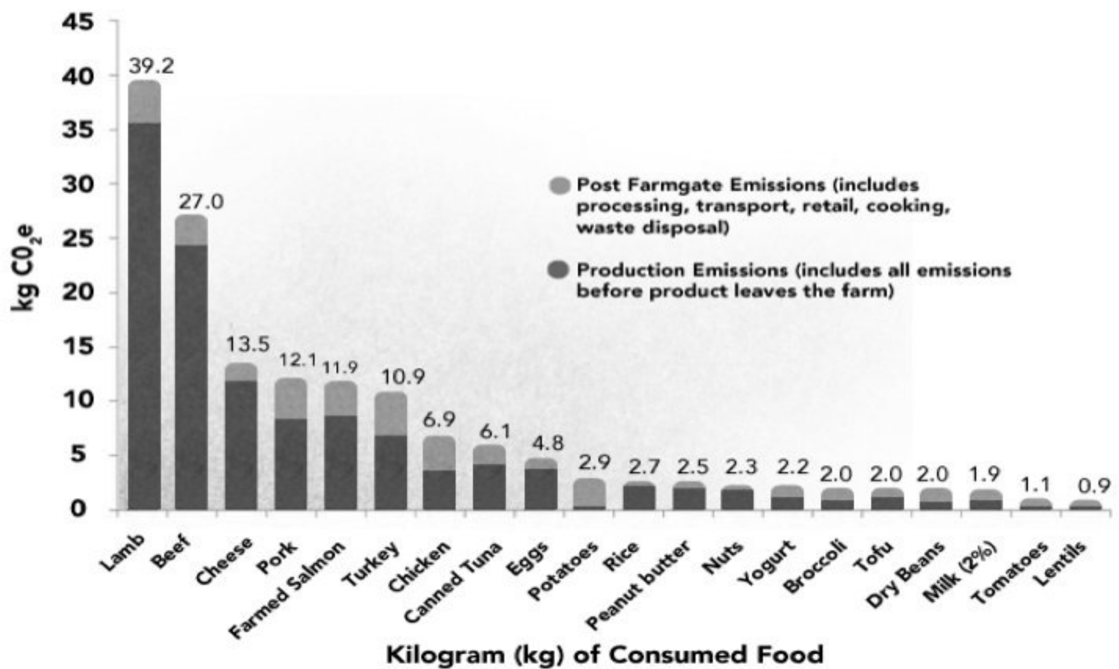

FIGURE 1.2 Lifecycle GHG emissions from selected food items
Source: Environmental Working Group (2011: 6)

reduction in agricultural GHG emissions. Hence, consumption-oriented mitigation strategies are necessary. Interestingly, the FAO report very briefly points out that other studies have demonstrated that dietary change can have a 'substantial mitigation effect' and at 'relatively low cost, compared with alternative mitigation strategies' (FAO 2013: 45). This report also cites studies that have found a positive impact of reducing animal protein consumption on human health. Figure 1.2 above provides a comparative overview of lifecycle emissions from selected food items. Figure 1.3 on the next page provides an example of how a healthy diet could replace beef protein by plant protein or chicken protein to reduce GHG emissions.

A number of studies suggest that significant reductions in GHG emissions are possible by reducing the type and quantity of animal-based foods consumed without compromising nutritional quality (Scarborough et al. 2012; Masset et al. 2014; van Dooren et al. 2014; CAT 2013; Meier and Christen 2012; Stehfest et al. 2009). Meat is a good source of protein and other beneficial micronutrients such as selenium, zinc, vitamin B6 and B12. In small amounts, particularly of lean and unprocessed varieties, meat can be an important component of a nutritionally balanced diet (McNeill and Elswyk 2012; McAfee et al. 2010). However, nutritional research has shown that meat is not an essential component of a human diet, and that well-planned plant-based diets can not only be nutritionally adequate to human needs, but also reduce risk of some

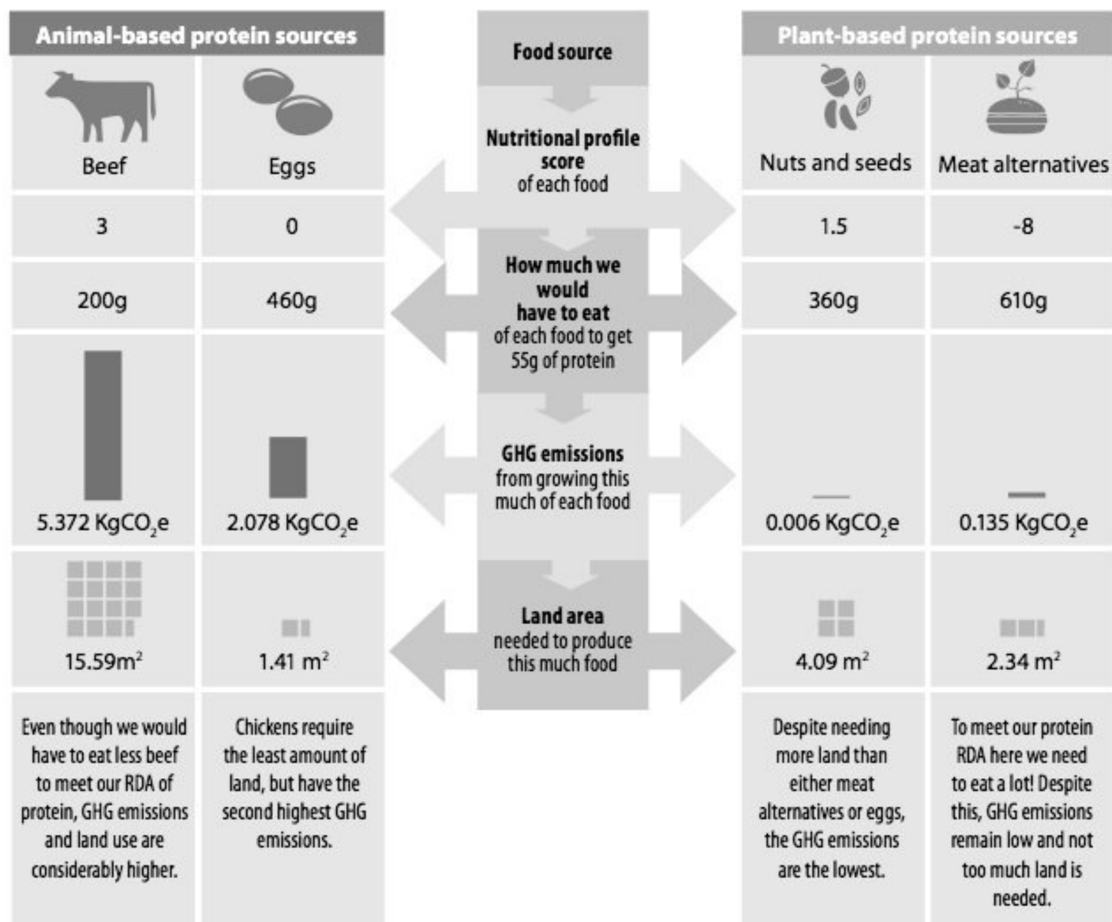

FIGURE 1.3 Comparison of four different high protein food sources
Source: Centre for Alternative Technology (2013: 88)

serious and chronic health conditions (Craig 2010; Marsh, Zeuschner and Saunders 2012; ADA 2009; Hunt 2002).

A study investigating nutritional and ecological benefits of six different diets, classified as,current average Dutch, official ‘recommended’ Dutch, semi-vegetarian, vegetarian, vegan and Mediterranean, found that diets and food patterns which had a good overall nutritional score also tended to rank high on environmental sustainability (van Dooren et al. 2014). This study recommended the Mediterranean diet, rich in plant-based foods but also allowing some meat, fish and dairy, as a ‘feasible compromise acceptable to the general public’ and one that combined good health and sustainability benefits (van Dooren et al. 2014: 44). A pro-vegetarian Mediterranean diet pattern has been shown to reduce mortality (Martinez-Gonzalez et al. 2014) and provide significant improvement in overall health status compared to a diet high in animal-based foods (McEvoy, Temple and Woodside 2012). Two studies modelled culturally acceptable diets for the UK, Sweden, France and Spain (called the Livewell model) to demonstrate that reductions

of 25% GHG emissions from dietary changes were possible while strictly adhering to the respective national nutritional guidelines, and costing no more than the current average diet (WWF UK 2011, 2013). Figure 1.4 shows one day's sample menu from the Livewell model. The convergence of public health and environmental objectives in encouraging specific dietary patterns provides a powerful argument to policymakers towards providing clearer guidelines on environmentally sustainable food consumption practices (Lang and Barling 2013).

Day	Breakfast	Lunch	Dinner	Snacks
1	wholegrain/high fibre cereal & semi skimmed milk white toast & preserve	vegetable & lentil soup prawn mayonnaise sandwich (wholemeal bread)	chicken curry & rice with white pitta bread	apple raspberries/strawberries biscuit 100ml semi-skimmed milk* 1 tsp of sugar**

FIGURE 1.4 A day's sample menu from the Livewell model developed for the UK
Source: WWF UK (2011: 36)

1.2.2 Consuming local and seasonal food

The contribution of food transportation to GHG emissions is important, albeit substantially less than the production-related emissions at the farm stage. In the UK, some studies have estimated these emissions to be around 2.5-3.5% of food consumption-related emissions (Garnett 2003; AEA Technology 2005). In the US, Weber and Matthews (2008) compared lifecycle emissions from food production against food distribution and found that while food production contributed 83% of a household's carbon footprint, transportation contributed only 11%, of which 4% was contributed by the last stage of delivery from the retailer to the customer. Their study concluded (ibid.: 3512):

> The results of this analysis show that for the average American household, "buying local" could achieve, at maximum, around a 4-5% reduction in GHG emissions due to large sources of both CO2 and non-CO2 emissions in the production of food. Shifting less than 1 day per week's (i.e., 1/7th of total calories) consumption of red meat and/or dairy to other protein sources or a vegetable-based diet could have the same climate impact as buying all household food from local providers.

Nevertheless, it is important to note that although the overall contribution of emissions from food transportation may be small, transport related emissions are a significant component of GHG emissions for certain categories of foods. For example, in a study

assessing the environmental impact of various sourcing options for Gala apples, runner beans and watercress, Sim et al. (2007) found that the transport stage is a major contributor to their GHG emissions. They recommend that for fruit and vegetables that can be grown in the UK without the use of heated greenhouses, local and seasonal sourcing generally has a lower carbon impact than importing the same produce from elsewhere. Domestically grown out of season produce, such as apples, is subject to emissions from cold storage and might have a slightly higher GHG impact than food imported from places such as New Zealand, where the same produce is grown in season at that time (Milà i Canals et al. 2007). Similarly, Spanish tomatoes, grown outdoors and imported to the UK, generally entail fewer emissions than those grown in heated greenhouses in the UK (AEA Technology 2005). However, Garnett (2008) cites a few cases where using electricity from waste and renewable sources can enable greenhouses in the UK to produce salad crops with a significant gain in carbon efficiency. She also points out that, among other factors, intensive use of pesticides and water scarcity in primary food-exporting regions of Spain further complicate the comparative environmental impact of the tomato growing systems in the two countries.

Finally, air freighted foods have a very high carbon impact per quantity and distance transported. A Defra study on food miles found that although air freight is used for less than 1% of food sold in the UK, it contributed to 11% of emissions from all food transport (AEA Technology 2005). Due to comparatively low volumes as a market share — 2% in the US (Weber and Matthews 2008) and less than 1% in the UK (AEA Technology 2005) — the overall contribution of air freight to emissions from the food sector is currently low. However, since air freight is the most GHG-intensive mode of transporting foods and has increased by 140% in the UK from 1992 to 2005 (AEA Technology 2005), any upward trend in its use will have a disproportionately high impact on the climate.

As a general guideline, when considering emissions associated with transport, as long as they are not outweighed by the magnitude of emissions associated with other stages of the lifecycle, as is the case with production-related emissions for meat and dairy products, opting for the combination of local and seasonal produce is preferable to buying produce from afar.

1.2.3 Selecting produce from less intensive production systems

Organic production systems generally use less energy than conventional systems, though there are some exceptions, such as organic (and free-range) poultry systems (Williams et al. 2006; Refsgaard et al. 1998; Mäder et al. 2002). On the other hand, GHG emissions associated with organic farms may not always be lower (Hodgson et al. 2010; Kumm 2002). This is particularly so in the case of livestock and poultry farming where the objective of providing higher animal welfare, for example, by making more land available for grazing cattle and allowing chickens to move about more freely, seems to conflict with the objective of reducing emissions per quantity of food produced (Williams et al. 2006). Although organic livestock farming has typically lower yields, intensive methods of farm animal production have a significant adverse impact on the environment in many other ways (Ilea 2008; Pew Commission 2008). Report of the Pew Commission on Industrial Farm Animal Production (IFAP) concluded (Pew Commission 2008: iii):

> Industrial farm operations impact all major environmental media, including water, soil, and air. Of most concern are the pollution of ground and surface water resources with nutrients, industrial and agricultural chemicals, and microorganisms; the use of freshwater resources; the contamination and degradation of soil; and the release of toxic gases and odorous substances, as well as particulates and bioaerosols containing microorganisms and pathogens…The major causes of the above noted environmental impacts of IFAP are the enormous amounts of waste that are produced in a very small area in this agricultural model, the inadequate systems we now have to deal with that waste, and the large energy and resource inputs required for this type of production, including feed production and transport.

For consumers, one way of reconciling better animal welfare and other environmental benefits against higher GHG emissions for organic and less intensively farmed meat could be to eat less, but more humanely farmed, meat (CAT 2013).

For cereals such as wheat, organic systems have been found to have less global warming potential than conventional ones, provided the distance travelled by organic crops does not offset the lower production emissions (Meisterling, Samaras, and Schweizer 2009). Garnett (2008) reviewed studies comparing GHG emissions from organic and conventional systems and found mixed results, which suggested that, overall, the differences between the systems may not be very significant. Nonetheless, she pointed out that organic production methods may produce other important environmental benefits by increasing biodiversity on farms and improving long-term soil fertility. Niggli et al. (2009) suggest that the greater potential of carbon sequestration in organic

systems is often neglected by many lifecycle assessments. They also emphasise that organic systems reduce nitrate losses into groundwater and enable soils to capture more water, which reduces flood impact. Furthermore, they conclude that organic systems follow many of the recommendations made by the Fourth Assessment Report of the IPCC (2007) on how GHG emissions could be mitigated by better agricultural practices. Garnett (2008) suggests that many components of organic systems can also be adopted by conventional systems to find an optimal balance between maximising yields and minimising harmful environmental impact.

In the case of fish, although its consumption is generally associated with lower GHG emissions than that of terrestrial livestock, unsustainable fishing practices in many parts of the world have severely depleted fish stocks and caused imbalances in marine ecosystems (FAO 2009; Pew Oceans Commission 2003; Royal Commission on Environmental Pollution 2004). Hence, demand must slow to reduce commercial incentives for intensive fishing; where possible, consumers should purchase sustainably farmed fish, certified by organisations such as the Marine Stewardship Council.

1.2.4 Reducing food waste

Reducing food waste could mitigate emissions in two ways. First, food degrading in landfill sites accounts for 0.3% of UK's GHG emissions (Garnett 2008). Hence, sending less food waste to landfills and recycling this waste to produce energy through anaerobic digestion systems can reduce its climate impact. Second, and more importantly, wasted food accounts for emissions embedded in all stages of its lifecycle from production to waste management that could potentially have been avoided. According to the UK government funded Waste Resources Action Programme (WRAP 2011), around 30% of all food bought by households in the UK is wasted, of which 60% is edible. WRAP estimates that 'avoidable food waste is responsible for greenhouse gas emissions of 20 million tonnes CO2 equivalent per year, accounting for the whole life cycle' (WRAP 2011: 1). This represents nearly 3% of the UK's domestic GHG emissions, and is equivalent to the emissions produced by 7 million cars in a year. Food waste also accounts for 6% of total water usage in the UK, equivalent to a wastage of 243 litres per person per day.

In addition to food wasted by households, some evidence suggests that 25-40% of edible produce that fails to meet the cosmetic standards of supermarkets and EU retail regulations is diverted away from human consumption at farms even before it enters the retail chain (Stuart 2009). Further losses occur in the retail chain due to environmentally irresponsible inventory management and cautious application of sell-by, use-by and best-before dates, among other factors. The data on retail losses is likely to be inaccurate and conservative since it relies largely on self-reporting by major retailers; estimates of food wastage at retail stores vary from 500,000 to 1.6 million tonnes a year (Stuart 2009: 31). Food waste reduction efforts, therefore, must involve retailers, suppliers, regulatory bodies and consumers. Considering that much of the food in the UK is imported, reducing food waste is an important contribution to mitigating environmental impact, both in the UK and abroad.

1.3 The role of behaviour change within the UK policy context

In the UK, the government has responded to the challenge of climate change at various levels. As a major statement of intent, Parliament passed the Climate Change Act 2008, which makes it legally binding for the government to significantly reduce carbon emissions produced in the UK to 34% by 2020 and 80% by 2050 (from 1990 levels). A separate Department of Energy and Climate Change now pursues climate change-related mitigation and adaptation strategies with a dedicated focus. Other government departments, in particular Defra, the Department for Transport, and the Department of Communities and Local Government have also been taking steps to understand and tackle climate change. Apart from seeking technological and regulatory policy-based solutions, the government has sought to influence individual behavioural practices in consumption and energy use towards reducing their carbon impact.

In the realm of household energy consumption, for instance, the government works with energy suppliers to increase efficiency in production and to encourage investment in renewable sources. Appliances such as fridges and washing machines must comply with minimum energy efficiency standards set by EU regulations, and these appliances are rated and labelled based on their energy efficiency so that consumers can make informed choices when purchasing. Building regulations set minimum insulation standards for new builds. Additionally, information campaigns attempt to educate people about the energy saving measures that can be taken in the household. The wide

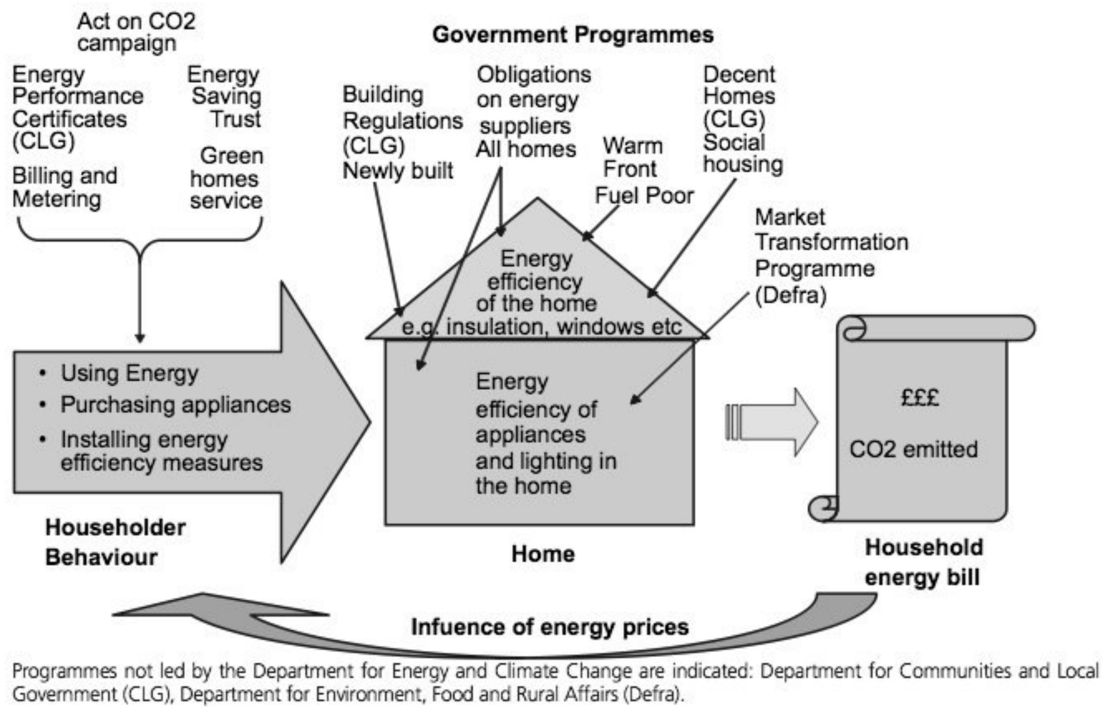

FIGURE 1.5 Government Programmes for Household Energy Conservation
Source: Public Accounts Committee (2009: 9)

array of government programmes addressing household energy consumption is depicted in Figure 1.5 from the Public Accounts Committee's (2009) report to the House of Commons.

Among the various strategies relevant to mitigating climate change impact, the potential of pro-environmental behaviour change among individuals is acknowledged by the UK government, given that '40% of national greenhouse gas emissions are the result of decisions taken directly by individuals' (Defra 2007: 9). In fact, if all emissions attributable to consumption in the UK are considered, individuals are responsible for 76% of greenhouse gas emissions (Druckman and Jackson 2009). Moreover, based on current consumption and behavioural patterns, pressure on the environment from households is expected to significantly increase worldwide by 2030 (OECD 2008a).

The IPCC (2007: 18) report states that there is 'high agreement and medium confidence' that changes in lifestyle and behaviour can reduce carbon emissions across a broad range of sectors such as energy production, housing and transportation. To achieve pro-environment behavioural changes, governments employ a variety of tools, which may include taxes (e.g. tax incentives for low-carbon vehicles in the UK and Korea), laws and regulations (e.g. the phasing out of incandescent bulbs in the EU and Australia), provision of infrastructural services (e.g. cycling paths in the Netherlands)

and information and persuasion (e.g. labelling of organic foods in Canada) (OECD 2008b).

However, the 'government can't do it alone' and active public engagement is required if policy outcomes are to be successful. Halpern et al. (2004: 6), from the UK Prime Minister's Strategy Unit, advance moral and political as well as economic arguments to propose that inculcating personal responsibility for behaviour change may be preferable to government's using coercive and intrusive policy measures. Firstly, moral arguments value the development of personal responsibility as intrinsically desirable for the strengthening of individual character and supporting quality of life within the larger community. Secondly, arguments in certain political traditions may favour empowerment of citizens to make the right choices over coercive judicial or tax-funded interventions. Finally, cost-benefit analysis may show the process of legislation and enforcement of policies to be more expensive in many cases than relying on responsible citizens who do not need policing (Howes 2005). Also, taxes and levies may have a regressive impact on low income groups or affect the competitiveness of small businesses with limited financial resources (Revell and Blackburn 2004).

Halpern et al. (2004) use the example of littering to illustrate these arguments. To address littering, the government can potentially impose higher fines, use CCTV cameras, employ neighbourhood wardens, tax packaging, and subsidise recycling, or they can educate citizens to be personally responsible, provide litter bins to help them exercise the appropriate behaviour or simply sweep the streets more often. 'The ideal', however, 'is to reach a position where there is no need for public expenditure on littering – either through street sweeping or enforcement – because people simply do not drop litter. To get to this point may require considerable behavioural change, but the eventual aim is to entrench a habit of personal responsibility and restraint, and a self-sustaining social norm' (Halpern et al. 2004: 5).

Framing pro-environmental action in terms of 'personal responsibility', nevertheless, has been criticised as a means of displacing or deflecting responsibility and blame (cf. Evans 2011; Shove 2010; Roff 2007; Maniates 2001; Uzzell 1999). Putting the onus of environmental action solely on individuals shifts responsibility away from businesses and governments. Individualisation of social issues ignores the structural and

institutional constraints upon individual action which policymakers are better placed to influence and often directly responsible for (Macnaghten and Urry 1998). Moreover, using the language of 'individual responsibility and restraint' in environmental discourse undermines seeking institutional and infrastructural level solutions that can be more effective in reducing carbon emissions (Shove 2010). According to the critics of 'individualisation', while behaviour change at the level of individuals may be necessary to tackle climate change, long-term changes in behavioural practices can only come about through a transformation of the institutional and policy structures that sustain environmentally damaging behaviour patterns.

Environmentally conscious behavioural actions by individuals, however, may not be at odds with institutional efforts towards influencing systemic changes. On the contrary, taken collectively these behavioural actions at the micro level may be an important force in shaping a more sustainable environment in a number of ways. Pro-environmental behaviour change provides another avenue, in addition to exercising votes in elections or joining policy campaigns, for individuals to express a political choice at the very fundamental level of everyday lifestyle decisions (Seyfang 2005). By the same token, exercising pro-environmental decisions at this level may empower those who may otherwise shy away from political environmentalism. As Muldoon (2006: 14) puts it: 'the game of sustainable living begins when more people can play. And anything that encourages greater contemplation of, and participation in, green issues is worth examining'. As a complementary step to other forms of political action, individual buying preferences are capable of sending demand-side signals to supply-side institutions to drive them towards more sustainable ways of production and distribution. The scale of emission reductions required to tackle climate change may not be achievable by individual-level behavioural changes alone. Nevertheless, within the repertoires of political and citizen-consumer action, there is little reason to neglect agency in the form of individual behaviour that not only directly contributes towards emission reductions, but also embodies the environmental consciousness and commitment of citizens to foster the political environment for changes at the institutional level. Nordgren (2011: 5) urges: 'Changing our consumption patterns is a matter of credibility'. More specifically, environmentally responsible individual actions may be vital in creating the political will necessary to push for institutional and infrastructural-level changes, i.e. encouraging the ministers and members of legislative

bodies to do what they know is necessary to tackle climate change, in the confidence that they will enjoy public support.

Halpern et al.'s (2004) work suggests that individual behaviour change is an important element of the UK government's Low Carbon Transition Plan. In fact, the government's Centre for Expertise on Influencing Behaviour explicitly pursues this agenda. But bringing about behavioural change is not easy. In particular, existing patterns of individual behaviour are recalcitrant in responding to the traditional information-based educational interventions. These interventions are carried out under the implicit assumption that behavioural actions depend upon a reductive individualistic cost-benefit rationale. Following this assumption, if only appropriate information could be provided to individuals to show that benefits of a behaviour outweigh the costs, the corresponding behavioural action will follow. Despite the intuitive appeal of this proposition, the behaviour change literature is replete with evidence of failure of programmes that have relied solely on this 'information deficit' model (Burgess, Harrison and Filius 1998: 1447).

For example, the UK government's Save It campaign for energy conservation in the mid-1970s (Owens 2000), the Going for Green campaign set up in 1996 to encourage individuals to participate in taking carbon reducing actions (Hinchliffe 1996; Blake 1999), and the 'Are You Doing Your Bit?' campaign that ran from 1998 to 2000 to educate people about the small actions they can take to reduce their carbon impact (Collins et al. 2003), all shared the premise that top-down messages will raise awareness leading to a change in attitudes and corresponding behaviours. Unfortunately, even where there was an increase in awareness among the surveyed population, behavioural change was a rare outcome in all of the above examples. This discrepancy between attitude change and behaviour change or the 'value-action gap' (Blake 1999) has long been known to researchers investigating attitude-behaviour relationship. And yet, removing the 'information deficit' has been the dominant strategy for behaviour change interventions across the world (UNEP and Futerra 2005).

Only recently have policy makers started taking note of the progress made in the psychological and sociological understandings of human behaviour. To enable theoretically informed and evidence based policy decisions, the UK government bodies

such as Defra (Darnton 2004; Darnton et al. 2006), Department of Transport (Anable, Lane and Kelay 2006) and the Cabinet Office (Halpern et al. 2004) have sponsored a number of literature reviews to understand the factors that influence an individual's behaviour. These reviews draw attention to the extremely complex nature of human behaviour and the considerable challenges involved in effecting behavioural change. Psychological theories of behaviour change have gradually adjusted their simplistic rational choice-based models to include, among other factors, personal motivation, social norms, self-efficacy, habits, and emotions (cf. Fishbein and Ajzen 1975; Triandis 1977). Research in behavioural economics has grappled with the limitations of the instrumental homo economicus in order to explain consumer behaviours that do not fit predictions based on the 'rational consumer' assumption. Discoveries, such as the effects of judgemental heuristics, framing, priming, and cognitive biases on behaviour, now facilitate a far more sophisticated understanding of behavioural decision-making than was earlier afforded by the linear 'information deficit' models (cf. Sunstein and Thaler 2008; Cialdini 1993). Finally, sociological studies have emphasised the need to look beyond individual agency and factor in the critical role of social, historical and institutional contexts in constituting and shaping routinised behavioural practices (cf. Spargaaren and Van Vliet 2000; Shove 2003).

1.4 Research motivation

A synthetic view of the behavioural influence literature suggests that strategies to influence behaviour change need to take into account individual-level psychological factors as well as the social contexts that condition and frame the field of behavioural practice. Furthermore, a significant body of literature on social capital and social learning suggests that taking an integrated approach towards shaping sustainable consumption behaviours is a role that community-based initiatives may be especially well placed to perform. Communities can create new norms and conventions, reinforce these norms through supportive social networks, and in some cases, provide infrastructural support to make the desired behavioural changes more convenient to adopt. Accordingly, many UK government bodies such as Defra and the Department of Trade and Industry emphasise the value of community-based programs in fostering environmentally responsible behaviour. Both ESRC (2010) and Defra (2007) have identified a lack of sufficient empirical studies on community-based behavioural change initiatives that can inform evidence-based policy. They have, therefore, urged further

research to help understand the forms of community initiatives that can be effective in motivating individual behavioural change.

In response to this identified need for research, I explore the potential of community-based food co-ops in encouraging sustainable food consumption practices. The motivation for this study is based on the proposition that community initiatives may overcome some of the shortcomings of behaviour change strategies that target individuals in isolation. Thus food co-ops can provide an infrastructure that makes sustainable food choices available and thus easier to make. Getting involved in the management and social life of the co-op may help individuals become part of a supportive network and adopt new social norms that make sustainable food consumption valued and acceptable. Moreover, in the context of community initiatives, individuals can see that others are doing their part and this in turn might increase their own sense of self-efficacy or agency in confronting climate change. Although there are a number of community-based initiatives aiming to support a sustainable food system in the UK, there has been little attention given to sustainable food co-ops. This research attempts to fill that gap. Additionally, to better understand how different factors interplay with life-contexts in influencing environmentally sustainable food consumption, I explore the relevant influences on the lives of people engaged in sustainable food practices. I then draw the implications of this study for strategies that sustainable food co-ops can develop to more effectively encourage pro-environmental food consumption practices at both community and individual levels.

1.5 Thesis outline

I now present an outline of the rest of the chapters in this thesis. In Chapter 2, I review the literature on social capital and social learning to understand why community-based initiatives may be relevant to shaping specific consumption practices. I then specifically consider the consumer co-operative potential through a brief review of its history, its principles, and the consumer food co-op literature, and articulate the overarching question that guides this research: Under what conditions can community-based food co-ops be effective in supporting environmentally responsible food consumption? In Chapter 3, I set out the five sub-questions that I explore in this study. Case study methodology is used to answer four out of five of these questions and I discuss the rationale behind using this approach, the selection of cases, and the data collection

methods employed. Methodological concerns related to reflexivity and ethics are also considered. Chapter 4 presents a narrative account of the ethnographic case study of The People's Supermarket (TPS) with a focus on evaluating its structural and operational capabilities in achieving three specific objectives (which address the themes identified in the research questions): making sustainable food choices accessible and affordable for members; engaging the participation of members in the co-op's activities; and, forging a community around sustainable food consumption. In Chapter 5, I bring in additional evidence through interviews with key informants of four other co-ops to offer a cross-case analysis of the opportunities and challenges that community-based food co-ops face in encouraging pro-environmental food consumption. This analysis also draws on previous research on consumer food co-ops. I conclude this chapter by reflecting on how food co-ops could build upon co-operative principles to pursue their environmental objectives.

One of the key challenges identified in the cross-case analysis is the ability of co-ops to engage member participation and the noticeable lack of a systematic approach to proactively encourage environmentally sustainable food consumption. Hence, the next stage of the research explores potential strategies to help co-ops overcome this challenge. In Chapter 6 I review relevant literature from the fields of psychology, social psychology, behavioural economics and sociology to present insights into factors that influence human behaviour. I then identify gaps in the extant literature that warrant further research to better understand the specific case of pro-environmental food consumption behaviour. Chapter 7 sets out the grounded theory methodology used to learn more about the formative processes and influences on pro-environmental dietary practices by interrogating the life histories of people who are engaged in such practices. In Chapter 8, I present evidence from life history interviews which illustrates the specific ways in which key factors — such as the influence of family members, peers and role models, environmentally significant life experiences, education, work, concern for health, involvement with pro-environmental organisations, concern for social justice and animal welfare, and, accessibility of sustainable food options — combine to play a role in shaping environmentally sustainable dietary choices over the course of people's lives. Based on the evidence presented in Chapter 8, Chapter 9 identifies five key mechanisms of influence on sustainable food consumption behaviour. These include: direct experience, social learning, knowledge, facilitating contexts, and personal agency.

I discuss these mechanisms through a more focused reading of relevant literature drawn from several disciplines and derive potential strategies that food co-ops could use to encourage more participation from their members and promote an environmentally sustainable diet. Finally, in Chapter 10 I summarise the key findings of this research, identify some of its limitations, and suggest directions for future research.

Chapter 2
COMMUNITY-BASED APPROACHES AND FOOD CO-OPS: LITERATURE REVIEW

I'm a reflection of the community.
Tupac Shakur, Rap Artist

The process of environmentally significant behaviour change is complex and intervention strategies targeting individuals through information-based campaigns alone have had a poor track record (UNEP and Futerra 2005; Owens 2000; Collins et al. 2003; Hinchliffe 1996; Blake 1999). Increasingly, institutions within the UK government have identified community-level efforts and bottom-up grassroots initiatives as a potentially effective avenue for promoting pro-environmental behaviours (Defra 2007; NESTA 2010; POST 2010; SCR 2006; DTI 2006).

For example, The UK Department of Trade and Industry's Energy Review of 2006 accepts that 'there are many barriers to individual engagement', but also anticipates that 'local authorities and community groups can play a key facilitating role' (DTI 2006: 52). Another report on strategies to promote sustainable consumption, funded by Defra and DTI, concluded (SCR 2006: 51): 'Breaking out of habits and norms is difficult as an individual. Groups, however, can create a new momentum for change'. Also, Defra's (2008: 53) 'framework for pro-environmental behaviours' with its four pronged approach to 'enable, engage, exemplify and encourage' environmentally sustainable practices (see Figure 2.1), includes 'community action' as one of the important means to 'engage' people to consider how they could contribute towards reducing their environmental impact. This approach is also reflected in the UK government's 'Community Action 2020 – Together We Can' programme, which articulates a policy focus on equipping communities 'to achieve a step change in the delivery of sustainable development…by promoting new and existing opportunities to enable, encourage, engage and exemplify community action to increase sustainability' (HM Government, 2005: 29).

Support for community-based initiatives to engage individuals in pro-social action has drawn from the literature on 'social capital' (cf. Bourdieu 1986; Coleman 1988; Putnam 1993, 1995) as well as 'social learning theory' (Bandura 1977a, 2001; Grusec 1992).

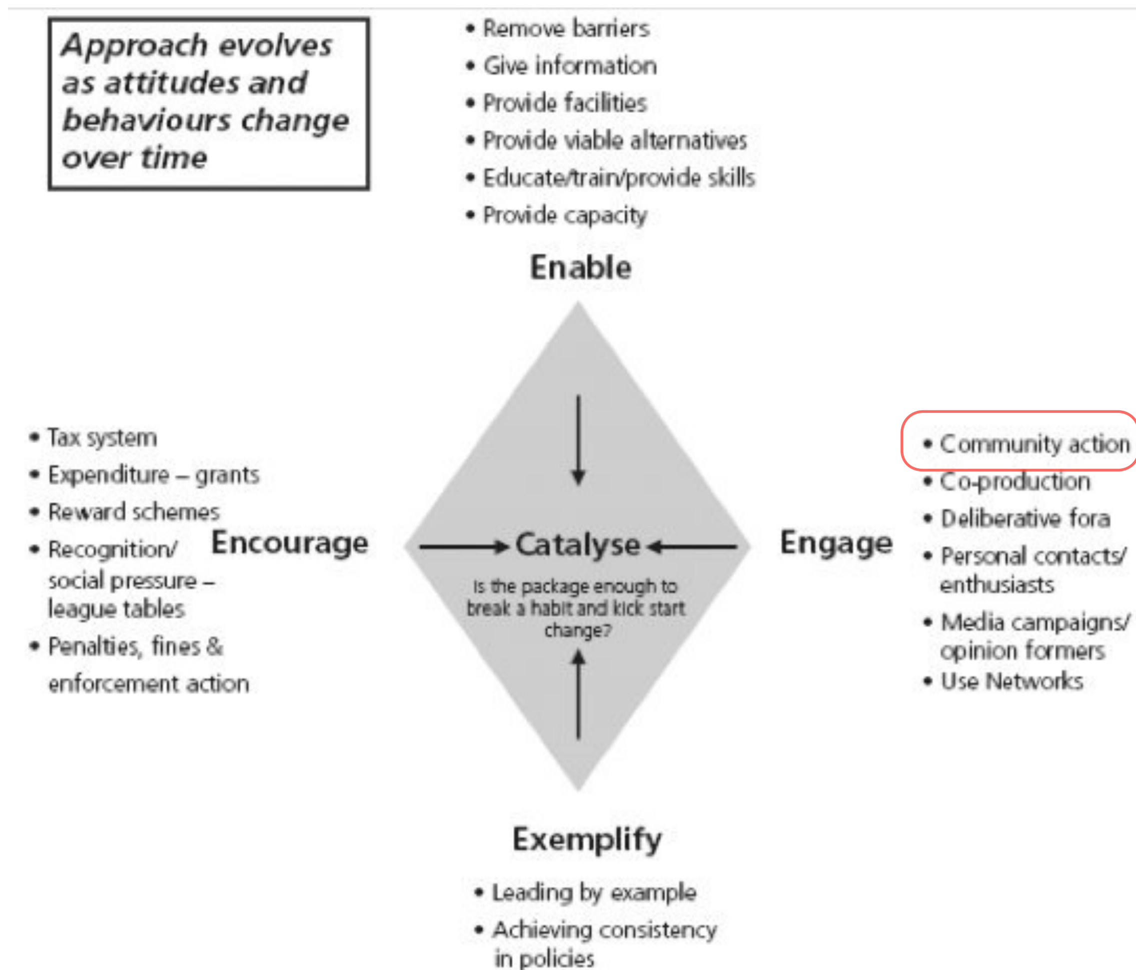

Figure 2.1 Diagrammatic representation of Defra's 4E's model
Source: Defra (2008: 53)

The key insight from this literature is that individuals are likely to be influenced in their actions by people who are important to them and with whom they maintain formal or informal social ties. In the following two sections, I briefly review the literature on social capital and social learning. I then present a summary evaluation of three case studies of pro-environmental community-based initiatives to illustrate the lessons learned about their potential in encouraging behaviour change. This is followed by a discussion of how food co-ops can be conceptualised as social capital-based and community-oriented initiatives and why they deserve consideration as a vehicle for promoting sustainable food consumption practices. Finally, I set out the overarching research question which guides this study.

2.1 Social capital

Social capital is a concept with many definitions. However, inherent in most definitions are the themes of shared norms, relationships, trust, reciprocity and participation in social networks. Portes (1998: 2) traces the origins of the idea behind social capital to 'Durkheim's emphasis on group life as an antidote to anomie and self-destruction and to Marx's distinction between an atomized class-in-itself and a mobilized and effective class-for-itself'. However, it was Bourdieu (1986) first and then Coleman (1988) who developed a sociological analysis of the term and a theoretical framework to discuss its sources and consequences.

For Bourdieu (1986), social capital is an asset attributed to an individual who gains privileged access to resources or social position through relationships with others who can provide those resources. An example of using social capital, in line with this definition, could be the procurement of a subsidised loan due to good relations with the bank manager or by virtue of belonging to the same social or ethnic group as the approving officer. Coleman (1988: 98) considers social capital as 'the structure of relations between actors and among actors' that enables productive endeavours. He uses this concept to explain socially-mediated acquisition of human capital (i.e. skills, educational qualification, and access to information) by individuals. He draws attention to three forms of social capital: firstly, the existence of networks to facilitate the flow of information which provides a basis for gainful action; secondly, the accumulation of obligations and expectations of reciprocal behaviour that depend on trust within these networks; and thirdly, the presence of norms and effective sanctions.

Unlike Bourdieu and Coleman who consider social capital as an individual attribute dependent on the nature of social relationships, Putnam (1995: 67) considers it as a community attribute and defines it as 'features of social organisations, such as networks, norms, and trust, that facilitate action and cooperation for mutual benefit'. He adds: 'Working together is easier in a community blessed with a substantial stock of social capital' (ibid.). Putnam's proxy measures for social capital include membership in local civic associations such as reading and bowling clubs, church and religious organisations, charities, and, professional and political associations. In his widely cited study on governance in Italian counties, Putnam (1993) argues that communities with better social capital (denoted by the number of associational activities carried out in those

communities) are likely to have more effective governance structures. ‘When economic and political dealing is embedded in dense networks of social interaction, incentives for opportunism and malfeasance are reduced’ (Putnam 1993: 21).

Social capital as a feature of communities and social organisations has found support in many recent definitions including those from Kawachi et al. (1997), The World Bank (Dasgupta and Serageldin 2001), Organisation for Economic Cooperation and Development (Cote and Healy 2001), and the UK Cabinet Office (Aldridge, Halpern and Fitzpatrick 2002). A literature review on social capital by the Office of National Statistics (ONS 2001: 7) lists a number of studies that have shown quantifiable effects of social capital in various spheres of public life:

> ...lower crime rates (Halpern 1999, Putnam 2000), better health (Wilkinson, 1996), improved longevity (Putnam, 2000), better educational achievement (Coleman, 1988), greater levels of income equality (Wilkinson 1996, Kawachi et al. 1997), improved child welfare and lower rates of child abuse (Cote and Healy, 2001), less corrupt and more effective government (Putnam, 1995) and enhanced economic achievement through increased trust and lower transaction costs (Fukuyama, 1995).

Importantly, in the domain of natural resource management, social capital has been shown to encourage co-operative behaviour (Ostrom and Kauder 2000; Gardner and Stern 1996) and help overcome free-rider issues and dilemmas of collective action (Olson 1965). These positive effects of social capital, according to Peters and Jackson (2008), have important implications for community-based initiatives. They suggest that, based on the evidence, one could infer that individuals in a community with high levels of social capital are more receptive to group influences. Hence, if pro-environmental norms were created and established in such a community, individuals may more readily adopt an energy conscious lifestyle.

However, critical reviews of the social capital literature have warned against conflating the positive effects of social capital with the definition of the concept itself (cf. Portes 1998; Durlauf 2002; Woolcock and Narayan 2000; Sobel 2002). In certain cases, social capital may have negative consequences for the society. Portes (1998) identifies at least four ways in which social capital may have less desirable outcomes. It may restrict access to opportunities, limit individual freedom, exclude outsiders and cause a downward levelling of norms. This implies that a community-based initiative aiming to effect social change must remain alert to the forms of social capital that permeate its field of action. Existing norms within groups may be resistant to outside attempts to

influence change. Even individuals who are sympathetic towards new ideas may be reluctant to adopt new behaviours that do not chime in with existing group practices. For instance, food consumption patterns that have symbolic meanings and functions in constructing cultural identities (Beardsworth and Keil 1997) may be particularly resistant to changes that potentially threaten those identities.

Social change entrepreneurs, therefore, need to develop an understanding of social capital as a mixed blessing. On the one hand, when effectively leveraged, high levels of social capital within a community provide an opportunity for rapid diffusion of change practices. On the other hand, however, aspiring for changes that challenge existing group norms calls for cultural sensitivity and a more participative and organic approach towards change. Following Portes (1998), greater attention must be paid to the causes and mechanisms that underlie the formation of social capital in community contexts, if the intention is to utilise it as a productive community asset in the facilitation of pro-environmental practices.

2.2 Social learning

Studies in social psychology on social learning processes provide further support for using community-based initiatives as a potentially effective avenue for influencing individual behavioural change. In his review of the behaviour change literature, Jackson (2005) identifies three specific avenues for behaviour change: persuasion; trial and error by individuals; and social learning. He notes that persuasion through exhortation and information based campaigns has been one of the most frequently employed tools for behaviour change by policy makers, but also amongst the least effective. Learning by trial and error is based on an individual's experience of rewards and penalties for any given behaviour. This type of learning can be leveraged by regulatory policies, for example, by providing financial incentives for pro-environmental behaviour and levying taxes on carbon intensive practices. In addition, individuals learn in communities by way of social rewards and sanctions, which are integral to the concept of social capital discussed earlier.

According to Bandura (1973, 1977a), trial and error by individuals is an important source for learning, but not the only source. He observes: 'coping with the demands of everyday life would be exceedingly trying if one could arrive at solutions to problems

only by actually performing possible options and suffering the consequences' (1977a: 27). Instead, Bandura argues that learning by individual trial and error in the real world is frequently complemented and reinforced by various forms of social learning. Through a series of studies Bandura and his colleagues monitored the adoption of aggressive behaviour by children when they were exposed to aggressive models in their environment (Bandura 1973). Researchers working on social learning theory were also able to demonstrate how children could be aware of the consequences of a given behaviour without ever having engaged in it (Grusec 1992).

The social learning theory expands the understanding of behavioural learning in a number of ways (Bandura 2001). First, people observe and learn from experiences of others. If they see that a certain behaviour brings joy and satisfaction to the actor, they are more likely to imitate it. Conversely, behaviours appearing to be causing pain and grief to the observed actor are likely to be avoided. Second, individuals can be selective about who they learn from. They often model their behaviour after those who are socially significant to them. Influential others may be salient for a variety of reasons. They may be closely related (i.e. parents and friends), or may be similar in some ways to the individual so that the individual identifies with them, or they may be celebrities who are seen as role models by the individual. On the other hand, anti-role models, or people that the individual would want to dissociate from, provide examples of behaviour that the individual learns to refrain from.

People, however, do not simply learn and act based on whatever they observe in their immediate environment. 'If actions were performed only on behalf of anticipated external rewards and punishments, people would behave like weather vanes, constantly shifting direction to conform to whatever influence happened to impinge upon them at the moment' (Bandura 2001: 7). Instead, Bandura's theory proposes that individuals develop personal standards based on their own prior experiences as well as vicarious learning from social models about anticipated outcomes. These standards then become a benchmark for subsequent evaluations and judgements on behavioural decision-making and also act as an individual's moral compass. They help an individual to internalise agency over behaviour from external sources to ones own cognitive faculties, and thus self-regulate their responses in given situational circumstances.

An important determinant of self-regulation is self-efficacy, which denotes confidence in one's ability to perform a specific action or effectively cope with a given environment. A person's self-efficacy is developed on the basis of the following: experiences of successes and failures from past actions in similar contexts; observations of the performance and achievement of others and comparing with them; verbal persuasion; and physiological states (such as nervousness or anxiety) which provide feedback about ones strength or vulnerability while performing a behaviour (Bandura 1977a). Numerous studies have shown the value of an optimistic sense of self-efficacy in learning new skills, dealing with clinical disorders and coping with challenging situations in one's life (Bandura 1989). Self-efficacy is an important variable in one of the most widely applied models of human behaviour — the Theory of Planned Behaviour (Ajzen 1985). Bandura (2001: 18) suggests that community-based initiatives are relevant in increasing people's self-efficacy to confront a global challenge like climate change:

> Worldwide problems of growing magnitude instil a sense of paralysis that there is little people can do to reduce such problems. Global effects are the products of local actions. The strategy of "Think globally, act locally" is an effort to restore in people a sense of efficacy that they can make a difference.

Peters and Jackson (2008) argue that modelling behaviour on the basis of social learning is integral to the process of establishing and sustaining social norms, and therefore, has crucial implications for community-based initiatives seeking pro-environmental behavioural change. The success of these initiatives in drawing participation from a large number of people in the community will depend on their strategic ability to recruit appropriate role models from across the socially diverse sections of the community. The more the people in the community can identify with these role models, the greater the possibility that new pro-environmental lifestyle choices are adopted by a broad spectrum of people in the community.

Research from other scholars also places value on community-based efforts to tackle behaviour change. Kaplan's (2000) research on 'control, helplessness and participatory problem-solving', for instance, suggests that individual helplessness, or a pessimistic lack of self-efficacy, can be overcome through participatory methods of exploring the problem in group settings and collectively figuring out apposite solutions. The role of social discursive processes in breaking existing behavioural patterns (i.e. habits) and replacing them with alternative ones is also recognised by Spaargaren and van Vliet (2000). They propose that habits are constrained by social practices, and routine

behaviours become ‘frozen’ in what Giddens (1984) calls ‘practical consciousness’. In order to break away from old habits, specific behaviours must be raised from the level of ‘practical consciousness’ (or nearly automated cognitive processing) to ‘discursive consciousness’ (or processing decisions by conscious deliberation). This discursive process is again seen to be more effective when explored collectively at a group or community level.

Research validating social learning processes has policy implications as well. Governments must be seen as practising what they preach for people to take their exhortations and information campaigns more seriously. Perceived self-efficacy and social norms are as much a product of social and institutional possibilities as of individual psychology (Lucas et al. 2008). Therefore, policy programmes and environmental campaigns must include institutional and structural incentives that make pro-environmental lifestyle options more accessible and affordable, and, community-based local initiatives that make alternative lifestyle choices more socially acceptable and desirable.

2.3 Lessons from community-based initiatives

A number of initiatives to stimulate local community-based responses to climate change are already active in the UK and elsewhere. This section presents a summary evaluation of three selected studies of pro-environmental community-based initiatives with an aim to draw out key potential advantages of the community-based approach, and to point out some of the challenges faced by such initiatives in influencing environmentally responsible behaviour.

2.3.1 Global Action Plan’s EcoTeams approach

The EcoTeams approach, pioneered by Global Action Plan (GAP), an international environmental organisation, has been a leading example of generating behaviour change through community engagement (Nye and Burgess 2008). EcoTeams consist of 4-6 households in a neighbourhood which come together to discuss how they can reduce energy consumption through changes in their behaviour. The meetings are facilitated by a GAP representative and progress is monitored collectively by team members who also support and inspire each other to make pro-environmental

behavioural changes. The project has been running in many parts of the UK for nearly ten years. Based on several empirical studies, the project claims that in the UK the average household with an EcoTeam member reduced waste by up to 20%, cut carbon emissions by up to 17%, lowered energy consumption by 21%, and achieved savings of £170 a year (EcoTeams 2011).

Nye and Burgess (2008) analysed the EcoTeams programme based on qualitative interviews with various EcoTeam members and suggested a number of factors that make the EcoTeams approach successful. Firstly, the process of measuring energy consumption, such as weighing garbage and reading electricity and water meters at regular intervals, and then seeing tangible positive results towards the desired goals provides rewarding feedback. This feedback is valuable as it 'offers a sense of efficacy, intrinsic satisfaction, and competence' (Hargreaves, Nye and Burgess 2008: 752). These factors are important psychological drivers of human behaviour (Eden 1993; De Young 1993, 2000). Secondly, the supportive social context and peer pressure serves to reinforce attempted behavioural changes. In addition, the knowledge produced about available options for change during peer group discussions is sensitive to local and group contexts. This participative approach helps the team in coming up with practical and readily applicable solutions to members' everyday lifestyles. Finally, in most cases, the teams build up on extant social networks such as community organisations and neighbourhood groups. Working within these familiar group settings provides the team members a trusted and convivial atmosphere for exchanging ideas. Importantly, it allows members to develop a shared rationale and understanding for the adopted tools and practices for reducing carbon consumption.

Notwithstanding the success of these projects, the time and commitment that such an approach demands meant that most of the people who were attracted to participate in the EcoTeams process were already environmentally conscious and leading some notion of a 'green' lifestyle. Challenges remain with this approach in reaching out to parts of the population that are not already concerned about the environment. Moreover, results show that most members adopted fairly straightforward changes like changing to energy-efficient light bulbs, turning off appliances when not in use, or reducing packaging. These changes could be accommodated in their already green lifestyles without much discomfort. It is not clear whether more deeply ingrained behaviour

changes such as those involving eating habits may be effectively addressed by the EcoTeams model.

Although the EcoTeams have not specifically addressed sustainable food consumption in their programs so far, it is evident from interview data collected by Nye and Burgess (2008) that food system-related emission concerns about packaging and wastage, and about sourcing local and organic produce, did crop up in some group discussions. At least some members of EcoTeams indicated that they had chosen sustainable food as an avenue to reduce their energy consumption. With respect to increasing environmentally responsible actions by individuals with prior favourable attitudes towards the environment, EcoTeams' social discursive process (Giddens 1991) of 'reflexive lifestyle examination' (Nye and Burgess 2008: 91) has shown some promise and can be expected to have further applications in fostering sustainable food consumption behaviour.

2.3.2 The Green Village Project

The Belstone Green Village is a funded, local government-led initiative that aims to drive community efforts towards making the village of Belstone, situated in the South West of the UK, greener and more sustainable. Apart from a number of awareness-raising programs, several projects have been initiated, some of which are ongoing. These include the formation of a youth group, a biodiversity survey, a household energy survey and a micro hydropower scheme. Researchers from the University of Plymouth, which was a partner in this initiative, carried out surveys of household attitudes and behaviour before the initiative began and monitored attitude and behaviour changes during the course of the project, through personal interviews, focus group discussions and participation in the steering group meetings (Trier and Maiboroda 2009).

The researchers made some useful observations regarding the nature and extent of local people's engagement in this initiative. The interview responses revealed that people who became active participants in this initiative were either already motivated by environmental issues and had adopted facets of a sustainable lifestyle, or were generally interested in getting involved with community events. Many of these people did make pro-environmental changes to their lifestyle within a relatively short period of time.

Nevertheless, participation in the initiative had not reached a wider population for reasons that seemed to vary widely among the non-participants. Some people could not take part in the programmes due to lack of time; others felt that they were already doing enough and did not need to be told what to do; and yet others found the idea of a 'green' project to be aligned with a certain political ideology and hence not inclusive for all people in the largely conservative village of Belstone. Additionally, there was a suggestion from one of the non-participants that the steering group members were expected to dominate the proceedings of the meetings and decide the course of the project. This perception was apparently informed by previous experiences in other community projects in the village.

Analogous to the EcoTeams case, the Belstone Green Village Project faced challenges in reaching beyond an already 'converted' group and engaging the wider community. In addition, responses from non-participants underscore the need for similar initiatives to understand the social context and group dynamics within a community, i.e. the nature and forms of social capital, before a project is launched. This will help avoid it being or becoming an exclusive domain of a small section of the community's population.

2.3.3 The Big Green Challenge

The Big Green Challenge (BGC) was a £1 million challenge prize organised by the National Endowment for Science Technology and Arts (NESTA) to encourage community-led innovation in achieving measurable reductions in carbon emissions (NESTA 2010). From an initial pool of 355 applicants, 10 finalists were chosen and supported over the period of one year (2009) to put their ideas into practice. The best four initiatives were then awarded a share of the £1 million prize. The winners managed to reduce emissions by at least 10% to 46%, which is significant in the context of UK's overall target of achieving a 34% reduction by 2020. To achieve their objectives, many initiatives combined behavioural change tools (such as pledges and voluntary consumption limits) and infrastructural support through community ownership of renewable energy supply. The behavioural change efforts, however, were limited to engaging a small number of households (ca. 50) in '"green housekeeping" and straightforward energy efficiency measures' (NESTA 2010: 6). There was little evidence from any of the community initiatives of tackling more difficult behaviours such as changing patterns of food consumption and modes of travel.

Drawing from its experience of organising the Big Green Challenge, NESTA (ibid.) offers a useful summary of ways in which community-based initiatives can leverage opportunities to respond to climate change. Firstly, communities can act at an intermediate level between government and business organisations. They can identify local opportunities for action and be more responsive at the ground level than larger centralised institutions that are distant from the community. Secondly, community-led initiatives can influence groups or people that may be difficult to reach or may even be excluded by a top-down approach. Additionally, grassroots-based initiatives may be able to relate to people and engage them at a more personal level and develop a shared sense of purpose and collective agency. As a result, participants in such initiatives are less likely to feel threatened by change processes. NESTA also identifies some of the key challenges faced by community-led initiatives that took part in the BGC as: building organisational capacity in terms of leadership and professional skills; accessing and generating financial resources; and sustaining participation levels over long periods.

2.4 Calls for additional research on community-based initiatives

The case studies discussed above provide some evidence that community-based initiatives can be a useful source of behavioural change at the individual level, to the extent they are able to tap effectively into local social capital and utilise group processes to generate social learning of new norms and practices. They may also offer some unexpected socio-economic benefits at the community level. However, reaching a wider section of the uninitiated population has proven difficult for most initiatives. Also, as the Big Green Challenge study (NESTA 2010) showed, relatively few pro-environmental community initiatives go beyond tackling simple energy efficiency measures in the household.

As a follow-up to the Energy Review of 2006, which brought community initiatives to the foreground of the UK policy discourse on climate change, a Defra-sponsored research group 'investigated what kinds of local and community initiatives are most effective in influencing changes in behaviour and at what levels, and whether any lessons learned from these are transferable to the issue of climate change' (Defra 2007: 4). These researchers found that in the existing literature there was little or no empirical evidence either supporting or contradicting the hypothesis that grassroots initiatives can

mobilise behavioural change in individuals. And yet, the authors of this study acknowledged that 'it is not easy to imagine a successful national response to climate change which does not involve effective community-based initiatives in stimulating individual behaviour change and establishing social norms to reinforce "low carbon lifestyles"' (ibid.: 7). The authors also observed that many evaluations of community-based behavioural change initiatives as well as their own field research suggested that it was problematic to isolate and measure a project's impact on behavioural changes. They concluded their report with a call to researchers and research councils in the UK to carry out longitudinal studies of community initiatives to evaluate their impact on 'social norms and individual behaviours' (ibid.: 8).

Likewise, a recent call for research proposals on the theme 'Energy and Communities' by the UK Economic and Social Research Council (ESRC 2010: 4) reflected on gaps in knowledge about the role of community-based initiatives in mitigating climate change impact:

> There is a clear need for the dynamics of transformative innovation to be explored at the community level. The roles of actors and communities in enabling novel, system-wide experiments in community settings require investigation... Shortcomings of existing research include the portrayal of consumers and communities as passive to the opportunities and constraints presented by technological development and central policy. A better understanding of what forms of innovativeness are expressed by communities, and whether models of 'open', 'user led' or 'systemic' innovation are well suited to them need detailed study.

Additionally, in the concluding remarks of his literature review on behaviour change, Jackson (2005) points out that although there is good evidence that behavioural changes can be socially influenced, more research is required to establish the extent to which community-based initiatives can be relied upon to bring about the changes in individual behaviour necessary to tackle climate change. Moreover, due to lack of sufficient research, it is not clear what forms of community-level initiatives are better suited to achieving pro-environmental behavioural change and how policy making bodies can select and support such initiatives.

This study responds to the calls for further research to evaluate the potential of different forms of community-based initiatives in influencing pro-environmental behaviours. In the field of sustainable food consumption, some studies have attended to the role of community-level initiatives, such as farmers markets, community gardens, community

supported agriculture, and organic delivery schemes (cf. Kneafsay et al. 2008; Turner 2011; Firth, Maye and Pearson 2011; Guthrie et al. 2006; Pascucci, Cicatiello and Franco 2011; Macias 2008; Seyfang 2005; Feenstra 2002). However, the potential of consumer food co-ops to promote pro-environmental food choices has received scant attention. This is somewhat surprising since a number of features associated with the co-operative model suggest that they could be promising avenues for reaching out to people and encouraging sustainable food choices. In the next section I highlight some of these features.

2.5 Co-operative principles and sustainability

The International Labor Organisation (ILO 2002: Recommendation 193) defines a co-operative as an 'autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise'. Historians have traced the birth of the co-operative model of business to as far back as 1760 when the dockyard workers at Woolwich and Chatham founded co-operative mills to liberate themselves from the fraudulent practices of shopkeepers who sold them adulterated goods (Cole 1944; Birchall 1997; Williams 2005). However, the idea of co-operation caught the imagination of larger sections of the working class in the early nineteenth century only after Robert Owen had extensively propagated his vision of building 'co-operative communities'. These self-sufficient communities were to improve the working and living conditions of the working class population and afford them educational opportunities (Holyoake 1908). But at that time, members of the working class lived in overwhelming poverty and did not have the means to start such communities. Hence, Dr William King, a physician from Brighton, proposed that workers should start pooling small amounts of money to, at first, enable them to purchase unadulterated food at a fair price, and also to develop their capacity to save capital for building 'co-operative communities' in the future (Mercer 1947). This idea of running a co-operative store was first successfully, and famously, practiced by a group of weavers, who formed the Rochdale Society in 1844. The principles on which the 'Rochdale Pioneers' founded their store left a lasting legacy for the future course of the movement, and these principles were broadly replicated throughout the movement once the stories of Rochdale's success became popular (Potter 1891). Historically, the commitment of co-operatives to social and ethical values has been noted by many students of the movement (Ronco 1974; Cox

1994; Birchall 1997; Knupfer 2013). Lang (2010: 1817) notes that 'one of the first large-scale businesses to champion the new wave of food ethics was the co-operative movement, which saw ethical foods as a defining characteristic for what it called "responsible retailing"'.

The International Co-operative Alliance (ICA), an apex organisation that represents co-operatives worldwide, lists the co-operative business principles, borrowed largely from the Rochdale Pioneers, as follows (2015a):

1st Principle: Voluntary and Open Membership
2nd Principle: Democratic Member Control
3rd Principle: Member Economic Participation
4th Principle: Autonomy and Independence
5th Principle: Education, Training and Information
6th Principle: Cooperation Among Co-operatives
7th Principle: Concern for Community

Worldwide, over a billion people are members of co-operative organisations and nearly three billion depend on co-operatives for their livelihoods (ICA 2015b). Co-operatives span a diverse range of economic sectors including agriculture, retail, sports clubs, energy production, credit unions, education, and health and social care. According to a report released by Co-operatives UK (2015), nearly 15 million people in the UK are co-operative members and owners. There exist 6,796 independent co-operative businesses and they contribute £37 billion a year to the UK economy. Moreover, based on data available from the Office of National Statistics (2014, cited in Co-operatives UK 2015), co-operative businesses are twice as likely to survive their first five years than other forms of businesses. 'A combination of sharing risks, harnessing the ideas of many and the stake members have, means co-operatives demonstrate significant business resilience' (ibid.: 8). Of particular relevance to the context of this research, co-operatives in the renewable energy sector in the UK have seen the largest growth in terms of collective turnover in the period 2010-2015, increasing from £18 million to £260 million (representing a 1,400 percent growth).

On the 86th International Co-operatives Day, ICA released a declaration on its website which claims that 'consumer co-operatives are seeking to reduce their carbon footprints both in-store, but also in terms of their own operations as well as their suppliers, and, they are active in providing education to members and consumers' (ICA 2008). In another press release put out to urge 'effective and ambitious measures against climate

change and to take into consideration the co-operative movement as a partner in their implementation', ICA argued in Paris, 4 December (2015c):

> What makes co-ops a unique lever to act on climate change?
> Co-operatives' unique member-owned model allows them to make long-term commitments to climate and energy transition. Co-operatives put people at the heart of their action, which fosters the buy-in for the personal sacrifices that climate change will require. They encourage people to mobilize more readily because they own the change.

An exploratory study commissioned by the ICA assessed the compatibility of co-operative and sustainability ideals based on a comparative technical analysis of terms found in the documents generated by co-operatives and the sustainability literature (ICA 2013b). This study found that the social dimension of sustainability, guided by the principles of democratic participation and a commitment to community welfare, was strongly evident across many co-operatives. Although linkages to economic and environmental dimensions of sustainability were weaker in comparison, they were also present. The ICA has identified sustainability as one of its five priorities in its 2013 vision document titled 'Blueprint for a Co-operative Decade'. This document suggests two reasons why co-operative values are intrinsically supportive of environmental sustainability (ICA 2013a: 16):

> First, as participatory organisations, concerns about future environmental outcomes can simply be voiced democratically by members, without needing to be calculated in terms of return on investment. Second, where co-operatives are multi-stakeholder, the capacity for businesses to push negative environmental externalities (i.e waste and pollution) upon particular stakeholders is diminished.

The ICA vision document is alert to the tensions that may surface between meeting social, economic and environmental objectives within any business. Nevertheless, it argues that co-operatives are well placed to balance and harmonise these objectives as they respond to the needs of their members in their respective communities.

The nature of co-operative membership, however, can be diverse and may be a critical determinant of their character and values (Calderwood and Davies 2013a). Even in the retail sector, co-operatives can be run as consumer-owned, worker-owned, producer-owned or retailer-owned businesses. Additionally, some of these businesses may be only open to members while others may accept trade from both members and non-members. The focus of this study is on community-based consumer-owned organisations involved, primarily, with procuring food. This is based on the assumption that, in comparison to worker-owned or producer-owned co-operatives, consumer-owned co-operatives rooted

in their local communities have the potential to engage more people locally to become a part of the co-operative practice. Consumer-owned co-ops do not additionally require members to be employees of the co-operative (as in worker-owned co-ops) or be involved in a food production enterprise (as in producer-owned co-ops). Moreover, involving people not just as consumers but as members of a social community with a shared sense of values can be expected to expose them to multiple mechanisms through which co-ops can exert influence on their consumption practices. In the sections that follow, I discuss some aspects relevant to understanding the character of community-based consumer-owned food co-ops.

2.5.1 Co-operatives as social capital-based organisations

As discussed in earlier sections of this chapter, the strength of social capital within a community could serve as an effective context for social learning. Co-operatives have been recognised as a productive force for generating and strengthening social capital in their communities (Valentinov 2004; Gonzales 2010; Majee and Hoyt 2011; Lang and Roessl 2011; ICA 2013a). Valentinov (2004: 10), in particular, provides a theoretical framework for understanding co-operatives as 'social capital-based organisations'. He argues that organisations based on co-operative principles not only generate social capital but also depend on it for their survival and effective management. In economic terms, the democratic form of co-operative organisation may represent a higher transaction cost compared to decision-making in hierarchically structured and capital-dominated organisations. At the same time, if sufficient social capital is available within co-operatives, transaction costs related to co-operative decision-making can be minimised. Consequently, organisations following co-operative principles could be more responsive to their members' needs than capitalistic organisations which are designed to maximise gains on invested capital. In Valentinov's model, the first four principles of co-operation — voluntary and open membership, democratic member control, member economic participation, independence and autonomy — point to the centrality of social capital as the governance principle in co-operative organisations. They serve as checks to the dominance of hierarchies and purely commercial interests in those organisations. The other three principles — education, training and information, co-operation among co-operatives, and concern for community — highlight the need to invest in social capital, both within the group and with external complementary networks, as a resource to achieve collective and group goals.

Although co-operative principles are designed to respond to members' needs, Novkovic (2006: 5) points out: 'Many case studies indicate that the gap between co-operative values and co-operative management is wide'. According to Valentinov (2004), co-operatives veer away from their principles when their high dependence on social capital is not matched by the availability of social capital. Reasons behind the lack of sufficient social capital may include: an increase in business volume to the extent where 'the returns on economic capital exceed the returns of social capital, whereby the first type of capital comes to dominate' (ibid: 18); 'expansion of membership base, which technically complicates the required communication processes, and the emergence of heterogeneities between members, which might hamper the process of collective decision-making' (ibid: 12). Co-operatives viewed as social capital-based business organisations can be differentiated from hierarchical capital-oriented organisations due to the greater dependence of a cooperative's economic actors on one another to obtain resources that are not easily accessible through other market mechanisms and organisational structures. Hence, in addition to financial capital required in any economic organisation, member participation within co-operative organisations becomes a significant and primary resource upon which the success of this form of organisation depends.

In fact, member participation is seen as a key 'co-operative advantage' over other forms of business organisations (Laycock 1990; Spear 2000; Co-operative Commission 2001; Birchall 2003). 'Pursuit of co-operative advantages in business leads to co-ordination, shared understandings, and trust among members as well as between members and the co-operative' (Fairbairn 2006: 23). Birchall and Simmons (2004a; 2004b) have attempted to develop an understanding of the logic of membership participation in co-operatives. Based on research exercises at some of the larger retail and housing co-operatives in the UK, they found that members who participated were motivated by both individualistic and collectivistic logics of participation. The surveyed co-operative members did seek 'selective incentives' (Olson 1965), which could be material such as member discounts or 'internal' such as acquiring new skills and feeling a sense of achievement. However, the researchers found that for 80 percent of the members who were active participants, collectivistic incentives classified as 'shared goals, shared

values, and a sense of community' outweighed individualistic incentives (Birchall and Simmons 2004b).

To improve member participation and commitment to the co-operative, Birchall and Simmons (2004a, 2004b) propose a 'Participation Chain' model. They identify three crucial factors for increasing participation:

- *Resources* such as skills and member confidence must be developed through education and training to enable participation.
- *Mobilisation* of member participation will be more effective if opportunities to participate engage members' interests and skills.
- *Motivations* of members to join and participate must be taken into account to ensure that participation processes are congruent with those motivations.

Birchall and Simmons (2004a, 2004b) use the 'chain metaphor' to emphasise that each identified factor needs to be developed in combination with the others in a joined-up approach to strengthen participation.

Member participation is also key to enhancing the potential for social learning (Quarter and Midha 1999; Majee and Hoyt 2009, 2010; Bradbury and Middlemiss 2014). Participation and social interactions increase context and practice relevant knowledge and skills among members and can shape their values. In a study of a student environmental group, Green Action at Leeds University, that included a food co-op, among other initiatives, Bradbury and Middlemiss (2014) looked for ways in which learning occurs in 'sustainable communities of practice'. Drawing on concepts of social learning in communities from Lave and Wenger (1991; Wenger 1998, 2000) they showed how:

- a new member of the co-op graduated from being a 'legitimate peripheral participant' to a 'relative old-timer' (Wenger 1998: 90) through engaging in co-op's activities and learning the rules and processes;
- members develop a shared understanding of the co-op's values and ethics through products that are offered and the practice of purchasing and running the co-op;
- through discussions members also gain a perspective on acceptable lifestyle choices within the co-op's membership and what co-op's values mean to themselves and to other members; and,

- continuous learning within the co-op through shared practices and meaning-making shapes a member's identity in congruence with the co-op's identity.

The above discussion on social capital and member participation in co-operatives suggests that community-based pro-environment food co-ops can potentially engage members in environmentally sustainable food practices by: harnessing the available social capital in the community denoted by a strong sense of community and shared purpose; and, investing effort to continuously build and strengthen social capital through the effective development of members' skills, mobilisation opportunities, and motivations.

2.5.2 Food co-ops as community-based initiatives

The notion of 'community' and what it means for a sustainable food co-op to be a community-based initiative warrants elaboration. In common parlance, the term 'community' refers to a group of people who may have something in 'common' (Johnson 2000). This 'common' in community may be a geographical location such as place of residence or work, a profession such as law or medical practice, a faith or religion, or simply a hobby such as painting or cooking. Pelling and High (2005) have conceptualised this everyday understanding of the term using two broad categories, namely, 'communities of place' and 'communities of interest', separating the spatially oriented groupings from all others. These categories may offer a starting point for analysis. However, further exploration of the concept, as Peters and Jackson (2008) point out, reveals that many communities are best described by a multitude of shared characteristics which interact and play a symbolic role in constructing a sense of belonging among the people (Cohen 1982, 1985). For instance, the sense of a national community may come from 'communion/attachment' to the combined factors of place, language, and social customs (Willmott 1989).

Wenger (1998) adds to these conceptualisations the notion of 'communities of practice', where people engaged in various activities together contribute to a unit of practice. In 'communities of practice' members have a shared understanding of social conventions that has come about through collective learning over a period of time in particular contextual settings. This concept is especially relevant for organisations where people may perform different roles and in disparate locations, and yet their routine interactions

with each other in a given contextual landscape may weave a common thread that binds people together. Their contextual landscape may be defined by a set of technologies used, power structures within which decisions are made, formal institutional rules that may govern their practices, and cultural customs that condition informal exchanges.

These varying conceptualisations suggest that communities are not confined by rigid dimensions. They have fluid identity markers that may be reconstructed to shape newer identities in changing contexts. People may identify with a number of different communities at the same time. In addition, communities that may seem homogeneous from the outside may entertain a reasonable amount of diversity within. The social networks that glue a community's membership together may be characterised by closed and intense interactions or weak ties with loose and open connections (Granovetter 1973), and sometimes a combination of both. Cohen (1985: 118) contends that 'whether or not its structural boundaries remain intact, the reality of community lies in its members' perception of the vitality of its culture'. He adds: 'People construct community symbolically, making it a resource and repository of meaning, and a referent of their identity' (ibid.). Cohen's contention further complicates the matter of defining contextual boundaries of a community. At the same time, it alerts one to a range of factors that must be considered when undertaking research on communities.

For instance, in the case of the community-based initiatives relevant to this study, the food co-ops are located physically in a geographical area and are relevant to the spatial sense of community, as in 'communities of place'. For the most part, they would subscribe to Somerville, McElwee and Frith's (2009: 13) definition of a community co-operative: 'a membership-owned enterprise in which the opinions of the members carry equal weight and the membership as a whole is identified with a particular community'. Although this definition does not define community, it draws on Somerville's (2007: 12) earlier work where community membership is characterised by 'residence or employment in a particular geographical area'. However, food co-ops may also attract people from beyond the immediate local area due to a shared interest in sustainability, and therefore can also be understood as 'communities of interest'. Additionally, members, employees, non-member customers and other supporters of the co-ops may co-create and evolve 'communities of practice'. These 'communities of practice' are shaped by both written rules and informal conventions that condition the operational

practices within the organisations. As a result, the food co-ops do not neatly fit into a single conceptualisation of community, but straddle the conceptual space of communities marked by ‘place’, ‘interest’ and ‘practice’.

Furthermore, it cannot be assumed that any of the above conceptual categorisations define homogeneous groups. People living within a given locale may differentiate themselves from others living in the same area along a number of demographical characteristics that may include, among other factors, income levels, educational attainment, religious denominations, and class identities. Even within communities where members share an interest in food sustainability, interpretations of sustainability may vary. For some, local food may be more important than organic. Similarly, fair trade, animal welfare and social justice concerns may compete in the prioritisation of value/interest preferences. Consequently, while factors that shape a community such as place, interest and practice are present in the case of local food co-ops, the sense of community may continually be challenged by differences in personal identities and preferences based on other, sometimes conflicting, factors. Thus, a cohesive community spirit cannot be expected as a given. On the contrary, it must be socially constructed by identifying and utilising whatever resources are available, material as well as cultural.

2.5.3 Literature on food co-ops

There is only limited literature on consumer food co-ops in the UK (Freathy and Hare 2004; Caraher, Smith and Machell 2014). Food co-ops have also been a neglected site in the discussion of alternative food networks (Little, Maye and Ilbery 2010; Zitcer 2015). In the UK, academic literature on co-ops has mainly focused on large national-scale co-operative retailers (cf. Sparks 1994, 2002; Shaw and Alexander 2008; Birchall 2011). There are some studies on village co-ops that were started to save the only shop in the community (Perry and Alcock 2010; Calderwood and Davies 2013b), or food delivery initiatives run by public sector and third sector organisations to promote health (cf. Elliot et al. 2006; Freathy and Hare 2004; Caraher et al. 2002). However, community-based consumer food co-ops guided by environmental ethics have received little to no attention. This section highlights key literature relevant to this study that has specifically paid attention to consumer owned and run food co-ops.

From the advocacy field, Friends of the Earth (FOE) produced a manual for operating food co-ops and buying groups in the UK that highlighted the economic advantage of collective purchasing (Hines 1976). Pro-environmental consumption was expected to be a potential side-effect. The manual suggested that food co-ops 'tend to result in less meat, processed, packaged food being eaten' since more money could be saved on fruit and vegetables and minimally processed cereals, beans and nuts compared to meat and highly processed food items when buying in bulk (Hines 1976: ii). More recently, a non-governmental organisation, Sustain - The Alliance for Better Food and Farming, has put together an online Food Co-ops Toolkit, drawn from the experience of its work supporting many food co-ops in the UK (Sustain 2012). This is a nuts-and-bolts guide about the best practices of running 'quite small scale food co-ops that are going to be run on a not-for-profit basis, mainly by volunteers' (ibid: 7). The aim of this toolkit is to enable groups of people to collectively access good food at an affordable price. The toolkit acknowledges that exercising ethical and environmental choices can guide the formation of food co-ops, but does not focus on ways to develop a sustainable food consumption practice within co-ops' membership.

Most of the recent literature on food co-ops in the UK has come in the form of impact studies of health initiatives funded by state and third sector funding organisations (Elliot et al. 2006; Caraher et al. 2002). Although the food delivery projects in these studies are classified as food co-ops, for the most part they are neither formally incorporated as co-operative businesses, nor do they exhibit democratic participation processes following co-operative principles (Caraher et al. 2014). The thrust of these initiatives has been to deliver access to healthy foods in economically deprived areas using a mix of top-down administrative support from the respective funding bodies and recruitment of volunteers from the communities served by these initiatives.

Freathy and Hare's (2004: 1566) work on Scottish 'voluntary food co-operatives' (VFCs) found that the term 'masks significant variations in structure, organisation and operation'. Based on the nature of supply chain and operations, they identify four co-op categories:

1. Own sourcing: Buyers source from a variety of sellers in a fresh produce wholesale market.
2. Independent supplier: A single supplier delivers products to the co-op.

3. Community distribution scheme: A central buying body which is externally funded (by Health Board, local authority, National Lottery, Charities Board) purchases mostly fresh produce and supplies to a number of community centres.
4. Cash and carry wholesaler: The chosen single wholesaler offers a wide variety of products beyond fresh produce to the members of the co-op.

The majority of community food co-ops in Scotland were set up to address the lack of access to a wide selection of fresh fruit and vegetables, mostly in low-income areas. Volunteers were critical to the survival and operations of these initiatives. Price advantage was easier to achieve where co-ops directly sourced fresh produce from wholesale markets. However, tinned and ambient products could not usually be offered at lower prices than those at the large multiple retailers. Margins were low in this category and required a much larger customer base to drive economies of scale. Freathy and Hare (2004) suggest that food co-ops may go through different phases of development. In the early stage, initiatives are run primarily by volunteers with low overhead costs and a focus on limited products, mainly fresh produce. Some of these co-ops may 'trade up' to include paid staff, hired location, longer hours of operation, and a wider range of products. Yet others may develop a degree of maturity in their operations by hiring paid staff but keep the focus on a limited range of products, protected from market competition by external sources of funding. A critical finding of this study was that while there were pressures on voluntary food co-operatives to become financially self-sufficient and autonomous, the most successful ones, in terms of improving healthy food access, 'were those that remained sheltered from external economic imperatives, had a limited cost base and did not attempt to "trade up"' (Freathy and Hare 2004: 1573). This conclusion raises concerns about the long-term viability of such initiatives without external funding.

Another evaluation report, published after the initiation of my own research, covered a range of food co-ops in England (Smith, Machell, and Caraher 2012). This report evaluates the Food Co-ops and Buying Groups (FCBG) project that was part of the lottery-funded Making Local Food Work (MLFW) programme (2007-2012). The overarching objective of the MLFW programme was to promote initiatives that reconnected consumers to local food networks; part of this project entailed supporting the work of food co-ops. For the purpose of FCBG evaluation, food co-ops were defined

as ‘any outlet run by local people that is involved in supplying food for the benefit of the community, rather than for private profit’ (ibid: 3). The majority of the cases included in this report were not formally registered co-operative businesses and did not involve systematic membership participation and consultation. Such initiatives relied almost exclusively on external funding and volunteers, and similar to the ‘voluntary food co-operatives’ in Scotland (Freathy and Hare 2004), it was difficult to envisage their survival without external support. However, the more established and formally registered co-operatives used a mix of volunteers and paid workers and had taken measures to develop business plans to achieve financial independence and stability. The evaluators conclude that incorporating as formal co-operative businesses and attending to the democratic processes espoused by co-operative principles in practice could help some of the informal ‘co-ops’ to look beyond day-to-day operations and plan for medium- to long-term business viability (Caraher et al. 2014). Broader member participation could also help these co-ops to be more responsive to their constituents’ needs.

Another body of work important in the context of this research is the documentation and discussion of the resurgence of the food co-op movement in the 1970s in the US (Ronco 1974; Cotterill 1983; Cox 1994; McGrath 2004). In contrast to the wave of the 1930s, the new wave of 1970s food co-ops in the US put greater emphasis on participative membership, anti-hierarchical forms of organisation, and also on different flavours of food politics, including issues such as labour rights, animal rights, food sovereignty and environmental sustainability. Ronco’s (1974) work, an advocacy monograph and guide for movement practitioners, has shown the new co-ops’ oppositional stance not only to the dominant capitalistic business practices, but also to the older co-ops’ lack of differentiation from mainstream capitalistic supermarkets. Cox (1994: 4) considered these countercultural co-ops as a ‘perfectly logical response to the demand among young radicals for the goods and services necessary for living a life outside the established economic system’.

However, not everyone who joined the 1970s food co-ops was keen on mixing food with politics. Numerous examples from Ronco (1974) and McGrath (2004) illustrate intense debates within many of these co-ops about the competing ethics and priorities of their members. For instance, when the Concord Co-op decided to stock only United Farm

Workers lettuce, it really upset one of its members. Ronco (1974: 93) recounts the member's remarks:

> Who the hell cares who picks the goddam lettuce? It all tastes the same to me, and besides, I don't need to waste my time at these meetings listening about the injustices of the food corporations. I joined the co-op to get cheaper food, not hear lectures on other people's politics…What's the point of being in the co-op if I can't get the food I want?…The problem is that politics is permeating everything. At least when I go to the supermarket I'm not subjected to the owner's political views.

In another instance, the decision to include meat on the shelves of Brattleboro food co-op in Vermont to respond to the demands of an expanded customer base was fiercely resisted by a significant number of its members, some of whom gave up their memberships in protest (McGrath 2004).

Members were also conflicted about the level of bureaucracy and hierarchy they were willing to accept (Ronco 1974; Cox 1994; McGrath 2004). Participation of members in running the 'new wave' co-ops was seen as a way of buying in commitment. As many co-ops' operations grew in scale some members felt the need for more professionalisation through the induction of skilled and paid staff. However, other members were weary of being distanced from decision-making processes once professional staff took over operations. Also, the increase in the number of members itself was not welcomed by existing members who preferred their co-op to be a community of familiar faces. One member explained her resistance thus (Ronco 1974: 78):

> If we get too big, we'll miss the whole point of what the co-op is. If I can't know everyone in the group, I might as well be shopping in the supermarket.

At times, the differences between members on ideological and organisational grounds led to splitting up the co-ops into smaller units or even a complete demise of some co-ops (Cox 1994). However, in a historical review of the 1970s food co-op movement, McGrath (2004) notes that many co-ops managed to survive despite their internal struggles and had to continuously adapt to balance their members' commitment to ethical principles with the need to sustain the co-op as a business enterprise. She concludes: 'Although their collective righteousness has not crumbled the house of capitalism or untied the knot of racial and class separation, as many 1970s radicals supposed, co-ops have persisted as flexible forums for the progressive middle-class to

practice conscientious consumption, alternative business, and purposeful communalism' (McGrath 2004: 14).

2.6 Framing the central research question

The literature review on consumer food co-ops shows that previous work has either focused almost exclusively on externally funded food delivery initiatives to promote health, especially in the UK, or on the entire class of consumer food co-ops with their diverse range of politics. This study differentiates itself from previous work by focusing on community-based consumer food co-ops with an explicit commitment to environmental objectives. It also attempts to address the dearth of academic literature on consumer food co-ops in the UK, which has been noted by other scholars (Freathy and Hare 2004; Little et al. 2010; Caraher et al. 2014).

The discussion in the previous sections has pointed out both the potential of community-based initiatives to influence people's behaviours and the associated challenges. With respect to the latter, in some cases of community-based behavioural interventions, social capital can induce resistance to change, social learning can be influenced by inappropriate role models, and a community of people may not be able to realise a shared purpose. Hence, strategic agency as well as the socio-economic contexts that bear upon the agents within these initiatives are crucial in determining the extent to which they are able to promote environmentally responsible behaviours. Notwithstanding the challenges, it is useful at this point to highlight what makes community-based food co-ops potentially capable behaviour change agents.

Consumer food co-ops are membership-based organisations. Members democratically elect the management and at times directly participate in making important decisions. Co-ops tend to serve their members' needs rather than maximise profit for outside shareholders (Birchall 2011; Novkovic 2008). Hence, if a co-op is built around environmental sustainability objectives, it should attract members who share those objectives and can build a cohesive community of practice around their shared interests. Additionally, the literature on social capital suggests that such an organisation would strengthen the community by developing more and perhaps deeper relationships between community members. For a community interested in sustainable food consumption, the co-op can provide accessibility to sustainable foods at affordable

prices by taking advantage of wholesale buying opportunities. The co-op may also reinforce the practice of sustainable consumption by creating a community environment conducive for social learning among like-minded individuals (Wenger 2000). Moreover, since many co-ops operate as businesses and have the capacity to generate income and surplus, they are a form of community-oriented initiative that can be financially self-sustaining in the long term instead of constantly relying on external funding opportunities.

The aforementioned potential of the community-based food co-operatives in influencing their members' and customers' food choices raises two important questions:

1. How and to what extent is this potential translated in practice?
2. Under what conditions can community-based food co-ops be effective in promoting pro-environmental dietary choices?

I attempt to answer these questions in the following chapters. The next chapter presents the research design and methods employed for this study.

Chapter 3
CASE STUDY METHODOLOGY

This chapter presents the case study methodology and the data collection methods employed to answer some of the key research questions. First, I set out the theoretical propositions and the five research questions that operationalise this study. Second, I provide an overview of the three stages in which the research was carried out. The case study methodology is used for two of those stages and is discussed in this chapter, whereas the third stage is based on grounded theory methodology and is discussed in Chapter 7. With respect to the case study methodology, I discuss the reasons behind the choice of this methodology, the process and rationale behind the selection of cases, and the methods used for data collection, interpretation and analysis. Finally, I reflect on positioning myself in this research exercise and consider ethical issues relevant to the case study.

3.1 Research questions

The key objective of this study is to explore the extent to which sustainability-oriented food co-ops can develop structural and operational capacities towards promoting environmentally responsible food choices in practice. The aim is to identify opportunities and challenges for food co-ops as well as possibilities to further develop their potential towards achieving environmental objectives. The literature review concluded with the following propositions that form the basis for further exploration:

Proposition 1: Food co-ops with environmental sustainability objectives should be able to attract members who share pro-environmental attitudes, even if some members have not yet translated those attitudes into everyday behavioural practices.

Proposition 2: The democratic structure of co-operative organisation, the capacity for collective bargaining, and the possibilities for social learning are some of the key features of community-based food co-ops, which should enable members of those co-ops to adopt sustainable diets at reasonable costs.

To explore the extent to which community-based and environmentally-minded food co-ops build capacity towards encouraging sustainable food consumption, this study attempts to answer the following specific questions:

1. How do environmentally responsible food co-ops develop a shared purpose around sustainable food consumption among their members?
2. How do they make sustainable food affordable for their customers?
3. How do they motivate people to participate in the food co-op?
4. What are the key challenges that community-based food co-ops face in fulfilling their potential as agents of pro-environmental behavioural change?
5. What kind of influences on food behaviour can be leveraged by food co-ops at the community level to foster change towards sustainable dietary practices?

A case study methodology is employed in answering the first four questions. To answer the fifth question, this study looks outside the domain of community-based food co-ops for insights on lifelong influences on pro-environmental food practices with an aim to understand the potential tools available to food co-ops (and possibly other community-based efforts) to encourage dietary changes. A grounded-theory methodology is used to explore this question and this is discussed in more detail in Chapter 7.

The research process comprised three distinct stages. First, an in-depth case study of a single food co-op was conducted, primarily based on participant observation, in conjunction with two interviews, an online members' survey and documentary analysis. The analysis of this in-depth case study (see Chapter 4) revealed key opportunities and challenges faced by the studied food co-op, but also pointed towards a need to develop an understanding of how these findings compared with experiences at other food co-ops in the UK that shared the features of community-based membership and environmental objectives. Hence, a second stage of thematically-focused comparative case studies was conducted through interviews with key informants at four other environmentally-oriented food co-ops in the UK. Findings from the first two stages of the research are presented and discussed through a cross-case analysis that addresses the first four research questions (see Chapter 5). Finally, as a participant observer at the first food co-op studied, I was interested in learning about ways to influence customers' food choices through the co-op, but found that this co-op had adopted no systematic approach to

encourage environmentally responsible food consumption. I considered that this research would be more useful for sustainable food co-op practitioners if, in addition to presenting findings from case studies of sustainable food co-ops, it were also to further explore the potential tools of behavioural influence available to food co-ops. This motivation led to the next stage of this research, which included a review of literature on behavioural influences (see Chapter 6), and subsequently, an exploratory inquiry, employing a grounded theory approach (see Chapter 7), into factors that influenced sustainable food choices among a selection of people over their lifetimes (see Chapter 8). Analysis of key mechanisms of influence and its implications on strategic capacity building at sustainable food co-ops concludes this study (see Chapter 9). Chapters 8 and 9, thus, address the fifth research question.

The rest of this chapter sets out the research design and discusses the appropriateness of the case study methodology that guides both the in-depth study of one food co-op, and the subsequent thematically-focused comparative study of four other food co-ops.

3.2 Why case studies?

Thomas (2011: 35) defines case studies as follows:

> Case studies are analyses of persons, events, decisions, periods, projects, places, institutions or other systems which are studied holistically by one or more methods. The case that is the subject of the inquiry will be an instance of a class of phenomena that provides an analytical frame — an object — within which the study is conducted and which the case illuminates and explicates.

This definition emphasises two features that characterise a case study. First, case studies tend to look at a phenomenon as a whole with careful attention to the context in which the phenomenon is embedded. The holistic approach often requires looking at the phenomenon from different angles and in sufficient depth. Hence, employing multiple methods for data collection and analyses is encouraged. Thomas (2011: 55) sees case studies as a 'wrapper for different methods' that are applied with a specific focus on a subject.

Second, it is the focus on the subject and its analytical frame that is critical in defining the case study. As such, it is important at the outset to be able to identify what the studied subject (or subjects when the study involves more than one case) is a case of. The analytical frame helps to demarcate the 'class of phenomena' and gives the case

study its focus. It sets out the qualifications and features of the case that narrow down and define the researcher's field of study. The objective of the researcher using the case study method is then to collect a rich set of data illuminating the specific focus of the case study and to develop knowledge and explanations from subsequent data analyses.

Yin (2009) offers three other considerations to assess whether a given enquiry should be conducted as a case study: the type of questions the research seeks to answer; the temporality of subject studied; and, the degree of control the researcher has over the subject studied. More specifically, Yin suggests that case studies are particularly suited to answering 'how' and 'why' questions of a class of phenomena. Whereas the 'who', 'where', and 'what' questions could be answered using survey techniques or analysis of previously collected survey data, answers to 'how' and 'why' questions are more 'explanatory', and 'operational links' between variables may have to be traced, analysed and established over a period of time (Yin 2009: 9). Therefore, case studies, historical studies and experimental research designs are more suited to answering 'how' and 'why' research questions. However, historical studies, by definition, focus on phenomena that have occurred in the past, and experiments demand a level of researcher control over the phenomena studied. Case studies, on the other hand, are most pertinent to studying a phenomenon as it unfolds and where the researcher has relatively little or no control over how the phenomenon takes shape.

The research questions explored here fit the criteria suggested by Thomas (2011) and Yin (2009). As the framing of questions listed earlier in this chapter suggests, I seek to explore 'how' sustainability-minded food co-ops go about engaging more members, making sustainable food more available and affordable, and building a community that fosters sustainable food consumption. I also seek to understand the challenges such food co-ops face in the process of working towards food sustainability objectives. The central aim of this research is a holistic study of contemporary sustainable food co-ops with reference to their potential to address the challenge of climate change at the community level. The researcher, as a participant observer in the ethnographic case, and an interviewer of key informants at other selected food co-ops, has limited influence, in shaping the phenomenon studied. Moreover, since little prior research exists on the capacity of food co-ops to influence sustainable food choices, this study is exploratory —

which makes the subject especially suitable for a case study approach (Platt 1992; Yin 2009).

The cases studied are food co-ops that share two specific features:

- the membership is predominantly rooted in the geographical community in which the food co-ops are based; and,
- environmental sustainability is at least one of the food co-ops' explicitly stated objectives.

These features define the analytic frame that guides the selection of cases and, consequently, the focus of this research.

3.3 Methodological aims

Varying organisational contexts and practices can affect different co-ops' capacities to meet their environmental objectives. Hence, attention to these aspects is crucial in assessing the co-ops' potential to influence sustainable practices. At the same time, it is not within the scope of this study, due to time and resource constraints, to conduct an in-depth study of a large number of food co-ops. Therefore, the research design for this study uses a variety of data collection methods to balance the need for in-depth contextual analysis with the objective of arriving at conclusions that are transferable, to some extent, to the broad class of community-based sustainable food co-ops.

Before discussing the process of selecting cases for this study, I briefly reflect on the methodological aims that underpin this case study research design. Case study as a methodology has been criticised as one lacking the ability to generalise findings across the whole class of a phenomenon. Critics contend that its focus on a particular case or a very small number of cases makes a case study incapable of offering explanations and insights that apply beyond the historical and anecdotal specificity of the individual cases studied (Vickers 1965; Campbell and Stanley 1966). In view of this criticism, it is important to consider what can be reliably learned through a case study about the potential of the class of community-based sustainable food co-ops to promote environmentally responsible food consumption practices among their stakeholders.

Case study researchers point to a number of ways in which case studies can offer not only generalisable insights, but also learning that is valuable in its own right to

furthering the understanding of a class of phenomenon. According to Stake (2005: 460): 'Case studies are of value in refining theory, suggesting complexities for further investigation as well as helping to establish the limits of generalisability'. Critical, or extreme cases can often be used to test general theories and hypotheses, and for example, identify 'black swans' in a class where only 'white swans' are expected (Flyvbjerg 2006: 227). One widely cited instance of such a case study is Robert Michels's (1962) study of oligarchy in organisations. By focusing on an organisation with broad-based democratic structure and ideals, and hence a particularly low probability of supporting oligarchy, Michels could test the hypothesis that organisation inevitably tends to oligarchy. Selection of cases that can be reasonably considered to be typical or paradigm defining can also shed light on the entire class, especially when the paradigm has received little scrutiny before. Importantly, Yin (2009: 38) makes the argument that the goal of case studies must be seen as 'analytic generalization', where a set of propositions can be tested and analysed within the selection of cases to expand and qualify those propositions. This is distinct from 'statistical generalization' where the aim is to research on a representative sample of the class in order to infer generalised propositions for the entire class.

On the other hand, some scholars (Flyvbjerg 2006; Thomas 2011) have argued that case studies serve the development of social science not just through seeking the objective of formal generalisation, but by illuminating an area of study through the rich and context-dependent 'power of examples'. This exemplary knowledge aims to develop phronesis or practical understanding of the class, where explanations are based on judgement derived from experiences and evidence collected of the particular cases. Both Thomas and Flyvbjerg question the ability of any social scientific method in developing general hermeneutic theories in social sciences. Therefore, they demand that instead of privileging generalisation through induction in all social science research, phronesis through abduction be considered a legitimate goal of social scientific enquiry. 'Abduction', in the words of Thomas (2011: 577), '[provides] heuristics — ways of analyzing complexity that may not provide watertight guarantees of success in providing for explanation or predication but are unpretentious in their assumptions of fallibility and provisionality'. Consequently, the validation of a case study for a reader comes in phronesis or the practical understanding of a class that emerges through the

connections, patterns and insights revealed by the case study researcher's experience and judgement of the particular.

This research is designed to analyse and evaluate the propositions presented at the beginning of this chapter through an in-depth ethnographic case study followed by a comparative cross-case synthesis which includes four additional cases, where data was primarily collected through interviews with key informants. Additionally, references to other studies conducted on food co-ops expand the discussion of primary evidence collected for this specific study. Following Yin (2009), the aim is 'analytic generalization' through a purposive selection of cases to gain sufficient understanding of the subject within the constraints of time and resources. At the same time, through elucidation of the particular case examples, I hope readers gain a practical understanding of the potential of food co-ops to influence environmentally responsible food consumption.

3.4 Selecting cases

At the beginning of my research I set out to conduct an in-depth comparative study of two food co-ops which shared the analytical frame of this research but varied on other parameters, such as size of membership, geographical location and model of operation. To identify and reach out to sustainable food co-ops in the UK, I first turned to the organisation 'Sustain', which is an umbrella organisation representing around 100 public interest organisations, and expresses its mission thus (Sustain 2010):

> Sustain — The alliance for better food and farming advocates food and agriculture policies and practices that enhance the health and welfare of people and animals, improve the working and living environment, enrich society and culture and promote equity.

Sustain's staff organised and co-ordinated funding and skills support for many local food co-ops and buying groups in the UK. They also ran the foodcoops.org website, which was my first point of call in searching for and locating food co-ops. I was looking for an opportunity to work within perhaps two sustainable food co-ops as a participant observer and was hoping that Sustain's knowledge of the food co-ops would point me to the cases most appropriate for my research and also help gain access to them.

However, when I contacted Sustain I was informed that they were at that time already conducting an evaluation exercise among food co-ops within their network as part of

the lottery-funded Making Local Food Work programme. They alerted me to the fact that since many of the food co-ops were short of staff and had agreed to participate in Sustain's own research, there might be some research fatigue and reluctance to participate in another study. That notwithstanding, Sustain's food co-ops co-ordinator confirmed to me the value of the research questions I wished to explore and generously agreed to send an invitation letter on my behalf to selected food co-ops. Her letter encouraged food co-ops to participate in my study with the aim of benefiting from: the learning outcomes of the research; receiving a £150 contribution from Sustain towards the participating co-ops' marketing initiatives; and, utilising me as a co-op volunteer during the period of my research. Unfortunately, the co-ops co-ordinator did not get a positive response from any of the co-ops contacted.

In the meantime, I became aware of a food co-op initiative in central London that had been launched the previous year and had been gaining attention in sections of the mass media as an environmentally and socially sustainable alternative supermarket. A documentary series tracing the founding of the co-op was being aired on Channel4 (The People's Supermarket 2011: 6 February). I saw the first of four episodes covering the co-op's inception, launch and early days of membership recruitment. The documentary presented The People's Supermarket (TPS) as a project through which the documentary presenter, co-founder and celebrity chef, Arthur Potts Dawson, wished to set an example of a retail model that connected urban consumers to local rural producers, reduced wastage in the food chain and promoted environmental sustainability in every aspect of its practice. From the first episode, it appeared that the co-op was still in its formative phase, with increasing public interest in its model and sustainability objectives. Hence, it appeared to be an opportune moment to observe and analyse TPS' development. I spoke to the manager of the co-op by telephone and expressed interest in joining the co-op. I told her that I was sympathetic towards the co-op's mission and also, as part of my doctoral research, wanted to study how the co-op went about achieving its goals. The manager sounded very welcoming in her response and encouraged me to contribute to the co-op in whichever way I could. The co-op had opened its shop in June 2010 and I joined it in February 2011 as its 543rd member.

Around the same time, through Internet research I came across Stroudco, a smaller food co-op initiative than TPS. Like TPS, Stroudco aimed to achieve environmental

sustainability objectives, such as, reducing food miles, reducing waste, and encouraging sustainable farming practices among its producer members. Stroudco and TPS were also both founded less than two years before I discovered them and thus presented themselves as interesting cases for comparison. However, unlike TPS, Stroudco had a working model where the democratic membership of the co-op was equally divided between its consumer and producer members, both of which were local to the geographical community in which the co-operative was based. Also unlike TPS, Stroudco was situated in a much smaller town with relatively less social diversity. I reached out to one of the founding members to enquire about the food co-op and the possibility of including it in my research. During the course of this conversation, it became evident that Stroudco had received the invitation from Sustain to join my research project and the management was favourable to it in principle, but had concerns about how much of their time my research would demand and whether my research would simply duplicate efforts by some other university-based researchers with whom the food co-op was already collaborating. I was invited to take part in one of the upcoming management meetings in Stroud to discuss how I would operationalise my research and contribute as a volunteer. After attending this meeting and upon further reflection it became apparent that it would be difficult to participate in Stroudco to the same extent as I was planning to do at TPS.

In practical terms, Stroudco was quite far from where I lived and that would have limited my involvement with the co-op on a day-to-day basis, both due to travel costs and time constraints. Since I was both working and studying, it was not possible for me to take time to immerse myself in the Stroudco community to the extent that I could do at TPS. Additionally, instead of a seven-days-a-week operation like TPS, Stroudco only ran a collection point at a local school for about two hours every Saturday. Membership meetings to discuss management issues were also not regular at that time; so there was less flexibility in meeting up with members and observing first-hand the management process at Stroudco. After the first meeting I expressed my interest in contributing to any member-oriented research that would help Stroudco's management in establishing their initiative. I also requested to interview key management committee members, should I need to in the course of my research. The management committee members present at the meeting consented to interviews. In the second stage of my research where I include a thematically-focused comparative research on four other co-ops, I was

able to draw information from not only an interview with a key organising member of Stroudco, but also from a short telephone-based survey of Stroudco's members that I conducted at the co-op's request.

However, for the in-depth exploration of how a sustainable food co-op goes about encouraging pro-environmental food choices, I chose to focus my research on the specific case of TPS. In case study research, selecting a critical case can increase the generalisability of findings. A critical case offers generalisation of the sort, 'if it is valid for this case, it is valid for all cases' (Eckstein 2000: 149). I saw TPS as a critical case in one sense. The literature review on community-based projects and co-ops had suggested that these kinds of initiatives have potential to influence pro-environmental behaviours by providing a supporting infrastructure, generating social capital and creating opportunities for social learning. After watching the first episode of the television documentary, I got the impression that TPS had access to a range of community- and business-building resources that few other grassroots co-operatives may have. The project received marketing and financial support from a television production company. One of its founders was a celebrity chef acclaimed in the UK for opening restaurants that promoted environmental sustainability; of the other two co-founders, one was a retail expert with several years of commercial experience and the other an urban space regeneration specialist. Together, the co-founders seemed to be well connected to a host of experienced professionals who were advising them on their project, offering services pro-bono and introducing them to funders. My reasoning for selecting TPS as a critical case was that, if I paid attention to learning about the challenges that TPS might face in encouraging sustainable food practices, despite being seemingly well-resourced, whatever I learned from this case would also most likely apply to a number of other community-based sustainable food co-ops. Also, I suspected that if such an initiative could work in a socially mixed part of a city like London (IPPR and London Borough of Camden 2006), it might work equally well in places with greater community cohesion.

I conclude the in-depth case study with an identification of key challenges faced by TPS in maximising its potential to engage more members, offer affordable sustainable food, and forge a community of interest around sustainable food consumption. These challenges are then discussed further in comparison with other cases of community-based food co-ops in the UK. The expansion of analysis to include more cases is done

with a view to understanding the similarities and differences between cases with respect to the identified challenges. This is to increase the possibility of advancing a more general understanding about the conditions under which sustainable food co-ops can effectively promote environmentally responsible food choices. Linking findings from a single case study to evidence from multiple cases enables one to assess the transferability of insights across the entire class of cases (Ragin and Becker 1992).

Yin (2009) suggests that multiple-case designs follow a 'replication logic' that is similar to the logic used in multiple experiments. After a single experiment has produced significant findings, more experiments are conducted to test and verify replication of those findings. Selection of additional cases could either be done with an aim to find similar results within a set of contextual parameters similar to that of the original case, or different results based on the change in selected parameters. In terms of selection of cases for a comparative study, 'maximum variation' could offer a diversity of perspectives, and also, as Stake (1995: 4) puts it, 'maximise what we can learn'. Moreover, generalisability of findings across the class is more likely if patterns emerge from a set of cases chosen for maximum variation within the class (Stake 1995; Flyvbjerg 2006).

To increase the number of cases considered, I collected primary evidence from four other co-ops for a thematic comparative analysis. The themes explored in this second stage address the research questions and also emerge from the experience of the first in-depth case study. Apart from the consideration of getting access to key informants, the selection of these co-ops was based on how much they varied from TPS in respect of location, size, organisational structure and emphasis on specific aspects of sustainable food consumption. The four cases selected were:

- True Food Co-operative, Reading, Berkshire
- The University of Brighton Food Co-op
- Transition Pimlico Food Co-op, Pimlico, London
- Stroudco, Stroud, Gloucestershire

Before selecting these cases, I examined short descriptions of various food co-ops in Sustain's directory. These four co-ops appeared broadly representative of the category variations I could identify, namely: shops, informal buying groups, box-schemes, pop-up

markets/stalls. Again, I did not see these cases as statistical representations of clearly defined categories, but saw enough variations between them across identified parameters to expect greater coverage of the whole class of food co-ops than the in-depth case study selection alone could provide. Figure 3.1 provides an overview of the co-ops' features which illustrates these variations. A short profile of these co-ops is also included in Chapter 5 where a cross-case analysis is presented. Two of the food co-operatives covered in this research, namely Stroudco and The True Food Co-operative, are formally registered as co-operative businesses, similar to TPS. I found both of these co-ops independently through online research and contacted their organisers. The other two co-ops, The University of Brighton Food Co-op and the Transition Pimlico Food Co-op, function as collective food buying groups with a less formal organisational structure. These co-ops were referred to me by acquaintances who already knew of them.

All of these co-ops share at least two key features. They are community-based and are organised and run by members who are considered equal owners of the co-operative. Most importantly, providing more sustainable food options in their local communities is at least one of their primary objectives. Nevertheless, each co-operative is run somewhat differently and operates in an environment that varies in terms of the constraints and opportunities it presents to achieve environmental objectives.

Figure 3.1 Characteristics of selected community-based food co-ops

	True Food Co-op	University Food Co-op	Transition Pimlico Food Co-op	Stroudco	TPS
Location	Reading, Berkshire	University of Brighton, East Sussex	Pimlico, London	Stroud, Gloucestershire	Camden, London
Size	ca. 450 members	ca. 200 members	ca. 19 members	ca. 36 producer and 250 consumer members	ca. 1000 members
Structure	Formally registered as a co-operative business.	Not formally registered, but all members are invited to participate in decision-making	Not formally registered, but all members are invited to participate in decision-making	Formally registered as a co-operative business.	Formally registered as a co-operative business.

	True Food Co-op	University Food Co-op	Transition Pimlico Food Co-op	Stroudco	TPS
Operation	One fixed shop, but also run mobile grocery stands on certain days in economically deprived areas of town. Source food from a variety of producers and suppliers.	Run a weekly box scheme and are supplied by one fresh fruit and vegetables wholesaler but were expanding to include cupboard essentials sourced from a local co-op wholesaler.	Collectively order whole foods, grains and cupboard essentials which are primarily organic and are supplied by another co-op wholesaler.	Weekly orders collected and supplied by local producer members.	Run one fixed shop which includes a kitchen to sell freshly prepared food. Source food from a variety of producers and suppliers.
Environmental focus	Focus is on mainly certified organic and local produce, which even if not certified organic, is produced through environmentally friendly farming practices, such as avoidance of pesticides and chemical fertilisers.	Focus is on mainly local produce. Non-local produce is supplied only where no local options are available.	Focus is on mainly organic wholefoods, pulses, grains and household essentials.	Focus is almost exclusively on sustainably farmed local produce supplied by producer members. A small range of organic cupboard essentials are supplied by another co-op wholesaler.	Focus is on reducing food-waste from shop. Both cheap non-organic and organic options available for some product categories, but organic options are not a priority. Local produce is supported as a policy.

3.5 Collecting data

Integral to its definition, as presented at the beginning of this chapter, case study methodology emphasises a holistic treatment of the explored subject with careful attention to its context. Use of multiple-sources of evidence within a single case study to achieve ‘data triangulation’ is greatly encouraged (Thomas 2011; Yin 2009). Using different data sources and collection methods allows a researcher to not only gain additional information, but also to verify and confirm the validity of data collected via one or more of the other methods. For the in-depth case study of TPS, I used four different data collection methods: participant observation; two qualitative semi-

structured interviews; one member survey; and document analysis of a media documentary and a management report. For the thematically-comparative study of four other co-ops, in-depth semi-structured interviews with key informants are primarily employed. In one exceptional case, Stroudco, I obtained additional data from a small-scale members' survey. I briefly discuss the data collection process below.

3.5.1 Participant observation

'The advantage of the case study', argues Flyvbjerg (2001: 82), 'is that it can "close in" on real-life situations and test views directly in relation to phenomena as they unfold in practice'. The first case study is primarily based on an ethnographic account of my participation in the co-op as a member and as a volunteer on some of its functional committees. I was part of the marketing team and within this team had a primary role of co-ordinating a couple of online surveys, such as the annual members' survey (which I discuss later), and some online polls to help make decisions for event planning. I also provided the membership team information technology (IT) support on tasks such as recording and processing membership data. At one point, the head of the IT committee gave up his position and I was asked to lead the IT team to implement two main projects: a shift-booking system for members; and, an online social network that would help members to communicate with one another and share documents such as meeting minutes and survey results. I also contributed to organising some membership events through my participation in the events committee, and helped in an exercise led by the operations committee to compare prices of some products offered at TPS with other supermarkets in the neighbourhood. Additionally, for four hours each month, I worked on the shop floor stacking shelves or serving on the tills. My active fieldwork lasted from February 2011 to August 2011. After August, I continued to provide some IT support to the co-op, mostly remotely, but no longer maintained a regular field diary. My participation in the co-op ended completely by the end of 2011.

The deliberative and participatory process of arriving at actionable choices in a co-op organisation is complex. Hence, developing an appraisal of why and how certain choices for strategic action are made demands a competent contextualisation of the decision-making processes. A participant observer's role in the organisation affords the researcher a valuable opportunity to accomplish this task (Atkinson and Hammersley 1994). However, although the researcher's role as a participant observer offers the

advantage of accessing case relevant data that would be difficult to obtain through other methods, it also raises important issues that concern reflexivity and ethics, which I will address later in this chapter.

As a participant observer, I recorded notes about the committee meetings I attended, my experiences of working on the shop floor, and the informal conversations I had with other members and office bearers at the co-op. On some occasions, these notes were written down during the meetings, and on other occasions, I recollected my observations after returning home from the co-op, usually on the same day. There were also times when I reflected on my experiences in audio format on my mobile phone. In the first couple of days, I tended to make exhaustive notes and record every detail I could remember after I returned from the field. However, I soon realised that this approach would lead to an unmanageable amount of data making the process of recording and analysing data very time consuming. Hence, I gradually tuned my recording of observations from the field to addressing the specific research questions identified. My notes were not only mere descriptions of factual observations but also contained my own feelings and reflections on those observations.

3.5.2 Interviews at TPS

I draw information from two interviews, one with a co-founder and another with one of the persons responsible for sourcing food products for the co-op. I interviewed the co-founder, Arthur Potts Dawson, with four other volunteers of the co-op's marketing committee. The purpose of this interview was to collect sufficient information from Arthur about the founding of the co-operative so that the marketing committee members could respond to media inquiries on the subject without having to turn to Arthur every time. My aim as a researcher for the case study was to learn about aspects of initial development of TPS that the television documentary may not have covered adequately, and also to confirm with Arthur whether my impressions of the story as presented by the documentary were reasonably accurate. The interview began with a narration of TPS' conception by Arthur punctuated by our questions when we wanted to learn more about a specific aspect. For example, I asked Arthur to provide more details about the initial funding sources and the extent of involvement of the television production company in the project's conception and early development. A marketing

team colleague recorded this interview in audio form and shared it with me later. I also took notes during this interview.

The second interview was with one of the product buyers. I had already had some brief conversations with her during my involvement as a member and committee participant. However, my formal interview with her took place after I had ceased my role as an active member at TPS. This interview was conducted to get a coherent sense of the product procurement policy at the co-op, which was unwritten at that stage. I wanted to understand how decisions are made regarding what products are offered and from whom they are sourced.

3.5.3 Member survey

As a volunteer of the marketing committee, I had the opportunity to co-ordinate an online survey of members that focused on understanding factors that motivated members to join the co-op, and collected open feedback on improving the co-op to serve the members better. Although results from this survey inform my case study, this survey was not designed by me for the purpose of this case study. Instead, the selection of questions included in the survey was a collaborative effort between members of the marketing, membership and operations committees as well as the management team of the co-op. The aim of the marketing team was to get members' feedback about their expectations from the co-op before the team could prepare a forward marketing plan.

Once a few initial questions were proposed by members of the marketing team, other committee members were invited to comment on the wording of questions and the topics that would be valuable for their respective committees. For instance, the operations team wanted to know about the type of products that members would like to see on the shelves of the co-op and also members' value preferences for shopping at the co-op. The management team, on the other hand, was keen on collecting data about what motivates members to join the co-op, as this was asked of them by funding bodies they had approached in the past. There was, however, an agreement among most committee members who provided feedback on survey design that the survey should be reasonably short and quick to complete in order to maximise response rate. In the end the online survey contained eight questions that covered product preferences, value preferences, membership motivations, expectations from the co-op, a satisfaction rating

and an open question requesting suggestions for improvement. The list of survey questions is available in Appendix D.

After a number of iterations of questionnaire design, we sent the survey via email to around 600 of nearly 1000 members who had consented to share their email addresses with TPS. Of these, 260 members responded to the survey, though not everyone responded to all questions. The email newsletter section inviting members to complete the survey read as follows:

> Our Members Survey
> We would like to know about your product preferences and the factors that motivate your shopping. To find this out, we've prepared a short survey with 8 questions and it should take no longer than 5 minutes of your time. This survey is open until 30 April, but it'd be fantastic if you can click on the link below right away and send us your responses. They are very important to us and will greatly help us to improve our services.

The online software surveygizmo.com was used to collect responses and also produce the collated report for close-ended questions. For the open-ended question concerning product suggestions and improvement feedback, another member of the marketing committee and I presented a summary analysis, coding responses into categories and, in the case of members' feedback, providing a few examples for each category. In this process, I was responsible for coding product suggestions and the other member for coding members' feedback. However, for this case study, I also carried out an independent analysis of members' feedback where the coding into analytical categories was tuned to the specific research questions explored.

Since there was not sufficient baseline information available about the demographics of members, we could not ascertain how representative the survey sample was along demographic dimensions. Therefore, the responses to the survey questions, which have been used to highlight various aspects in this case study, were taken as indicative and not necessarily representative. The aim was to learn about concerns and issues flagged up by members that required management's attention. Our goal in the marketing team was also to provide through the survey a voice to those members who found it difficult to share their views in members' meetings or directly with the management team.

3.5.4 Document analysis for TPS

I watched all episodes of the documentary and made notes to piece together information relevant to my narrative. In writing my narrative, I also referred to a report prepared by David Barrie, one of the co-founders of TPS. This report documented some of the experiences of the top-level management at TPS in running the store, and was developed with the funding and support of NESTA (2012) in order to help other similar initiatives.

3.5.5 Semi-structured interviews with key informants at other four co-ops

I draw my data on the other four co-ops, primarily, from the interviews I conducted with one member of the management team in each co-op. The interviews with key informants were focused primarily around understanding the experiences of these co-ops with respect to the three themes identified in the research questions: building a community with a shared purpose; making sustainable food available and affordable; and enlisting member participation. I followed a general interview guide (see Appendix B). However, each interview was loosely structured and the actual questions asked and their order depended largely on the nature of responses received from interview subjects.

3.5.6 Telephone-based members' survey at Stroudco

In the case of Stroudco, I had the opportunity to gather additional data. I was asked by the Stroudco management to help with a member survey they were conducting to find ways to increase the frequency of orders from existing members. My job was to reach out to 27 members who had ordered with Stroudco at the start of their membership but had not done so in the previous three months. In the end, I was able to take feedback over the telephone from 11 of these members. I called these members on behalf of Stroudco to ask just one open-ended question which was more or less phrased as follows:

> Hi, I'm calling from the Stroudco food co-op to thank you for your membership with us and find out if there is anything we can do to make Stroudco work better for you?

All the interviews were conducted in February 2012. Conversations lasted 15 minutes on average and offered indicators of barriers to member engagement with the co-op.

3.5.6 Document analysis for co-ops other than TPS

Following is a list of documentary sources that I referred to for gathering additional information about the other four co-ops.

Stroudco Review (Stroudco 2012)	A report produced by Stroudco management in August 2012 about how Stroudco operates and the lessons learned. This report includes the output of the telephone-based members' survey I carried out, in addition to summaries of findings from studies on the co-op carried out by researchers from University of Cardiff.
Mailing list of Pimlico Food Co-op (Transition Pimlico Food Co-op 2012)	Through access to this mailing list I got a sense of how members co-ordinated their orders at this co-op.
Websites of Stroudco (2011) and True Food (2012)	I gathered some initial information about these co-ops and their objectives from their websites before I interviewed their key informants.
Co-ops Guide for Brighton & Hove (University of Brighton Co-op 2013)	This guide was prepared by organising members of the University Co-op to share their experience and help other people to set up similar co-ops. This document was published after I had interviewed the key informant and it supported the data collected in the interview.

Although the data available from the other four co-ops is not as context-rich and in-depth as that for TPS, including these cases in the analysis of key challenges provides a broader base of knowledge and evidence to advance understanding. Instead of looking at all aspects of the sustainable food co-op operation in the cases that were included in the second stage of the research, the emphasis was on developing a more nuanced understanding of the challenges that food co-ops face in influencing sustainable food consumption. In defence of the case study methodology, Flyvbjerg (2001) argues that gaining expertise in a given field is only possible through an intimate knowledge, which is context-dependent and based on experience, of several cases that populate that field. The second stage of this study has obvious limitations in drilling deep enough into the four food co-op cases to fully appreciate the context of these co-ops' operations and the lived experiences of their members. However, I would argue that, despite these shortcomings, the discussion of food co-ops' opportunities and challenges in promoting sustainable food consumption has been enriched by including additional evidence from these co-ops.

3.6 Analysing the cases

Making sense of a case study from data compiled using a variety of methods can be challenging since methodological guidance on analysis and interpretation of data is usually clearer when following a single method approach. Throughout the data collection process I had followed Lofland's (2004) suggestion on keeping memos about possible directions for analysis which, to an extent, helped in sorting and selecting data at the final stage of the analysis. But most importantly, an iterative focus on the research questions while looking at each piece of evidence provided the structural framework both for analysis and presentation of findings.

In analysing the selected cases, this study takes both an illustrative and an interpretative approach. For the in-depth ethnographic study of TPS, the illustrative approach takes the foreground. Flyvbjerg (2006) considers illustrative examples provided in case studies to be an important tool for practical learning. The utility of this approach is aptly captured by Thomas (2011: 131):

> The case study is not a proxy, an alternative for real experience, but incorporates its ingredients. It illustrates and provides metaphors by which the reader can 'get inside' the problem, thinking about it and empathising with the characters of the story being told. It enables readers or inquirers to share the experience, using their own reserves of knowledge and experience to make sense of its structure and its lineaments.

The narrative account of TPS tells a story that unfolds in the specific space, period and context in which the participant observation takes place. Employing the participant observer's perspective and interpretation, the narrative attempts to weave together evidence collected from different sources into a coherent and connected tale. The level of detail included in the account is filtered by the analytical focus on the key research questions and the illustrative insights the case offers with reference to these questions.

The thematically-driven cross-case analysis which follows the narrative account then shifts the focus from the singular case to the class of cases defined by the analytic frame of community-based sustainable food co-ops. The in-depth ethnographic study brings to light key challenges faced by TPS in achieving its environmental objectives. The subsequent cross-case comparative analysis hinges upon these identified challenges, and is used to derive a potential set of conditions under which sustainable food co-ops may be more effective in achieving their pro-environmental objectives. This discussion draws

not only upon primary evidence collected from the five food co-ops included in this case study, but also upon secondary evidence available from other studies on food co-ops.

I found the following recommendation from Yin (2009: 172) a useful guide for composing the cross-case report chapter:

> In such a report [involving multiple case studies], each chapter or section would be devoted to a separate cross-case issue, and the information from the individual cases would be dispersed throughout each chapter or section. With this format, summary information about the individual cases, if not ignored altogether…might be presented in abbreviated vignettes.

Instead of using a more conventional approach of presenting the findings followed by analysis and discussion, the cross-case report in this study presents findings, analysis and discussion together under thematically organised sections. A summary profile of each of the included co-ops is made available at the beginning of the chapter to provide context for more detailed findings and discussions that follow in subsequent sections. Thomas (2011) has also defended this approach for composing case study reports. In case studies, one may be constantly evaluating 'emerging findings' against one's propositions. Hence, according to Thomas (2011: 209), it may be 'inappropriate' to strictly separate out the written up sections 'wherein *findings* precede the *analysis*, which precedes the *discussion*' (emphasis in original). Nevertheless, I have separated analysis with reference to previous studies on co-ops into a sub-section within each of the main thematic sections in order to more clearly distinguish the new evidence contributed by this study to the knowledge of food co-ops. The concluding section of the cross-case report draws together the case study findings and analysis to suggest the potential conditions under which community-based sustainable food co-ops can more effectively pursue their environmental objectives.

3.7 Reflexivity

In the context of any research, it is important to reflect on the researcher's position relative to the participants involved with the research. As Mason (2002: 30) observes:

> the researcher (the knower) is directly implicated in the knowledge he or she produces. In other words, my own subjectivity fundamentally shapes the pictures… that I produce, according to the assumptions that I make, the questions that I ask, the concepts and excerpts I prioritise, the analysis I compose, and the interpretations that I generate ... The dynamics of each and every interview, including the questions of personality and timing, will influence the things that interviewees tell me, how

> they tell me, the slant they put on a given event, what they leave out, what they forget, and what they remember.…

Moreover, an in-depth case study, where the researcher is embedded as a participant observer in the studied community, calls for even greater scrutiny of the researcher's positionality in relation to both the proposed topic of research and the research participants. In this section, I discuss how I arrived at this research topic and how throughout the research process I negotiated my positions as a researcher and participant observer, and as an insider and outsider in TPS.

Two personal interests converged in developing this research project. First, before I started doctoral studies, my interest in economic democracy and social movements had resulted in a postgraduate dissertation on: 'What factors led to the emergence and growth of the co-operative movement in the early 19th century in Great Britain?' Through this dissertation I had developed an appreciation for worker-owned food co-ops and the role they had played in increasing workers' self-reliance at economically difficult periods in the 19th century. Second, towards the end of my MSc studies, I had become more aware of climate change issues due to its coverage in mainstream and alternative media sources, especially after IPCC's fourth assessment report was published in 2007. Although I was already somewhat aware of the environmental impact of different choices of food and the different systems of agricultural practices, I was alarmed to learn about the extent of food systems's contribution to climate change from the IPCC's report. This led to further inquiry, which suggested that there was growing interest in policy-oriented research to find community-based solutions to influence pro-environmental behaviours. However, in the literature food co-ops had been neglected as a potential site for promoting sustainable food consumption practices.

From the outset, I intended to approach this research from an activist orientation. Although I had not previously been a member of a food co-op nor taken active part in the environmental movement, my aim in conducting this study was to explore questions that mattered to sustainable food co-op organisers. I wanted to incorporate their input and shared experiences, and present findings in a form that was accessible and useful to both academics and food co-op members interested in expanding sustainable food practice in their community. As such my approach was, 'empathic and interactive rather than extractive and objective' (Chatterton and Pickerill 2006: 732). A number of

scholars, particularly in the field of social movement research, advocate an activist-oriented and movement-relevant research practice (Flacks 2004; Anderson 2002; Bevington and Dixon 2005). Bevington and Dixon (2005: 192) make the case that 'the engaged researcher has more of a stake in producing accurate findings than one with no stake in the movement'.

However, both taking an activist-oriented research approach and using participant observation as a research method raise questions about a researcher's objectivity in evaluating the studied subject (cf. Bouma, Atkinson and Dixon 1995). In response to this criticism, Becker (1967) questions whether it is at all possible to remain value-neutral about a research topic using any research method. The very choice of the research topic is often laden with the researcher's value preferences or political sympathies. I do not believe that all researchers have to be personally involved with their case or have preconceived positive or negative evaluations of the case they intend to study. Case studies can be exploratory undertakings to illuminate latent and context-dependent knowledge in any given field. But many case study researchers, as Becker suggests, enter the research field with value preferences.

In the food co-op that is the subject of my in-depth case study, I am a bona fide member, and not just one 'acting out' a participant role. My position is one of an activist researcher who is interested in working out how sustainable food co-ops can become vehicles for supporting environmentally responsible dietary practices. Particularly with reference to instances when researchers become part of the subject of their research, scholars of qualitative methodologies (cf. Willig 2001; Seale 1999) emphasise the value of reflexivity in enhancing the credibility and trustworthiness of a qualitative study. While analysing the contribution of ethnographic methodologies in studying social movements, Plows (2008) underscores the need for ethnographers to be reflexive about their personal values and claims to knowledge so as to make explicit such influences as inform their research practice.

Making my position explicit regarding my allegiance to the organisation and its goals, I would argue, helps me to critically appraise the implications of my own position as a researcher-cum-participant at every step of the research process. At various points during the fieldwork I was conscious of how my involvement with the co-op might

influence the course of action the co-op takes and how this might have a bearing on the research questions I intended to explore. For the most part, in negotiating the dual role of researcher and sympathetic participant, I took the position of helping with the operational side of the co-op's functions, stacking shelves, providing information technology systems support, co-ordinating online surveys, serving at the tills, and helping with events, but otherwise curbing my instinct to be proactive about making a case for stronger environmental focus in the co-op's operations. Recording field notes and reflecting on the events in the field away from the field provided a measure of critical distance to the observer role in the research process. Fortunately, being part of some of the working committees gave me reasonable access to observe the operations of the co-op at close quarters, but not to the extent that I could exercise significant influence on strategic decision making, which was the remit of the core management team and the elected board members. Moreover, the co-op had a sufficiently large membership base, which limited the influence of any individual member.

I also made a conscious effort to focus more on identifying and discussing challenges instead of elaborating on the co-op's accomplishments to address a key concern raised about the use of case study methodology. Case studies have been criticised for tending to confirm the researcher's preconceived interpretations (Diamond 1996). This criticism has, however, been contested by notable case study practitioners (Ragin 1992; Flyvbjerg 2006; Campbell 1975). Flyvbjerg (2006), for instance, argues that a review of several case studies shows that instead of verification of prior assumptions, getting close to real life and practice contexts often enables case study researchers to question and revise their assumptions and hypotheses. My hypothesis is that community-based sustainable food co-ops have the potential to encourage sustainable food consumption. By focusing on the challenges a co-op might face in achieving this objective, I intended to avoid any bias towards verification of my hypothesis. At the same time, attending carefully to organisational challenges would, I hoped, steer me towards learning more about the conditions necessary to make such community-based initiatives successful in achieving environmental objectives.

3.8 Ethics

Ethical considerations are central to maintaining the integrity of the research process. Broadly, two key ethical concerns have been identified by methodology scholars (cf.

Silverman 2013; Thomas 2011; Bryman 2001): obtaining informed consent from research participants; and, protecting confidentiality of participants and not exposing them to any risk due to their participation in the research. In this section, I discuss the measures I have taken to address these concerns and point out some tensions that arose in subscribing to these ethical principles and collecting ethnographic data in a fluid and open membership-based organisation like TPS.

3.8.1 Obtaining consent

When I decided to research the case of TPS I wrote an email to the manager of the co-op requesting access to be able to conduct, in consultation with her and other management team members, research that could help the co-op and also contribute to my case study. However, I got no response to that email. Fortunately, after a couple of attempts to reach the manager by phone, I was able to speak to her and express my interest in working at TPS to both contribute to their organisation's goals and use my experience and observations as data for my research. She readily consented to my request and recommended that I should first join as a member and then find ways to contribute. She emphasised that TPS was an open organisation and the management was happy for student members to contribute through their research.

Although I had obtained the consent of the manager to study the co-op, I was aware that in a membership-based organisation such as TPS, no office bearer had the authority to formally approve a research based on participant observation without obtaining consent from every member-owner of the co-op. This was unlike obtaining managerial consent in corporate organisations where authority is hierarchical, and where a top-level gatekeeper's approval might be considered sufficient. However, obtaining every member's consent did not seem feasible or necessary for several reasons. Firstly, the research was not focussed on members in their individual capacity but as participants of the co-op and its processes. Individual consent would have been more pertinent if details about individual members were to be disclosed or their time and other resources were specifically requested for the purpose of this research exercise. Secondly, membership in TPS was open and fluid. New members were continuously joining the organisation and some old members would cease to be active. Besides, not every member had provided contact information. Thus it was not feasible to obtain consent from nearly 1000 members who had already joined or the new ones joining the co-op.

Most importantly, I intended to observe organisational processes and people in their natural settings. Since this was critical to exploring my research questions, I did not wish to make all those whom I encountered in a casual setting at the co-op overly self-conscious and unnatural in their interactions with me or with one another in my presence. Nevertheless, I did make it clear to a few members with whom I had frequent and meaningful correspondence, that I am an academic researcher interested in food co-ops and that my participation at TPS was going to inform my research. Moreover, as I mentioned in the section on reflexivity before, I was also just another member who shared the values and commitment to the co-op's objectives. With respect to sharing my experiences and findings about the co-op with the rest of the world, I could have been any other member who chose to blog or write about their experiences through any public medium. However, not being able to obtain explicit consent from every member of the co-op made it all the more critical for me as an academic researcher to protect the identity of all participants who in some way or another contributed to the case study narrative.

For the second phase of case-study research, which involved interviews with key informants at four other co-ops, informed consent was sought and obtained before the interviews were carried out. The interview with one of the co-founder's of TPS was conducted for the explicit purpose of allowing the marketing team at TPS to share it with people outside the co-op organisation, especially public media. For the second formal interview at TPS with the product buyer, explicit and informed consent was obtained before conducting the interview.

3.8.2 Protecting the participants

For the in-depth case study, this research explores an organisation that was difficult to keep under wraps due to the high profile it gained in the mass media. In the process of data triangulation, the four-part televised documentary is used as a source. Also, the public profile of the co-founders and the specific location and setting of the co-op is essential to developing the holistic case study narrative. Hence, an attempt to conceal the identity of the co-op was considered futile. However, protection of members' identities in the case study narrative has been given due consideration.

The primary focus of the research account has been on processes and organisational capacity. Where agency and actors are mentioned, no member's real name or identifiable personal data has been revealed. All names have been anonymised and pseudonyms have been used instead. Members' privacy has been strictly respected in the account of the research. Sensitive details about conversations with members that may reveal a member's identity or embarrass individuals who may have shared their personal thoughts and opinions in confidence have been excluded from the report. Only those quotes and opinions of co-founders have been included that were already in the public domain or were similar to opinions they had shared with public media channels.

In the case study report, only that data is included from TPS that was freely accessible to all members of the co-op. In particular, the results of the online members' survey (referred to in section 3.5.3 above) were made available to all members. Any member could have looked at those results and talked about them in the public domain. There were no confidentiality concerns raised by the co-op's management about this set of data. Besides, none of the survey responses presented in the report could be traced back to individual members as the responses were completely anonymised. Nonetheless, these responses provide important evidence in establishing an overall sense of members' motivations, expectations, and feedback with respect to the co-op. Also, financial data, such as annual revenue has only been included when it was shared in the annual or monthly members' meetings and with public media. For the other four co-ops included in the second stage of the thematically-compared cases, all key informants had given explicit consent to using the data shared by them. I was also allowed by Stroudco to use anonymised data from the telephone survey responses (and referred to in section 3.5.6 above).

In the end, I believe I have taken due care to protect the identity of individual participants who have explicitly or implicitly contributed to the research process. Whenever formal interviews were conducted, informed consent was obtained. In the ethnographic account, explicit consent from all participants and in all contexts of participant observation was not considered feasible. Nevertheless, consent was taken at the organisational level and only data accessible to all members or that was already available in the public domain has been used in the case study analysis and report.

3.9 Conclusion

This chapter has provided an account of the methodological concerns that guide this research design, the selection of cases and the rationale behind it, the multiple data collection methods, and the consideration of reflexivity and ethics in the context of this research. Following Dreyfus (2004), this study should be seen as a first step of a novice's attempt to develop a more nuanced and expert understanding of the potential of community-based sustainable food co-ops to promote sustainable food consumption. I conclude this chapter with Eysenck's observation, which captures the primary motivation behind using the case study methodology for this research: 'sometimes we simply have to keep our eyes open and look carefully at individual cases – not in the hope of proving anything, but rather in the hope of learning something!' (1976: 9)

Chapter 4

CASE STUDY: THE PEOPLE'S SUPERMARKET

We are stronger as a group than an individual. Think in a cooperative and communal way, set up local food hubs and create growing communities. I have tried to create that type of idea in The People's Supermarket, and hope that it grows in popularity.
Arthur Potts Dawson, Co-founder of The People's Supermarket, on CNN, December 19, 2010

In this chapter I present the case study of a food co-op whose mission statement includes a commitment to environmental sustainability. This case study is based on my ethnographic account of working at the The People's Supermarket and interviews with two key organising members of the co-op. In addition, a few other sources inform this study which include: an online member survey, which I co-ordinated with other members of the co-op; insights from a television documentary that followed the story of the founding of the co-op; and a report from one of the co-founders of the co-op (NESTA 2012). I evaluate the potential of the food co-op towards encouraging sustainable food choices, based on its ability to:

- forge a community of interest around sustainable food consumption;
- make sustainable food choices accessible and affordable for its members; and,
- get members involved in purchasing regularly from the co-op and running the co-op store.

The case is presented as a narrative which is organised broadly around the aforementioned criteria for evaluation. However, before I discuss The People's Supermarket in some detail, I offer a short profile of the co-op.

4.1 Profile of The People's Supermarket

The People's Supermarket was started in June 2010 to connect urban people with rural producers, reduce food wastage in the distribution chain and provide sustainable food options at an affordable price. It was founded by three people: an ecologically-minded celebrity chef, a retail expert and an urban space development consultant. The co-op is run as a retail store in a central area of London and is open to both members and non-members. Members are expected to volunteer at least four hours a month in the shop and can get a 10% discount on their purchases in return. There are monthly member meetings where members discuss and vote on important organisational and operational matters. Many members also volunteer in committees to run various business functions, such as marketing, events, membership administration, finance, and public relations. At

the time I worked at the co-op in 2011, it employed 3 full-time and 22 part-time personnel and had around 1000 members. It also had a board of directors elected from amongst its members to give strategic direction to the business and take key operational decisions. In its first year, the co-op's revenue was around £1 million.

4.2 Case Study of The People's Supermarket

The People's Supermarket (TPS) is located in the Borough of Camden on Lambs Conduit Street in a fairly central area of London. The landlord of the shop is a rugby school charity which also owns many other retail properties on Lambs Conduit Street. A number of small and independent retailers define this street's identity. Chain stores like Starbucks who have tried to locate there in the past have faced opposition from community residents loyal to the local retailers. Across the street from the shop is the world famous Great Ormond Street hospital, dedicated to providing health care for children suffering from critical illnesses. Passing footfall is typically made up of staff and families of hospital patients, students and staff from the nearby University of London buildings, office workers, as well as local residents, a large number of whom live in social housing. Within a ten-minute walk from the co-op's store, one can reach branches of three other large supermarkets — Tesco, Sainsburys and Waitrose.

I joined TPS in February 2011 and remained an active member for about six months. A friend had told me about the initiative, and by the time I joined the co-op, two of the four episodes of a TV documentary on the co-op The People's Supermarket had just been aired on Channel 4 in the UK. After joining the co-op, I worked on the shop floor and at the till, participated in the marketing and membership committees, led the IT committee for a few months, co-ordinated a members' survey, helped in a price comparison exercise for the operations committee, and attended some monthly members' meetings as well as the first Annual General Meeting of the co-op's shareholders. I also took the opportunity to formally interview two members. One was Arthur Potts Dawson, British celebrity chef and co-founder of the co-op. The other interviewee was a member who was responsible for the sourcing of the co-ops's food products. Based on a reading of the documentary, ethnographic accounts of my work experience at the shop, members' survey, interviews and references to media sources, this case study explores how the co-op mobilised resources to run the shop and recruit

members, and how effective it has been in promoting sustainable food choices within its community.

Right from the early stages of planning for the co-op, Arthur, its co-founder, involved a TV production company with a Channel 4 contract to document the startup process. In his interview with me, Arthur mentioned that the TV production company had already been interested in working with him for some time. He believed that this project might be a great opportunity to bring them on board as it would raise the profile of the project and help garner wider support for the co-op. The documentary makers followed the celebrity chef in his efforts to finalise a retail space for the co-op, attract members and financial backers and present his case for why there needed to be an alternative to the conventional supermarket.

In the documentary Arthur makes two critical arguments against the four big supermarkets that control 75% of the grocery market in the UK. Firstly, he points out that the large supermarkets generate enormous food waste, and secondly, that they exploit farmers by pushing prices down to commercially unsustainable levels for the farmers. According to the documentary's claims, food wastage by the large supermarkets can be up to 1000 tonnes a day, enough to feed over a million people. Products that are perfectly edible are still binned by the stores if they develop cosmetic blemishes or reach their overly risk-averse sell-by dates. To drive this point home, Arthur is shown hosting a co-op fund-raising dinner prepared using food products that were foraged from the waste bins of some of the supermarket stores. Arthur argues that this wasteful practice can be avoided if supermarkets would stop overstocking products and encourage their suppliers to put more realistic sell-by dates on their products. Also, wastage at the household level may be related to the buy-one-get-one-free offers that push customers to purchase more than they can consume. And finally, supermarkets are responsible for wastage at the farming stage. Some of the vegetable and fruit farmers Arthur visited expressed concern that up to 30% of their produce goes to waste when supermarket buyers reject it simply because it does not meet the supermarket's shape and size specifications. So the waste is generated not only directly in the supermarket stores but also offloaded on to their supplying farmers. In the latter case, the farmers have to bear the cost of the rejected produce. And on top of that, they face constant downward pressure on the prices at which the supermarkets are willing to buy their

produce. One dairy farmer in the documentary lamented that although it cost him 29p to produce a litre of milk, the supermarkets were only willing to pay 15p a litre. Unsurprisingly, this was driving him out of business. In my interview with him, Arthur told me that he had met many farmers with similar stories of wastage and/or exploitation due to the power of the big supermarkets over their supplying farmers. These stories and experiences inspired the mission statement of The People's Supermarket, which is stated as follows in the members' handbook (NESTA 2012: 25-26):

> The People's Supermarket is a sustainable food cooperative that responds to the needs of the local community and provides healthy, local food at reasonable prices. To this end, we believe in a series of key values, which guide our philosophy and management approach. We seek:
> - To create a supermarket that meets the needs of its members and the local community by offering high quality, healthy food at reasonable prices.
> - To buy from trusted suppliers with whom we develop mutually sustaining relationships.
> - To buy British produce where possible, and produce local to London.
> - Provide choice and information to our members to help them make healthy decisions.
> - To create a community supermarket that highlights the possibilities of consumer power and challenges the status quo.
> - To minimise wastage, by creating prepared dishes from food coming up to its sell-by date, and by composting all other waste material.
> - To provide inspirational training and life skill opportunities to the local community
> - To create a working environment that values every one's contribution, is welcoming, safe and non-judgemental
> - To be a training and development resource for our community.
> - To buy sustainable energy and other inputs, and to promote alternative, forward thinking ideas and solutions.

4.2.1 Mobilising resources and recruiting members

Setting up a community supermarket that reflected these principles in the heart of London demanded substantial financial and human capital. The founders, through their professional and personal networks and through active campaigning, had pulled in a number of experts to help them with their project. These experts advised on aspects such as creation of business plans, architectural and interior design and planning, project and co-operative management, as well as finance and accounting. Arthur estimated that the co-op must have saved at least a £100,000 in business consultancy fees due to the skilled human resources they could tap into free of cost. Above all, however, the biggest backer — both financially and in terms of organisational management — was the TV production company, Wall to Wall Television. Wall to Wall Television was obviously interested in the commercial value of the media content this

project's story would generate. Nevertheless, their involvement also injected creative ideas for reaching out to people and provided a tight focus on project management.

During the planning phase, the TV production company arranged an educational visit for the chef to a successful American co-op — Park Slope in Brooklyn, New York — which became the model for TPS. The idea of reducing operating costs by asking members to volunteer their time was borrowed from Park Slope, for example. The TV production company also offered critical financial help to the co-op to secure the rent of the retail space. They lent a sum of £130,000 when no other bank or financial institution was prepared to extend credit to what was seen as a commercially risky enterprise. Once the co-op finally opened in June 2010, there were still enormous financial pressures of making payments for rent (ca. £80,000 per annum), business rates (ca. £50,000 per annum) and ordering produce and supplies. Although some other private and public organisations had stepped up to provide small amounts of startup funding, there was not enough money to pay all the expenses. The documentary series was hurriedly aired on Channel 4 to prevent the project from going under. The four-part television series subsequently managed to draw generous public support for the co-op. According to the founders, the co-op increased its membership from 340 to 960 within three months of the documentary series appearing on television. Thus, the television deal turned out to be a great resource both for launching the project and recruiting members in the initial phase.

However, recruiting the first 340 members was not easy. One of the main targets for membership were the low-income residents of some of the big housing estates that surrounded TPS. Leaflets were distributed door-to-door and where possible TPS organisers explained the concept and the ethical principles behind the initiative personally to some of the residents. To demonstrate that a good meal can be prepared by buying ingredients from the co-op store, Arthur and some volunteers even set up a food stall at three of the estates, where they cooked and distributed free meals. Unfortunately for them, the results were disappointing. Arthur recalled that at one estate they gave out 320 meals and talked to people there about the co-op, but only one person got convinced to sign up. 'They just don't get it', he said, shaking his head. When he approached the representatives of the housing association at the nearest estate, he was told that low prices of groceries was the key concern for most of the residents. They

would prefer one of the mainstream supermarkets like Tesco opening up in their locality instead of an ‘arty-farty’ store like TPS. The representatives made it clear that in order for TPS to attract low-income residents, it would have to show savings in weekly shopping bills. Moreover, they were quite dismissive of the membership requirement to volunteer four hours a month at the shop. Even those residents who liked the ethics and community-minded spirit of the co-op were pessimistic about the co-op’s ability to be an alternative to a low price supermarket. In the end, only a very small number of people from the neighbouring housing estates signed up as members.

Not everyone was looking the other way, however. Some locals did appreciate the independent, community-based character and sustainability ideals of the co-op. Nearly a hundred of them signed up as members on the first day of membership recruitment at the store and agreed to work a certain number of hours every month at the co-op in return for a membership discount offered on their purchases. Some of them had learnt about the co-op through flyers distributed in the streets, local parks, and local shops and businesses. TPS founders had spoken at a couple of local resident associations and at a few student residence halls in the area. That brought in some locals and students as well. A few people had visited the stalls that TPS set up at local events and others had simply been intrigued by the signs and posters they had seen when they were passing by the TPS store. The store opened with about a hundred members. As the word spread about the co-op’s somewhat unique identity, friends of existing members and some of the professionals working in the neighbourhood also joined. Targeting flyer distributions at the doors of competing supermarket stores nearby, creating a buzz in social media networks like Twitter and Facebook, and hosting food tasting events outside the shop to draw people in, were some of the other marketing tactics that were employed to drive up membership. By the time the documentary was shown on the television on February 6, 2011, 340 members had signed up. The membership, thereafter, increased significantly. However, it stabilised around 1000 members three months after the documentary was aired and remained around that figure for the rest of the year 2011.

Figure 4.1 gives an indication of some of the key reasons that motivated members to join TPS. In response to an online survey question, members expressed a strong sentiment against the large supermarkets. They wanted an alternative that supported local suppliers, practiced sustainability and was run with the participation of its

consumer members along with opportunities to develop social relationships with other members. Most of the members felt that the co-op met their expectations (see Figure 4.2). However, when asked about how the co-op could interest them more, they suggested a number of improvement areas. These suggestions could be broadly categorised into issues related to product choice and price, operational processes, participation in management and cultivation of a social community of members. I will discuss members' feedback in each of these categories in the relevant sections of this chapter.

Thinking about when you first joined The People's Supermarket, how would you rate these statements.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Totals
I wanted to be involved in a business that sources from local suppliers.	0 0.0%	3 1.2%	11 4.3%	92 36.4%	147 58.1%	253 100%
I wanted the opportunity to meet more people through getting involved.	1 0.4%	13 5.1%	62 24.4%	123 48.4%	55 21.7%	254 100%
I wanted the 10% discount.	9 3.6%	21 8.3%	91 36.0%	95 37.5%	37 14.6%	253 100%
I liked the member-owned and member-run concept of the business.	2 0.8%	1 0.4%	12 4.7%	74 29.2%	164 64.8%	253 100%
I wanted an alternative to the large supermarkets	2 0.8%	4 1.6%	9 3.6%	47 18.7%	190 75.4%	252 100%
I wanted to be involved in a business that practices sustainability	1 0.4%	1 0.4%	9 3.6%	93 36.8%	149 58.9%	253 100%

Figure 4.1 TPS member's survey: motivations to join

How has your experience using The People's Supermarket differed from your original expectations?

Value	Count	Percent %
Well above my expectation	20	7.9%
Better than I expected	84	33.2%
Meets my expectation	111	43.9%
Somewhat below my expectation	35	13.8%
Well below my expectation	3	1.2%

Statistics	
Total Responses	253

Figure 4.2 TPS member's survey: expectations

I became the 543rd member of the co-op on the 26th of February, 2011. Following is a brief excerpt from my field diary of the members' orientation meeting I attended on my first visit:

> The orientation started with a presentation of the co-op's history and its business ethics focused on community ownership, environmental responsibility and fairness to local producers. The presenters pointed out, however, that members' views were divided about the kind of produce that should be made available in the co-op. The products ranged from the local and organic types to cheap and basic brands so that poorer members from the housing estates could also participate in the initiative. In the question and answer session at the end of the presentation, one member who was a resident in the neighbourhood expressed concern that her loyalty was a bit

> divided among other shops in the community. She felt that TPS may be taking away some business from other small shops in the area and may even be seen to be doing so with help from the local council that unfairly advantaged them over other businesses. Specifically, she mentioned that there was a rumour that TPS was paying a lower business rate or that their rates had been frozen. TPS presenters protested that they had not been given any such advantage by the local council. They assured the concerned member that they were not there to be ruthlessly competing with other local businesses, but to create a new model for consumer run supermarket which need not necessarily threaten other businesses. They felt that there was enough room in the market for everyone to play a role. In fact, they pointed out a case where TPS had gone out of its way to not compete with the local butcher by keeping its meat section small. A couple of other newly inducted members, however, were more blunt in their response to the concerns of other local businesses. One of the members asserted that there was no reason to occupy ourselves with such concerns as this was a market economy and not a planned one and other businesses need to deal with a competitor with an innovative and ethical approach just as TPS had to deal with their competition. Another member, who had come from Greenwich borough to join the co-op, expressed that instead of spreading rumours and back-biting, the other local shop owners should learn from the ethical practice of TPS.

4.2.2 Offering sustainable product options

Already in my first visit to the co-op, I was made aware of diverging concerns of the co-op 's members in terms of the product choices they demanded in the co-op. I was also intrigued by the hostility of the local community of independent shops towards the co-op, which was seen as a new competitor. Differences among members regarding the types of products that the co-op should sell were clearly evident in the television documentary. When the founders opened their shop's doors to the public, they were under intense financial pressure to generate sales — a minimum of £1800 per day — to break even on operating costs. Hence, based on the data available from retail experts they consulted, the co-op bought 500 of Britain's most popular products along with some fresh produce from local wholesalers. In terms of environmental sustainability of the range offered, there were a few organic products as well as some locally sourced fresh produce. However, it was clear from the beginning that the shop had to also sell what most people wanted to buy in order to be commercially viable. Hence, the principle of environmental sustainability had to be weighed against the need for commercial sustainability. The documentary followed two local residents from the housing estate into the shop on the first day. These residents were not convinced that shopping at the co-op would save them money against their preferred supermarket branch. They complained about not finding a variety of products that they usually shopped for and the fact that there was no other cheese except organic cheese. They

also questioned whether the co-op was just a general convenience store for top-up purchases or a supermarket that can cater for a customer's weekly grocery needs. Another local resident from the housing estate who had joined as a member also complained about not finding 'normal stuff' like fries and frozen pizzas. She was frustrated at seeing only fresh produce options for peas and artichokes. 'I do not have time to sit and pick peas and peel artichokes; where are the frozen peas?', she demanded.

The shop struggled to make decent sales for a few weeks after the opening. To understand why members were not shopping at the co-op, the founders called the first members' meeting. In that meeting, a few members, in particular four residents from the nearby housing estates, gave a clear message that the products offered were too upmarket. They reckoned that there were hardly any value range products and no convenience foods they could use to put meals together in a short time. This is not what they had been promised when they joined, they felt. Their understanding was that the shop will stock what the community wanted, but what the co-op was offering was not what they wanted. It seemed to them that most members were middle class and the shop catered mainly to higher income groups. To this, one of the members responded, 'I am middle class and I still cannot afford organic'. Some other members, however, pressed for stronger environmental commitment. There were voices of concern against unseasonal and air-freighted fresh produce available in the co-op. One member found that the shopping aisles at TPS did not look too different from those at a conventional supermarket. She wished that TPS would offer more sustainable food products. There were also requests for more vegan and gluten-free products. In the end, a compromise was reached with the members regarding the product choices to be offered at the co-op. It was decided that, wherever possible, each product line would offer three options — a sustainable option, a market leading brand, and a lower priced value option similar to that available in conventional supermarkets.

In the same meeting, Arthur urged members to get out of their comfort zones and try to shop differently. He felt that they might be used to buying certain brands but they should adjust and adapt and make more use of what was available at the co-op to make it more successful. To this end, he made recipe flyers available at the co-op to help and educate people about preparing meals with ingredients that could be bought at the

store. The documentary showed that some of the shop's customers were quite happy to find these recipes.

However, it was still difficult to offer products at competitive prices. Arthur had been focusing on buying high quality products. This was perhaps not surprising given his professional background as a gourmet chef. Although he realised that he had to listen to the co-op's members about their demand for better prices, he did not want to get cheap produce at the cost of exploiting farmers. Also, since the co-op could only make small orders with the wholesalers initially, it could not buy stock at low enough prices. So Arthur and his team had to look for ways to offer produce at a lower price than other supermarkets despite their inability to match the volume of orders normally placed by larger supermarkets.

One such opportunity presented itself with farmers whose produce was rejected by the larger supermarkets for cosmetic reasons. This 'Class II' graded produce would normally go to waste or had to be sold at a loss as animal fodder (see also Stuart 2009). But since it was perfectly edible, it could be offered in the shop for a much lower price than usual to the co-op's customers. This would prevent at least some of the 'Class II' produce from going to waste and provide the farmer a better deal at the same time. So it seemed like a great idea which would benefit the producer, the consumer and the environment. The documentary showed three instances of farmers of potato, apple and cucumber who readily gave a very good buying price to Arthur for 'Class II' produce, which in turn enabled him to bring this produce to the co-op's customers at below market prices. The farmers also benefited from this deal. For instance, a farmer offered a certain variety of potatoes to Arthur for 16p a kilo, for which she would have received only 4p a kilo from the larger supermarket she used to sell to. Arthur could sell these potatoes at 32p a kilo and still offer them cheaper than the larger supermarkets. Many customers and members reacted positively to this initiative and hoped that the co-op could leverage more such opportunities.

One member who was critical about high prices earlier was shown in the documentary to be impressed with the low price of the newly brought in 'Class II' produce. Affordable prices were important to pull the local community together, she felt. However, the documentary also showed an example of one mum and her kids from the nearby

housing estate who did not immediately warm to the odd-shaped cucumbers. They found the produce ugly and doubted its quality. It took some persuasion by Arthur who got the family to taste the cucumbers to prove that they were not at all inferior in quality to the more conventionally-shaped cucumbers found on sale elsewhere. Once the family members appreciated the taste, they had no hesitation in buying the produce, given that the price was much lower than what they were used to paying for it. Although this family was successfully persuaded to buy the 'curly' cucumbers, the selling experience would have suggested to Arthur that some other customers might associate poor quality with unconventional-looking produce and not every time would a co-op member be at hand to convince them otherwise.

When I joined the co-op I found that sourcing 'Class II' produce directly from farmers was an exception rather than a regular feature at the co-op. Once the documentary filming had ended the co-op did not have the human resources to search, follow up and arrange collection of farm produce that was rejected by larger supermarkets and thereafter earmarked for landfills or animal feed. Occasionally, a couple of local farmers, who had developed a relationship with the co-op as members, did bring in such produce. But the co-op's shop was too small an outlet for the quantity of waste the farmers had to cope with. Hence, this potentially useful way of making local food available at reasonable prices to the co-op's consumers could not be practically implemented on a consistent basis at TPS.

In a price comparison exercise conducted by the co-op in the first week of April 2011, in which I helped the operations committee with the implementation, prices of a select range of 31 products available at the co-op were compared with those at the nearby branches of three other supermarkets. These products were selected by the management as the ones that were most likely to be included in a weekly basket of shopping by the co-op's customers. We found that only in the case of free range eggs were TPS prices consistently lower than all other supermarket branches in the neighbourhood. After applying the membership discount, TPS prices were lower than 7 out of 19 comparable products in Tesco, 14 out of 30 comparable products in Waitrose and 13 out of 24 comparable products in Sainsburys. Even where TPS was cheaper, the price difference was barely a few pence. Hence, it was difficult for customers to opt for TPS over other supermarkets on the basis of price alone, especially considering the larger range of

When you buy a product, how important are the following factors?

	Very important		Important		Neutral		Not important		Totals	
Personal recommendation	11	4.4%	75	29.8%	129	51.2%	37	14.7%	252	100%
Organic	32	12.6%	101	39.9%	87	34.4%	33	13.0%	253	100%
Animal welfare	103	40.4%	109	42.7%	36	14.1%	7	2.7%	255	100%
Fair trade	71	28.0%	132	52.0%	45	17.7%	6	2.4%	254	100%
Allergy concerns	22	8.7%	33	13.1%	64	25.4%	133	52.8%	252	100%
Vegetarian/Vegan	43	17.3%	43	17.3%	54	21.8%	108	43.5%	248	100%
Price	84	32.7%	120	46.7%	45	17.5%	8	3.1%	257	100%
Brand	4	1.6%	39	15.5%	103	40.9%	106	42.1%	252	100%

Figure 4.3 TPS member's survey: factors influencing product choices

products on offer at competing stores. The co-op needed to focus on other factors to help draw customers to the shop.

In the online members' survey, members were asked to rate the factors that were important to them when they bought food from the co-operative (see Figure 4.3). If one takes a non-weighted total of both 'important' and 'very important' ratings, animal welfare comes up as the most important concern (212 votes), followed by price (204), fair trade (203), organic (133), vegetarian/vegan (86), personal recommendation (86), allergy concerns (55) and brand (43). Members also reported strong support for sourcing from local suppliers. Responding to the question about factors that motivated them to join the co-op, 239 out of 253 members 'agreed' or 'strongly agreed' with the statement, 'I wanted to be involved in a business that sources from local suppliers' (see Figure 4.1).

The co-op had responded well to some of the major concerns of their members. Most importantly, animal welfare was a key criterium in procuring meat products. One of the co-op's buyers, with whom I had the opportunity to speak with on many occasions, had made visits to suppliers' farms to ensure adequate welfare conditions of animals raised for their meat and eggs. Also, only sustainable fish certified by the Marine Stewardship Council was offered in the shop. There was a small section of the membership that was vocal in demanding a cheaper and larger range of meat and fish. This could have compromised the objectives of promoting animal welfare and sustainable fishing. But

the co-op stuck to those objectives. Arthur proudly reported at the first Annual General Meeting (AGM) that despite their decision to be ethically selective about meat and fish products, meat sales had increased significantly in the first year. In addition, going forward, the shop was now able to offer more by-catch sustainable fish options and at a better price than previously available. There were also a number of Fairtrade products on offer and this category was strongly promoted with the help of annual celebrations of events such as the Fairtrade Fortnight. Occasionally, local suppliers and small and independent local brands were supported and given a chance to introduce themselves to the shop's customers through product tasting sessions. Based on customers' responses, some of the locally produced items became a successful and regular feature on the shop's shelves. For example, artisanal bread from the Flourish Bakery in Tottenham, London, was reported as the top selling product in the first AGM. The shop also stocked Frank's Honey, which was supplied by one of the co-op's members from his garden in the suburbs of London.

Organic fresh produce options were limited however. This was partly a reflection of the perceived lack of demand from the shop's customers. Many of the residents of the neighbourhood council estates whom the founders wanted to attract to the co-op valued price over organic. Some members were vocal about this preference in the early membership meetings shown in the documentary. Arthur mentioned to me once, in a conversation we had while preparing a fruit salad in the co-op's kitchen, that if it was up to him he would have offered only sustainable food options in the co-op. However, since he started working on the initiative he had found in his interactions with other members that most of them did not care about sustainability as much as they did about price. And since this was a co-op and not his personal business, he had no choice but to respect the voice of the member community. The membership survey also suggests that for many members price is a more important factor in coming to a purchase decision than whether or not the product is certified organic. In response to how the shop could interest them more, one member wrote: '[The shop should offer] more affordable mainstream items - less of the obscure veggie, organic and non-essential food items.' Another member added: '[The shop should] appeal to more local residents who are Sainsbury and Tesco devotees - make sure it doesn't turn purely organic, middle class!' Hence, member preferences were an apparent reason for the limited organic choices offered in the shop.

Nevertheless, a section of the membership, about 51% of those of who responded to the survey, considered organic an 'important' or 'very important' factor in their food purchase decision. Preference for organic and sustainable produce also came through in some open responses to the question of how TPS can interest members more. Some members expressed that they would like to see more seasonal, local and sustainable produce in the shop with more information available about provenance and how the produce is grown. One member, for example, said: 'I would buy organic fruit and vegetables at TPS if it was available. There are many producers at farmers markets whose produce is not accepted by the major supermarkets who could be approached'. Another member expected TPS to put 'more focus on sustainable and "really" local food, not just food packed and labeled in Britain'. So it seemed that there was at least some demand for organic and sustainable produce that was not yet being met by the shop.

When I asked one of the store's buyers why the co-op was not offering more organic fresh produce, she pointed to logistical and resource constraints rather than a lack of intention from the management. In fact, she seemed very interested in finding a way to offer more sustainable fresh produce at the shop. She explained that the range of fresh produce that was currently available at the co-op was entirely determined by the shop's chosen fruit and vegetable supplier, Gilbert, who was also a member of the co-op. His business was to supply to some gourmet restaurants in the city. As such, his focus was on quality, and not always on sustainability. This meant that there were some days when organic and British-grown options were available, but the co-op had not implemented a consistent policy on sourcing organic and locally grown fresh produce. Gilbert had previously supplied to Arthur's restaurants and Arthur trusted him. So when the co-op's shop opened Gilbert answered the call to help out with supplying fresh produce to the shop.

Although the shop's buyer had thought about pushing for more organic and local produce, she was hesitant in the beginning about interfering in Gilbert's work and disturbing a working relationship. He offered convenience and the buyer was not sure if she had the time and resources to deal with the overhead of sourcing fresh produce from several independent suppliers. But as other local growers sought the buyer's attention, she did speak to Gilbert and managed to expand the fresh produce offer to

include a few more local options. More organic options, however, were brought in only after some customers started asking for it. These customers were previously sourcing organic produce from another independent grocer, located on the same street as the co-op; but in the meantime that shop had shut down. Responding to this opportunity, one of the co-op's newly inducted staff members, Terrence, who was previously a trainee from the Future Jobs Fund programme, took the initiative to find and organise the wholesale supply of more organic produce at the store. This was the kind of additional human resource help that the co-op's buyer had been looking for, and the expressed demand from customers enabled her to make the business case for introducing more sustainable fresh produce options at the store. The buyer told me in an interview later that the sale of organic produce had since been going well and she was relieved that Terrence had taken over all the responsibility for managing the sourcing for this product category. However, although organic options had increased, the vast majority of fresh produce on offer was non-organic.

In this way, TPS was able to offer a product mix that catered to those members who had concerns regarding food ethics and sustainability as well as to those who wanted popular brands and lower cost product lines. This enabled the co-op to gain a broader customer base for itself. In an interview given to the Fredericks Foundation (2012), one of the co-op's founders and CEO of TPS, Kate Bull, summed up the product strategy thus:

> We don't judge, but we do give choices. I personally may believe Coca-Cola, for instance, is one of the most dangerous products out there. But it's one of our top 10 lines. If we didn't sell it, we wouldn't have a business. But we always offer an alternative – we also sell Ubuntu [Fairtrade] cola. There's actually nothing we won't sell except cheap beer and alcopops. But cheap beer has no profit margin anyway, so why would we?

Some members did not, however, agree with this policy of trying to cater to a variety of customer segments. In response to an open feedback survey question, one member, for instance, urged the management:

> Do not try to please everyone but work out what is important to sell. It's a bit of everything at the moment and therefore not strong enough. Either [products] should be very cheap or better quality or organic.

Some other members demanded still lower prices, broader range, more local and seasonal, more ethical, more Fairtrade and more organic products. So striking the right balance continued to be a difficult proposition. The table in Figure 4.4 shows a selection

of feedback on product and price from members in response to the question on how TPS could interest them more.

Figure 4.4 TPS member's survey: product and price related feedback

Price	Reduce prices! I shop there sometimes but couldn't afford to all the time. I really like the product selection particularly the fruit and veg but it is more expensive than alternatives.
Choice	The fruit and veg is nice in its choice and quality and the kitchen produce is great, but there is much left to be desired when it comes to meat and dairy produce.
Seasonal and Local	1. By being more sustainable and stocking seasonal, local produce. e.g. not having strawberries or asparagus until they are in season. The current strawberries don't taste of anything and will put people off buying fruit at TPS. 2. Seeing imported broad beans, peas and strawberries recently in the shop, when the British season is not far away made me wonder what our aims are.
Organic and Fairtrade	Increase the amount of organic and Fairtrade products and try to work on lowering the prices where possible. Can we please label what fresh produce is organic and what isn't.'
Local and Fairtrade	Would be great to see almost 100% products sourced from local producers and all the other be Fairtrade and that at the same price as in other supermarkets.

Although the above table highlights critical feedback, and there were more of these due to the wording of the survey question that specifically asked for suggestions for improvement, it is important to note that some members did express satisfaction with the product offering, in particular with the choice of fresh fruit and vegetables available in the shop. For instance, a member wrote, 'I think if you wanted to look to improving your overall offer on the shop floor [I would say] that the fruit and veg is absolutely amazing but your longer life products let you down on display and variety in comparison'. Another member said, 'I do not live that locally, and so cannot use it for weekly shops, but love the bread, fruits and veg'. Therefore, the co-op evidently did deliver good options in specific product categories.

Members' interest in the products, however, was not limited to shopping at the co-op. Some of them, especially those who had been inspired by the television documentary, wished to develop a deeper relationship with their food in terms of understanding how their food was produced and who was supplying it to the co-op. The documentary had

emphasised this relationship and had perhaps created a certain expectation that membership in the co-op would mean having opportunities to explore this relationship further through farm visits, fruit and vegetable picking events and so on. However, once members joined they were disappointed to not find these opportunities available. The following selection of responses shows the interest in such opportunities, and in one case, the disappointment when the co-op did not meet the member's expectations in this regard.

1. I'd love to visit farms and pick up fruits and vegetables or generally get involved and help out on the 'producing side'. It'd be a hell of an experience and very educational.

2. I'd like to meet some suppliers. Felt a bit cross that the TV programme claimed that I'd be asked to go to a farm and I hadn't.

3. One thing I would love is to actually visit the places the food came from eg I've always buy organic dairy products because they have higher standards of animal welfare. But I'd love to visit, say Yeo to see for myself how the animals live. Probably not a very practical idea though.

After seeing these responses and also hearing about such requests from members on a regular basis, the co-op's buyer once organised a farm visit and fruit picking day with the help of a local farmer who supplied to the shop. However, on that occasion, only four people from among those who had earlier expressed interest were able to turn up. In the end, the trip was cancelled as the number of people was too little to justify the effort for the farmer concerned. This experience showed that it was not so easy to respond to members' demands and expect them to follow up on their expressed interests. However, in this particular instance, as I was one of those who had expressed interest but could not attend, I can add a member's perspective here. I felt that the trip was organised on short notice and this might have contributed to a low response. Also, given that many members had shown interest in this particular activity and it had the potential of engaging members more deeply with the co-op's mission, opportunities for farm visits and meeting the suppliers were expected on a more regular basis by members, and not just once in eight months. So, in this respect, the co-op could have done more to meet the expectations it had apparently set in the documentary.

4.2.3 Practicing sustainability: The People's Kitchen

In addition to offering sustainable food options, the co-op embarked upon an initiative, The People's Kitchen, that enabled it to practice sustainability in a way that was

somewhat unique for an urban grocery store. In the kitchen, tucked away in a small corner of the shop, ready meals were prepared and these attracted a large number of local office workers, students and staff from the nearby hospital. Lunch times were the busiest times of trade for ready meals and some customers also came to pick up a meal before leaving for home after work. Most of these customers were not members as they did not live locally and could not afford the time to work at the supermarket. But they were valuable customers for the business nonetheless. Behind the scenes, the supermarket was saving fresh produce that was near its use-by date from going to waste by incorporating it into ready meals which were in demand by the professional and student population in the neighbourhood. Furthermore, any remaining food waste from the kitchen was sent to a local community growing project's compost bin to be turned into organic fertiliser for the fruit and vegetable produce that was grown there and sold back to the co-op. The People's Kitchen demonstrated how the practice of environmental sustainability could be integrated at the end-point of a grocery store's food distribution cycle, i.e. at the point of waste management. Moreover, it became an important source of driving trade at the tills.

The initiative, however, was not planned at the outset of starting the co-op. After the first month or so of running the store, Arthur found that the store had to dispose of almost £3000 worth of fresh produce that was not sold. This was the type of wastage the big supermarkets were accused of, and the kind he had riled against in the documentary. Determined not to let his alternative to supermarkets contribute to the £1.5 billion worth of food wastage in Britain (as reported in the documentary), he decided to set up The People's Kitchen to turn potential food waste into ready meals. Most of the equipment for the kitchen was obtained as a donation from another business that no longer needed it. In the first week of running the kitchen 63 kilos of food waste was saved from going to landfill. Customers liked the quality of freshly prepared meals at the store. There was an excitement about the variety of meals that were offered as the menu changed each day. A professional chef with a team of supporting members would use their skill and culinary innovations to good use in coming up with ways to design a menu largely around the fresh produce that had to be used up before it went bad. The chef was initially unemployed and worked as a volunteer, but was later inducted into the permanent staff roll of TPS as the kitchen became more successful. At the first Annual General Meeting of TPS in April 2011,

Arthur reported that the kitchen was saving around 94 kilos of food waste per week which was worth around £550 and contributed to about £2800 of sales revenues. By February 2012, the kitchen was serving over 700 ready meals a week (NESTA 2012). The kitchen's success meant that it not only served ready meals in the store, but also started offering catering services at selected business and charity events. This helped both in spreading the co-op's name and mission to people further away from the shop, and in creating additional revenue for the co-operative.

4.2.4 Running the shop

The co-op had become a food store as well as a sustainable kitchen and catering operation, and the management of the co-op had to overcome the challenge of running these operations efficiently with the help of member volunteers, most of whom had no experience of working on a shop floor or at the till or in a commercial kitchen. The documentary showed a retired actor and a jeweller, who had come to work on their first shift, struggling to stock the shelves and carry out other tasks on the shop floor. They, however, enjoyed the novelty of their experience and hoped that they would get better at the shop floor tasks with more practice. In the following note from my field-diary, I share my first day's experience of working at the shop floor.

> I was welcomed by Mike, who was the shift manager and responsible for helping new members get used to their work responsibilities on the shop floor. Only two out of four members signed up for this shift had turned up. The first job that the two of us got was to find some new products in the storage area, get price tags printed for them at the till and then find some shelf space to introduce them. That was not problematic. After that we decided to restock empty shelves. This seemingly simple task turned out to be less than straightforward. I recorded the products that needed re-stocking and went to the storage area to find them but more often than not failed as the product was out of stock. But this was only discernible by trial and error. There was no easy way for shop workers to check on a register (digital or print) the status of all products stocked. At times I took some of the stock from the storage downstairs to restock upstairs and found those shelves full with some other stock that was not supposed to be there, which was a tad annoying. After spending some time re-stocking and re-arranging shelves, I volunteered to do data entry work involving the uploading of membership application data to an online database system. This work was tedious but I made good progress.
>
> While I was busy going in and out of the basement, I overheard a member, who I recognised from the TV documentary among the first batch of members at the co-op, complain to one of the shop's management staff. He was not happy with how some decisions were being taken without involving other members. To him it seemed that the founders had their own agenda and were pressing on with it. They needed to realise that this project was not just their baby any more, he felt. Other members were part of it now and their views and need for participation must not be ignored,

he added. I did not hear what his specific concerns were but some signs of tensions were already visible with the growth of membership and diversity of concerns.

I had some good conversations with other co-workers. One that stood out was with a volunteer who was not a member but was working at the shop to gain work experience in between jobs. This was funded by a government programme for the unemployed. He told me that he had worked for all other big supermarket chains, but never felt the same kind of loyalty he felt towards TPS. When I asked him why he felt that way, he replied that it was because he respected the ethics of the shop. He liked that it was run on principles other than simply making profits and it treated its workers well.

After I had completed the shift and was preparing to leave, Jon, an American, and another lady, who was originally from Australia, joined me in a chat about the Obama campaign, his tenure so far, the situation in Libya and Egypt and their political future. The lady was all praise for Fidel and Cuba whereas Jon had some reservations about Fidel. Some of his Cuban-American friends had told him negative stories about repression of dissidents in Cuba. Both of these members showed good political awareness and an interest in social justice issues. Overall, it was an interesting first shift. I look forward to meeting more like-minded people in my next shift but I am not particularly enthused about stocking shelves again.

With respect to the organisation of work during shifts, a number of members reported in the survey that they were dissatisfied and would like to see improvements in that respect. Members requested ‘more structure and direction’ during shifts. Following are selected responses that throw light on aspects of shift organisation that needed attention.

1. Whilst working my shifts, I've noticed that the space for stock is quite limited, and it's difficult to find items. Therefore, it would be good to label the shelves and keep that area more organised.

2. I have often done shifts where I have to go around asking what I can do; of course I need to take initiative but then I hear that there is so much to do and they can't get around to doing it!

3. When I was there on my first shift, everything was so disorganised, there was no sense that someone in charge will guide me through all that's necessary, even though it's fairly obvious what the recurring issues are. It felt that if so many people are doing things it will only make it more difficult to follow for everyone where things stand at any given moment, which I would've liked to know (even if it's normally the manager's responsibility).

Some of these issues raised were addressed over time. To some extent, the storage shelves did get better organised and so did the allocation of work responsibilities during shifts. However, at least as long as I was active at TPS, the experience of organisational efficiency was variable. It was based on who the shift managers were, whether they had experience and training in executing their responsibilities, and whether or not enough members had turned up for a specific shift. At times, due to a lack of personnel the shift

managers were diverted in taking care of other critical responsibilities at the shop. In that case, members who had turned up for the shift were left on their own to figure out what needed to be done and make the best use of their time.

Some members felt that more training should be available to enable them to contribute more effectively toward the running of the co-op. In one member's words:

> I think training members properly in all aspects of working in a supermarket is paramount. It would be good to have some training for those of us who are interested in acquiring specific skills such as cooking, nutrition, marketing, environmental and Fairtrade knowledge ... to accounting and ethical business.

I was aware of at least two kinds of training that were available to members. One was a professionally organised training certificate concerned with handling of food under statutorily prescribed health and safety guidelines. This training was particularly required by those who worked in the kitchen or handled non-packaged foods. Hence, mainly members who were usually involved with kitchen work and perhaps a few others availed of this training opportunity. Those working alongside professional chefs in the kitchen also had the opportunity to learn cooking and catering skills. The other training given by the co-op's staff was that of working at the tills. This training was rather informal and available to members who felt confident about working at the tills. Again, only a small percentage of membership received this training as many members shied away from working at the till for fear of making mistakes under pressure that could cost the shop financially.

During my second shift, I received a quick training on how to operate the point-of-sale system at the till. We were experiencing a shortage of people who were trained to work at the till during that shift and so I volunteered to step in. In my experience, I found that checking out products with bar codes was straightforward, but it took more practice to get used to weighing up fresh produce and getting their prices on the point-of-sale system, especially since the fresh produce quantities and varieties would change often. Moreover, most members would volunteer only once a month, and two hours a month at the till was not enough practice for beginners to attain the level of efficiency one expects at supermarket tills. The customers had to often exercise patience. Members would fumble at the till and make errors that would slow down the checkout process causing a build up of long queues at peak times of trade. In the online survey, some members complained about the quality of service at the tills. For instance, one member

responded thus in the survey: 'A lot of mistakes are made at the tills … in recent weeks I can think of a number of incidents: not getting my discount after having shown my card, offers not coming up at the till, being overcharged'.

A few customers, however, expressed in the documentary that seeing member-volunteers instead of professional workers at the tills made the store feel more unique and like a community rather than a business. I felt that member-customers were generally more understanding of the mistakes at the till. Perhaps, they could imagine themselves in the shoes of their newly trained fellow members behind the tills. For non-member customers, however, if there were delays at the till, it was simply not an inviting checkout experience and it might have dissuaded them from shopping again at the co-op. Hence, it was important that members received adequate training and practice to ensure a smooth checkout process at the tills. In my experience this operational aspect improved over time, especially with the addition of permanently employed staff members at the co-op.

Although the founders had initially intended to run the co-op almost entirely with the help of members, that proved to be an enormous challenge. More and more paid staff had to be inducted as, according to the shift register that I had the chance to look at, less than 20% of members turned up regularly for their shifts. When Arthur had visited the Park Slope co-operative in New York, an enterprise he often referred to as 'mothership', he had a different experience. His interactions with members of Park Slope co-op, who were working on the shop floor, gave him the impression that in addition to saving overhead costs, working for the co-op made its members more loyal and committed to the mission of the co-op. However, it is important to note that Park Slope, a co-op with an annual turnover of over £30 million and 15,000 members, was only open to members and enforced a strict policy that allowed members to continue to receive substantial cost savings only as long as they volunteered around 3 hours a month at the shop. Members were lured to contribute their time to the shop by a significant personal financial incentive, and not only by the co-op's commitment to environmental and social ethics. TPS was unable to match this financial incentive for its members in its early days. That appeared to be at least one of the main reasons for the difference in volunteering commitment shown by Park Slope's members versus TPS' members.

TPS did not have the financial resources to increase the number of paid staff early on. Though, it had seized upon an opportunity to forge a partnership with a welfare-to-works programme by the UK government, called the Future Jobs Fund. This partnership helped them compensate for the workforce deficit created by members who did not show up for their shifts. Through the Future Jobs Fund, TPS was able to employ workers, who were previously unemployed, under 24 years of age, and whose salaries were subsidised by the government. The government's expectation was that these workers would receive retail training at the co-op and would hopefully move on to find suitable permanent jobs after some time. TPS, on the other hand, found valuable human resources at a negligible cost. The co-op could now afford more stability in shop operations. The management provided on-the-job training to these workers. Some of them had prior experience of working at a supermarket or convenience store and these workers could share their skills with other trainees. The more experienced trainees were appointed as duty managers for shifts to provide support to member volunteers. As a result, there was a continuity of operations between shifts and the duty managers could better organise the tasks that had to be undertaken by members who moved in and out of their shifts. These trainee workers were also assigned critical responsibilities such as opening and closing shop and taking stock in from suppliers. As their welfare payments from the government depended upon them showing up for work at the co-op, the Future Job Fund workers proved generally more reliable for day-to-day shop operations than the average member.

But the government's subsidy was available for a limited period only. A few months before the government scheme was about to end, the co-op's management became increasingly concerned about the lack of commitment by members to fulfil their monthly shifts. Without the government sponsored trainees the shop would be impossible to run, unless members stepped up and contributed the allotted amount of time. A lot of effort was put in to call up members who were not coming for their shifts. Sometimes, however, these efforts proved to be counterproductive. One membership co-ordinator told me that some members did not like to be chased up and expressed their annoyance on receiving calls from TPS staff. The most common reason members gave for not turning up was that they could not find time from their busy schedules. Some members had moved away from the shop's neighbourhood and a few reported that the

co-op had not met their expectations for one reason or another and so they had decided to disengage from it.

Less than one in three members continued to volunteer their time. Although a few committed members dedicated their time far in excess of the membership requirement, the co-op could not rely on members alone for running the shop. Therefore, when the partnership with the government's Future Jobs Fund ended, many of the trainee workers were given permanent employment at the co-op. The co-op had invested in training these workers and it made sense to utilise their skills and experience further. On the other hand, the trainees, who were all previously unemployed, were able to secure their financial future with permanent jobs. It was a mutually beneficial outcome that was made possible through availability of more money at the co-op as sales increased. Besides, it was necessary due to the persistent shortage of member-volunteers.

Although inducting more permanent employees went some way to reducing the operational worries of the co-op's management, engaging members to participate in the co-op's affairs was still vital to the success of the shop. Members who did not sign up for shifts were also less likely to continue shopping at the co-op. Two members interviewed in the documentary expressed that not being able to do their shifts made them feel a bit guilty. They were then reluctant to go and shop at the co-op as they did not want to risk being told off for not contributing the hours required of members. Additionally, the nature of work that most members did on their shifts, i.e. stocking shelves and cleaning up, was not to every member's liking. Members had expressed the desire for a wider range of opportunities for participation in the co-op and this was evident in some of their survey responses as well, such as the following:

1. Offer different opportunities for working my four hour shift. For example working in the kitchen, office, etc.

2. [My shift] generally involves me working in the chilled cabinets to make sure the items closest to best before dates are displayed at the front and tidying the cabinet. I think it would be great if you could ask members what kind of work they want to do and make it happen for them, as much as possible, or at least some of the time. I think this is your aim, but I don't see it working in practice.

3. [The shop could interest me more] by using my time and abilities more centrally to help the business.

4. There should be a bit more flexibility for contributions (i.e. possibly an online or printed forum for members to give input on specific ideas/developments other than coming to a meeting which is full of people and the agenda gets knocked off anyway.

The co-op's management was aware that while shop floor tasks such as stocking shelves and cleaning up were what they most needed support for on a day-to-day basis, the co-op could also use some help from its members in fulfilling other functions of the business such as marketing, finance, events, health and safety and membership co-ordination. Some of these functions were more likely to resonate with members' professional skills or personal interests and thus be a more motivating avenue for participation. Besides, playing to members' strengths could bring to the co-op valuable skills that it could not otherwise pay for. Therefore, members were encouraged to join various committees organised by business function that matched their interests. These committees were supposed to have a fair degree of freedom to organise, develop and implement plans in consultation with the co-op's management. Members who volunteered their time on committees were requested, however, to not use this avenue of participation to avoid doing their monthly shifts, if possible. Though in a few cases where committee work demanded significant time, some members did excuse themselves from other work on the shop floor.

Soon after I became a member of the co-op, I saw a posting on the co-op's website that a meeting was being organised for everyone interested in being part of the marketing committee. I was keen on contributing toward increasing the co-op's membership as well as building a more engaged and committed membership within the co-op. It appeared to me that the marketing committee might be the group that would focus on these objectives. So I went along to the first marketing committee meeting. The following is an excerpt from my field diary about my experience of that meeting:

> When I arrived I was surprised to see the TPS basement packed with people who had come to attend the marketing meeting. There were nearly 60 people and I had expected around 10. Ruth had organised the meeting and was going to lead the marketing committee. Arthur was also present. He expressed that this was probably the biggest number of members assembled at the co-op, bar one general member meeting when there may have been a larger attendance. It seemed to me that the success in gaining membership involvement was riding on the publicity driven by the television documentary. Before the meeting started Arthur left. But before leaving he made it a point to tell everyone that the basement space was sacrosanct member space and even though some people may have come along to this meeting without yet becoming members, everyone who wants to participate in any aspect of TPS management must become members.

> Ruth immediately proposed to divide the people into smaller groups based on their areas of interest. The groups were based around the following functions: general marketing plan, outreach/PR and social media, design and branding, IT and web, signage and canvassing. I asked if we should first identify the broad focus of the marketing planning that evening. It was important, I said, that we know whether we were making a plan to increase the number of members or increase sales to existing members. To which Ruth replied that these objectives will be discussed by the general marketing plan team and that I should join it if I was interested in the big picture. Group leads were assigned pretty much on the basis of whoever volunteered to be the lead or in the case where there was more than one volunteer, the one standing closer to Ruth was chosen. It was clear that this was a temporary grouping to kick start the process. Ruth mentioned that she expected less people in subsequent meetings and will only assign group leads after she has properly assessed the commitment from members willing to lead.
>
> The general marketing plan team that I went with had seven participants. Our group's discussion was a bit all over the place. Some members were getting into very specific details of the ground level activities that they thought needed immediate attention, such as making the signage in the shop clutter-free. Others were arguing to keep the initial focus more high-level and think about strategy from the perspective of overall objectives, market segmentation and market research requirements. I guess other groups were having similar unstructured discussions.
>
> After ten minutes or so, we all got together and every group presented what they felt was the key aspect in their respective areas which demanded priority attention. Most of the groups expressed the need for a marketing plan with clear objectives and targets before further progress could be made. So Ruth scheduled a meeting for the general marketing group in a week's time to discuss the marketing plan.

Items discussed in the next general marketing team meeting, which was attended by twelve members, included re-branding TPS from a design perspective, identifying target groups for marketing, fundraising ideas and promoting TPS over social networks. We also decided to document the marketing efforts that had already been undertaken by the founders. Some of this information was available in the television documentary. But to get a more complete story, four of us interviewed Arthur and recorded our conversation for other team members to refer to if needed. Ruth and I also put forward a proposal to conduct an online survey of members. After returning from the first marketing team meeting I had suggested in an email to Ruth that the process of developing our marketing objectives could benefit from some research to find out what motivates our members to be part of TPS and what, according to them, could TPS do to gain more participation from them. She readily agreed to that idea and encouraged me to co-ordinate the effort to run an online survey. There was a general agreement in the team that the survey would be a good step before creating the marketing plan. And a few other team members with professional skills in market research joined me in the effort to design and run the survey.

After several iterations of running the survey questions by members of marketing, membership and operations committees as well as the core management team, we sent the survey out via email to around 600 members who had consented to share their email addresses with TPS. Of these, 260 members responded to the survey. The management team conveyed to us that for them the most important data from the survey would be the values that drive the co-op's members, as this information was often asked of them by funding bodies. The operations and products team was interested in finding out about specific products members would like to see in the shop apart from getting a general sense of the factors that influence their shopping preferences. We also included an open question requesting suggestions for improvement. Since there was not sufficient baseline information available about the demographics of members, we could not ascertain how representative the survey sample was along demographic dimensions. Therefore, the responses to the survey questions, which have been used to highlight various aspects in this case study, were taken as indicative and not necessarily representative. The aim was to learn about concerns and issues flagged up by members that required management's attention. Our goal was also to provide a voice through the survey to those members who found it difficult to share their views in members' meetings or directly with the management team.

Although the initial few marketing team meetings were well attended and the members showed energy and excitement in talking about new initiatives, the number of meeting participants dwindled fairly rapidly. Two months after our first meeting, Ruth and I were the only team members who turned up for what was supposed to be our fourth meeting. Ruth was visibly disappointed with the response. While a couple of members were constrained by some other commitments on that specific day, it seemed that most of the marketing team members had lost interest and left the committee for good. I can reflect on a few specific reasons for why some members walked away from continuing their involvement with the committee.

In one instance, the person leading the design and signage team and most of his team members had withdrawn as they did not find support for their proposals for changing the TPS branding and introducing a new visual design for logo and product labels.

When new proposals were tabled in a monthly membership meeting, many TPS members who had already become attached to the existing branding, opposed suggestions for changes. The management team was also cautious about discussing and encouraging these changes. I recall that in the first team meeting the design lead had expressed excitement about the opportunity to work from a clean slate and shape the branding of TPS, an opportunity he felt was seldom available while working professionally on corporate projects with strict branding guidelines. Unfortunately for him and his team members, TPS did not offer them the creative freedom they were looking for. They realised that at TPS they had the hard job of selling their creative ideas not only to a management team, but also to TPS members who had many diverging opinions.

In addition, working on the basis of a consensual decision making process in the committees did not come easily to some members who were used to a more hierarchical decision making process in other business organisations. One of my colleagues in the marketing research team expressed his frustration at having to accommodate so many concerns and feedback from various members involved and not just the management team. Another member who was head of the marketing department at a leading food service organisation in the UK and who had provisionally led the first general marketing team meeting decided to step back from taking on a more active role. He explained his decision thus in an email:

> I think the best value I can add is short sharp specific items that are probably outputs of the various committees and groups. I love the ethos behind them but it would drive me nuts.

There were also misgivings among some committee members about a perceived lack of communication between them and the management team. One time this became very evident was when the event team was organising the first birthday party for TPS. On this occasion the team lead complained about the lack of support from the management. I had volunteered to help in organising this event and learnt in the event committee's meetings that the lead's emails to the management team were not being answered. This made it difficult for her to make preparations for the event, especially where decisions required management approval. There were a couple more instances when I heard members of the marketing committee echo similar frustration with respect to communication with the management.

In my experience while co-ordinating the members' survey I also initially found it difficult to get access to the management team. My initial emails went unanswered. However, when I did manage to catch hold of them in the shop for a conversation, I found them to be supportive as long as I was prepared to act on my initiative rather than come up with suggestions for what I wanted *them* to do. To me it seemed that the people involved with the day-to-day management of the store were simply too busy with the operational side of running the store. They found it difficult to respond to the increased demand on their time from various committee members and their frequent suggestions for new initiatives that placed the onus of implementation on the management. In a report prepared by the management to document what might be the lessons learned from TPS for other similar social enterprise initiatives, they admitted that managing various committees was a 'particularly difficult aspect' of running the store (NESTA 2012: 9). This report emphasised that for the committees to play an efficient role it was vitally important that there is transparency in communication between the management team, the board members and the committee members, and that there are avenues available to represent voices from the committees at the board level. There must also be evidence of the management's considerations of committees' proposals and support for committees' efforts to influence the direction of TPS. Moreover, committees functioned best when they had a project-based focus.

These observations from the TPS management about running committees effectively resonated with my experience as the head of the IT committee at TPS. In contrast to the marketing committee, the IT committee was much smaller, with only five members. The overall scope of function for the IT committee was perhaps better defined and more focused than for the marketing committee which had a broader range of concerns. The IT committee supported the software and hardware infrastructure needs of the membership team as well as the TPS office. Two major initiatives were run as projects. The first was to introduce an online shift booking system for members and the second to provide an online social network that could be used by members to communicate with each other and the management within the co-op. Both projects were delivered within time and budget. This was largely due to efficient communication between our committee and the management. One of our committee members was also an elected member of the board and acted ably as our channel of communication with the management. Whenever we needed an executive decision on the purchase of software

or approval of implementation timelines, she was able to bring it to the management's attention and we received a timely response from the management team. Perhaps, other committees also needed a board member to champion their priorities within the management team.

Over just a few months after their launch, most committees became smaller and operated with a tighter focus than when they were first formed on the wave of excitement generated by the televised documentary. The initial surge in participation could not be sustained beyond a couple of months. Events such as Fairtrade Day and Royal Wedding Celebrations continued to be successfully organised, but instead of the formal events committee planning it, a committed member would take the lead and other members interested in the event would rally and provide support. Participation in work shifts, however, remained a problem. A few who were able to give a lot of their time at the co-op mostly did not have full-time jobs. The impression I got from talking to some of them was that their engagement with the co-op added meaning to their lives. The co-op was a vehicle that connected them to their community and gave them a sense of social belonging. By working there, they got the satisfaction of offering service to their community. In a conversation I had with a member of the board, she said that she was very happy to see some of the member-volunteers grow in confidence and self-esteem since joining the co-op as it had given them opportunities to socially engage with other people, feel welcomed, and gain skills. Nonetheless, she wondered why many of the members did not feel as committed to the co-op as she did and take more initiative instead of complaining about poor training and poor processes. She admitted that the organisation could be improved, but felt that this was a members' supermarket after all and every member could play a role in making it better. According to the survey responses, however, some members felt that the onus of integrating members more fully into the co-op's organisation was on the management. In their opinion, the management's efforts in this respect were found wanting. Following is a selection of survey responses that reflect members' interest in having a greater say and participation in the co-op's management.

1. [The co-op needs to be] REALLY member-run... Nothing is truly transparent... We are not really involved in decision-making, even by being engaged in a committee.

2. [We need] greater transparency from management and clarity about the governance structures. [There is a] lack of follow-through on basic issues such as making the governing documents available to all members.

3. A greater amount of attention and commitment is needed to integrate members into the people's supermarket. More solid infrastructure and direction needed for the members.

4. I would like to get more involved and have more info on buying and sourcing products and the actual running of the shop rather than all the social activities.

Another aspect that some members found lacking in the co-op was a closer sense of community. Members wanted to know other members and engage in social activities with them. One member expressed this interest as follows:

> Would like a more social aspect to it, to help meet more members as one or two shifts a month makes this difficult e.g. fruit or veg picking events at weekends, putting a team together for a pub quiz once a month, cookery nights etc. Also think ALL members [including] full time/paid staff should wear name badges to help people get to know each other.

The co-op did organise social events now and then such as yard parties, Japan Day, and royal wedding celebrations, which should have provided opportunities for socialising. But some members responding to the online survey, as the following examples show, did not find those events enough, and wanted 'more opportunities to meet other members'.

1. Though it is very welcoming and friendly downstairs, I sat at the bar by myself - might others enjoy eating TPKitchen food at tables together? Not often around on weekends for parties, but they sound fun.

2. Have found it hard to know how I fit in and feel a bit anonymous. No one has interviewed me or welcomed me. Bit of a strange experience and I feel a bit nervous each time I come in.

3. Feels a bit cliquey. A number of people don't seem very interested in meeting more members - and that was before the recent, huge increase.

I took the opportunity to attend the first TPS birthday party. It had a small attendance of about 20 people, many of whom were either organisers of this particular event or members who were already active in committees or with established social networks within the co-op. For a member who was shy and did not know anyone else at the event, it might have been difficult to take the initiative to approach other people already engaged in group conversations in a party. A more proactive approach of including such members and helping them break the ice with others in small groups was perhaps required.

4.2.5 Concluding observations

A few days before I withdrew from an active role at TPS, I attended a board meeting as the head of the IT committee. The strategic focus of that meeting was around making TPS commercially sustainable. A few months back, TPS had been unable to meet its tax obligations to the local council. Donations from supporters and a last-minute re-negotiation of payment terms with the council had saved TPS from closing down on that occasion. Hence, the board was determined to avoid a similar crisis in the future. There was no mention of evaluating how the shop was measuring up on other objectives such as promoting environmental sustainability. The reason given for not focusing on other objectives was straightforward. If the shop could not become commercially sustainable, there would be no resources to pursue any of its other objectives. A key member of the TPS board mentioned at one point during the meeting that what drew him to TPS was its disruptive business model that challenged the status quo in UK grocery retail. He was excited about the challenge to make TPS a commercial success despite its unusual business structure. But listening to him and other board members during the meeting made it evident that environmental sustainability was certainly not a priority focus at the board and management level of TPS, at least at that point in time. The store still offered sustainable options in product categories where there was a perceived demand from its customers. However, there appeared to be no concerted effort to promote sustainable food consumption among members. The management felt that the store must sell products that its customers were keen to buy rather than try to push more sustainable options without a clear and expressed demand from members and customers. This made business sense and the store, first and foremost, needed to survive as a business, at least as far as the management was concerned.

Not long after I stopped being an active member of TPS around October 2011, TPS faced another financial crisis in February 2012. It once again found it difficult to pay business rates that were due to the Camden council. Only a generous grant of £20,000 from the Fredericks Foundation and an online fundraising campaign that raised around £7000 saved the co-op from closing its doors. In an interview with the Fredericks Foundation website team (2012), Kate Bull, the CEO of TPS, reported that the sales at the co-op had increased by 53% in the second year. She revealed:

> In two years we've created a business with £1.2m turnover from zero, with gross profits of £368,000. We started with no cash and we've never had an overdraft…

> This year we have a loss of £92,000 after overheads, but I think next year we'll make a surplus.

In September 2012, Kate Bull stepped down from her position as the CEO but continues to be a member of the TPS board of directors. David Barrie, the other founder has also stepped down from being a member of the board and is no longer playing an active role at TPS. Arthur had stepped away from being an active member already after the first year, though he participates occasionally in pop-up catering events organised by TPS. The product buyer from the founding days of TPS has also moved on, and a number of other people with whom I had worked are no longer members of the co-op. Also, I found out from the TPS website (2013) that in order to further incentivise members to volunteer their time for the shop, TPS management has decided to offer 20% discount to those who do their shifts regularly instead of the 10% it offers to non-volunteering members. The co-op also offers 10% discount to reward loyalty of staff from a couple of local business organisations as they contribute greatly to the shop's revenues. At the time of writing this thesis, TPS has survived for four years and is now operating under a new leadership team.

Next, I focus on key challenges faced by TPS in promoting a sustainable food consumption practice within its community and compare the TPS experience with four other co-ops in the UK to broaden the discussion and understanding of the potential of community-based food co-operatives in encouraging pro-environmental food consumption.

Chapter 5
SUSTAINABLE FOOD CO-OPS: CHALLENGES AND POTENTIAL

Now I can't go out and drag people in by their collar and say, 'look you're a member … help us'. They are likely to leave. Some of them are doing 68 hours a week and some of them have young children and some of them have health issues and so forth. But our community is going to become healthy again by participation.
Founding Member of a Co-op

In this chapter, I explore findings on key challenges from the in-depth case study of TPS in conjunction with other research output on community-based co-ops to more broadly evaluate the potential of food co-ops in fostering an environmentally responsible food consumption practice at the individual and community level. First, I bring into this discussion evidence collected through interviews with key informants of four other co-ops in the UK. Second, in each thematically focused section, primary evidence from this study is further analysed with reference to previously published work on consumer food co-operatives. Finally, I consider ways in which the seven co-operative principles can be built upon to further the specific objective of encouraging environmentally sustainable food practices.

5.1 Profiles of four other sustainable food co-ops

Engaging with TPS for about seven months as an active member helped me learn about its successes and challenges in encouraging sustainable food consumption. When I became a member, TPS was still in its first year of development and the organisation as a whole was learning from its operational experiences and from the feedback it was receiving from its various stakeholders — members, customers, funders, neighbours, supporters, and suppliers. Despite being a member of a few of its working committees, I had only limited exposure to the impact the co-op had on its members and customers. I was not part of the core management team and I did not have access to sales data. Nevertheless, the opportunity to get a close look into the workings of the co-op did present important lessons. In the rest of this chapter I discuss those lessons and compare them with evidence collected from four other co-ops. Before I proceed with the discussion, however, I present a short profile of the four co-ops: Stroudco, The True Food Co-operative, The University of Brighton Food Co-op, and the Transition Pimlico Food Co-op.

5.1.1 Stroudco

Stroudco was established in 2008 as a not-for-profit democratically run business with a focus on connecting local producers with local consumers and giving both a fair deal on food. Its two founders were already part of a community-supported agriculture initiative in Stroud, Gloucestershire. Their motivation was to create a new model of producer-consumer relationship in the food system which would replace the profit-driven supermarkets acting as middlemen. Members can place their orders through Stroudco's website or by phone. The orders can either be collected on Saturday from a local school, or delivered to members' homes for a small delivery charge. The co-op is run by a management board elected by its members. Unlike other consumer co-ops included in this research, Stroudco's board has equal representation from both producer and consumer members. Since producer members are far fewer than consumer members, the producers have a disproportionately larger representation on the board. However, it is important to note that all members are involved in electing both the producer and consumer members on the board. Producer members must sign up to and satisfy strict criteria on environmentally sustainable farming and food production practices. The co-op employs only one part-time employee to manage its operations. Other committed members, especially those on the board, volunteer their time to support the manager. In 2012, the co-op had around 35 producer members and 250 consumer members.

Key strengths: Stroudco has a strict policy on offering environmentally sustainable and local produce.

Key challenges: Only a small proportion of members makes regular orders at the co-op and the co-op is struggling to become financially self-sufficient. High prices, limited range of options and inconvenience of making and collecting orders are identified as constraints.

5.1.2 True Food Co-operative

The True Food Co-operative (hereafter, True Food) was established in 2005 in Reading as a not-for-profit business. It grew out of an informal food-buying group called the True Food Club, which had existed since 1999. This club consisted of a group of friends who decided to bulk-buy organic and ethical food in response to the shutting down of a number of independent retailers in the town due to increased rental rates of business

premises. As a co-op, True Food initially started operating weekly mobile markets in different community centres around Reading to bring ethical and sustainable food options at an affordable price to local communities. It currently runs three such mobile markets in the south of Reading. In addition to those markets, with the help of significant lottery funding, the co-op also opened a larger fixed shop in 2010, which is open to both members and non-members. The co-op employs three full-time employees but is helped by a number of members who volunteer their time and receive a small discount for their support in running the co-op. In 2011, turnover was around £400,000, and the co-op had around 450 members.

Key strengths: True Food is committed to offering only environmentally sustainable produce and is able to offer affordable prices in some categories of fresh produce and bulk-packaged wholefoods.

Key challenges: Getting members to volunteer their time to support the co-op has been difficult. At the same time, the financial position of the co-op does not allow inducting more paid employees. Therefore, running both the shop and mobile markets is a considerable strain on management resources.

5.1.3 The University of Brighton Food Co-op

The University of Brighton Food Co-op (hereafter, University Co-op) is run as a student society, which received its first delivery of produce in March 2011. The student co-op was initiated by a student and a staff member of the university to make local, sustainable and seasonal food affordable to its students and faculty. Although the co-op's primary focus is on serving students and faculty it also reaches out to the communities surrounding the university campus. It is exclusively run by volunteers and is able to offer locally sourced and artisan food at competitive or below market prices by being volunteer-run and using the university's premises. Apart from making sustainable food affordable and easily accessible, the co-op intends to build a community around food and educate students about sustainable food choices with an aim to influence students' food choices even after graduation. Membership is open to everyone for a nominal yearly membership fee and requires a minimum of one hour a month volunteer time. The co-op now operates from three campus sites, which are open for collection of

produce once a week. Each campus site has its own management group elected from amongst its members.

Key strengths: The co-op is able to offer locally produced fruit and vegetables at a very affordable cost to its members and has almost no financial overheads.

Key challenges: Getting sufficient members to participate in running the operations has been difficult, and therefore, most of the operational burden is borne by a handful of committed members. Also, plans to engage members socially around sustainability issues have not been followed through due to lack of participation.

5.1.4 Transition Pimlico Food Co-op

An offshoot of the Transition Town movement's Pimlico chapter, the Transition Pimlico Food Co-op (hereafter, Pimlico Co-op) is a food buying group. The group started making collective orders in November 2011 for shelf-stable grocery items through a wholesale co-operative, Infinity Foods. The co-op's aim is to get good quality (mostly organic) and healthy food at affordable prices and reduce packaging waste by ordering items in bulk. The group has 19 members on its online mailing list who co-ordinate their orders through a shared spreadsheet. Orders were made once a month or at times once in two months. One founding member took the lead in collating all the orders, collecting money and receiving the delivery at his residence. A couple of members, depending on their availability, helped the lead in sorting the delivery into individual orders so that it was easy for other members to collect their orders from the delivery address.

Key strengths: The buying group is comprised of socially engaged members working together to reduce their carbon footprint and the co-op helps in meeting a gap in their locality for sourcing sustainable grains, nuts, cereals, wholefoods and household cleaning products at affordable prices.

Key challenges: The buying group has no overhead costs but currently relies heavily on one person to organise the collection of orders and delivery. Also, the use of spreadsheet software to enter and combine orders is cumbersome.

5.2 Analysis of key challenges faced by TPS

I will now look more closely at three key challenges with respect to encouraging sustainable food consumption that I observed during my fieldwork at TPS, and compare the case of TPS with that of the above four co-ops. TPS was successful in recruiting the number of members its leadership had deemed necessary to operate the co-op profitably. Initially, the founders estimated that 500 members would be enough, but the nationwide telecast of the documentary helped push the membership number considerably higher. Also, the TPS business model demonstrated potential for commercial viability, albeit external funding has been crucial for survival at critical periods. Three other objectives, however, remained a challenge. Firstly, sustainable food consumption could not become a shared purpose with which the entirety of the co-op's membership could identify. Secondly, the co-op found it difficult to attract a significant number of low-income members from its neighbourhood and offer significant savings in food purchases that many of its potential low-income members expected. Finally, getting the majority of members to engage fully with the co-op by volunteering their time or shopping regularly at the co-op proved difficult.

5.2.1 Community with a shared purpose

One of the propositions that guides this research is that co-operatives could be formed around a shared sense of purpose, or what Pelling and High (2005) would call a 'community of interest'. In the case of TPS, however, what exactly defined its shared purpose seemed a bit muddled to some of its members, as is evident from their survey responses. While some saw it as an enterprise focused on environmental sustainability, others valued its community-ownership, and yet others were upset about its lack of clear focus. The mission statement of TPS focused on both social and environmental objectives. However, it was also a commercial enterprise and its survival depended on its ability to generate revenues.

Arthur, the co-founder and celebrity chef, who initially conceived the project along with producers of a television documentary, was keen on creating a sustainable food co-operative that connected rural farmers with urban consumers. But when he went campaigning for support in the co-op's neighbourhood, he told people that being a co-operative, the community of members will decide what will be available in the shop.

This was to assuage fears of low-income residents that his alternative to the supermarket would offer exotic and expensive food that would cater only to middle- and high- income groups. When the co-op opened its shop, members were divided about the kind of produce the co-op should offer. Hence, based on members' feedback the management decided to be as inclusive as possible. High fixed costs of running the store and constant financial pressure to keep the project afloat meant that commercial sustainability objectives triumphed over environmental sustainability objectives. That notwithstanding, the co-op did offer a few sustainable options like local and organic fresh produce (though the majority of fresh produce was non-organic), Fairtrade products, environmentally-friendly cleaning products, and ethically farmed fish and meat alongside popular budget items found in mainstream convenience stores. In the end, the store supplied what its customer base, which comprised more non-members than members, demanded. There were no overt attempts to promote environmentally sustainable food consumption as an everyday practice, most likely for fear of alienating potential customers who did not prioritise environmental concern as a value guiding their food decisions. Consequently, the members' community was also not united around giving priority to the purpose of encouraging pro-environment food consumption behaviour. Instead, the co-op celebrated its identity as a community-owned enterprise that was not just profit driven but also ethics driven, and the leadership team championed this identity.

A few months after the co-op's launch, and especially after the telecast of the television documentary, Arthur had stepped away from an active role in the management of the co-op. Kate Bull, the co-founder and retail expert, was entrusted with the responsibility of managing the co-op as its Chief Executive Officer. From what I saw of her as an active member of the co-op, she promoted local and independent suppliers as well as Fairtrade products, though she did not seem to care as much about organic produce. More than anything else, she was a pragmatic manager who wanted the shop to be commercially successful as a community-owned enterprise. Closest to her in the co-op were its employed staff. Kate's and her employees' careers depended more on the commercial success of the shop than the achievement of its environmental objectives. The board of directors was also clear about the priority of commercial sustainability. This is reflected in the management's advice to other similar ventures: 'Run a business first, 'engine' of ethics second [because] without cash in the till and defence of margins by stealth, you'll

go bust – and fail to share and spread your values' (NESTA 2012: 58). From Kate's talks at members' meetings it was evident that she took pride in the community-based aspect of the initiative. After a members' meeting Kate said on Twitter:

> Kate Bull @KateTPSfounder 10 Jan 2013
> Members meeting last night - Q. how do we let the world know what makes @TPSLondon different to other supermarkets A. Food waste & Members

Thus, after two years of running the co-op, Kate felt that the co-op's constitution as a member-owned enterprise and its efficient handling of food waste was what differentiated the co-op from other food retailers. These were the features that were exemplified in the co-op's operations. To demonstrate environmental sustainability, its flagship project was The People's Kitchen, which cut down food waste by turning fresh produce that was close to its use-by date into ready meal products for the co-op's customers. Besides, TPS encouraged people to re-use shopping bags by making used ones available in the shop or charged 5p for new ones, greatly reducing the use of new plastic bags, according to the management. The co-op also operated a strict recycling policy. To an extent, the co-op made sustainable food options accessible for customers and members who cared about those options but this was not a defining priority for the co-op. As such, there were few social learning opportunities for sustainable food consumption within the co-op's community of members.

On the other hand, other co-ops studied in this research had a clearer focus on promoting sustainable food options to their members. For instance, Stroudco's primary focus was promoting local produce and strong animal welfare standards. It also encouraged its suppliers to reduce pesticide usage as much as possible. Initially, the co-op was strict about only stocking products from suppliers within a 15-mile radius of the town. Some of its fruit and vegetable produce came from Stroud Community Agriculture, a co-operatively owned farm practising organic farming methods. Occasionally, it also allowed guest suppliers from within a 50-mile radius. Later however, it relaxed its policy based on members' demand to allow non-local fresh produce as well, but only if a particular produce could not be grown locally. It also expanded its product offering to include some wholefoods and cupboard essentials supplied by another ethical co-operative wholesaler.

Similarly, at the University Co-op, local and seasonal fruit and vegetable supply was prioritised in the weekly boxes and was only occasionally supplemented by non-local

options when produce was not available locally. The founding members, who are also members of a students' society called the Environmental Action Network, did a survey among students and staff of the university to find out what features of the co-op would be most important for them. Price sensitivity ranked highest but was followed very closely by the desire to source local produce. Preference for organic came third but the founding group did not feel that the demand for organic was sufficient to steer the co-op's sourcing in that direction. Therefore, the University Co-op aims to provide fruit and vegetables, grown as locally as possible, and at the lowest possible cost to its members.

True Food sources its products from a range of suppliers. Dry items are mainly sourced from wholesale workers' co-operatives such as Infinity Foods and Suma and fresh produce is sourced from a mix of wholesalers and local growers. Most of the products are certified organic. However, local fresh produce need not be certified organic where growers can be trusted to avoid harmful chemicals and follow sustainable agriculture practices. The co-op claims on its website (2012): '…you will not find a range of organic and sustainable groceries as large and well priced as ours anywhere else in Reading'. The clear focus of True Food on environmental sustainability does not necessarily end internal debates about product preferences, but it defines the terms and boundaries of these debates within a set of ethical and environmental principles. As a key informant here explains:

> So if I am a bit of a conscience eater, then I come to True Food without having to worry so much about the product. They'll still look at the label and so forth. And also that doesn't stop any debate. In fact, we're still having debates about whether we should be stocking products from certain countries or not. And people can keep continuing to be switched on when they come to True Food and ask you know - what is going on here, why have you not stocked a certain product, whether it has a GM element involved in it's manufacturing.

At the Pimlico Co-op, environmentally sustainable dry wholefoods and household cleaning products were the primary focus of its members. The member who initiated this co-op told me that while people in his neighbourhood could source fresh, local and reasonably priced fruit and vegetables from two local farmers' markets and a couple of community growing spaces, they did not have an affordable and ethical source for grains and other food items that could not be grown locally. Therefore, he and a number of other people who were already involved in the Transition Town movement, decided to source non-local food items and ethical products from a supplier whom he considered as 'a very ethical, a very fair company' since it was run as a co-operative as well. In his

words: ‘They set a good price and we buy our goods from them which cuts down a huge amount of food miles; it cuts down packaging and it also, at our end, builds community because people are coming together to socialise and talk rather than just buy the actual food’.

Among the five co-ops from which I collected primary data, two – TPS and Stroudco – were started by founders who initially targeted membership from low-income communities of which they themselves were not part. They did not necessarily offer products that could be seen by members of their targeted communities as unavailable in their localities. Not far from TPS, Waitrose was perceived to be offering a good selection of sustainable food. In Stroud, there was a farmers’ market and some local shops that catered to sustainable food demand. Both co-ops did, however, offer a community-owned enterprise model, which by itself could attract very few members from the initially targeted low-income groups. Later, the co-ops accepted that they had to look elsewhere to recruit members who valued their democratic business model and ethical values enough to accept limitations in product range and price competitiveness.

The other three co-ops were started by members who were residents of the geographical and interest-based community in which the co-ops were established. In the founding members’ experiences of these co-ops, retailers in their respective areas were not making sustainable food options as easily accessible as they would have liked. Hence, they set up sustainable food co-operatives to meet their needs and those of other like-minded people in the local community. Apart from TPS, and to a lesser extent True Food, the other co-ops had much lower financial overheads, and therefore a lot less financial pressure to trade off environmental sustainability objectives against commercial sustainability ones. Hence, it was perhaps easier for the other co-ops to be more single-minded about promoting environmentally sustainable food options.

5.2.2.1 Discussion with reference to other studies

Prior research on food co-ops provides ample evidence that diversity of member concerns can at times lead to disruptive contests about the prioritisation of one purpose over another (Ronco 1974; Cox 1994; McGrath 2004). Briscoe (1988) characterises people holding extreme positions within these debates as ‘traders’ and ‘idealists’. ‘Traders’ are only concerned with economic benefit whereas ‘idealists’ steadfastly stick to

their principles and are ready to accept economic losses. In reality, membership communities in food co-ops are more likely to find themselves somewhere between these two extremes. The kind of compromises that are made can depend greatly on specific contexts. For instance, when a co-op's customers are predominantly non-members, it is likely that the management team would be less inclined to solely focus on a set of ethical principles to which the members signed up. Non-members may be attracted to the co-op because of its ethics, but also because 'they may be using the nearest shop, or the shop with the best prices or range at this point in time, or they are using the shop as one of several possible choices just for a bit of variety' (Calderwood and Davies 2013a: 20). Besides, sales to non-members are not discounted and result in greater margins. This can further tilt the focus on non-members when making decisions about the range of product offering, and especially so when there is a risk of commercial survival.

Unlike at the other four co-ops, promoting sustainable food consumption could not become the primary guiding purpose at TPS, despite it being the main objective of one of its founders. The need to offset high fixed costs to survive, weaker commitment to environmental objectives from the rest of the leadership team, and heterogenous concerns among members, led the TPS management to prioritise responding to customer demand instead of attempting to proactively shape member preferences towards sustainable food consumption. In addition, customer demand at TPS was shaped for the most part by non-member customers, which further distracted from trying to get members to agree upon a set of environmental principles to guide product focus. However, at True Food, which is also open to non-members, the core leadership team continues to prioritise environmental sustainability. This co-op has relatively lower overhead costs compared to TPS, but maintaining financial stability is an ongoing challenge. Since its inception True Food has relaxed some of its policies on sustainable sourcing to accommodate customer demands but these adjustments have not compromised the primary focus on promoting environmentally responsible food choices.

On the one hand, food co-ops with some environmental objectives but a more relaxed and inclusive approach to membership recruitment and product offering may be able to expose members without pro-environmental values to sustainable food and information about its environmental and health benefits. Through the creation of social interaction

opportunities, such co-ops can also facilitate conversations about environmental issues between those members who are already motivated by environmental concerns in making food choices and those that are not. There is a danger here, however, that if the majority of members or customers were not concerned about sustainable food choices, the co-op could steer away from its environmental goals and lose out on members who were inspired by its environmental objectives. On the other hand, food co-ops with a strict policy and commitment to environmental sustainability may only be able to attract those members who are already sensitive to environmental concerns. However, by doing so such co-ops may have a more focused product strategy targeting sustainable food options, and thus create opportunities to make those options more affordable and available for its members through collective bargaining advantages. This could help these co-ops' members to both include more variety and more quantities of sustainable food options in their dietary practice.

Evidence from the case studies suggests that within the co-operatives a 'community of interest' (Pelling and High 2005), such as the goal to promote sustainable food consumption, has to be carefully constructed from the ground up. To build a co-operative around a shared purpose it helps if the initial group is committed to a given set of principles and new members are inducted based on their willingness to subscribe to those principles. However, if there is financial pressure to recruit more members, then members with diverse interests can shape co-op objectives in ways that dilute or reject some of the initial principles set by the founders. Pragmatic management of how the co-operative's objectives are interpreted might ensure commercial survival. Moreover, compromises with some of the original objectives may be justified as a necessary trade off to achieve a smaller subset of goals within a broader set of principles. As a 'community of practice' (Wenger 1998), a consumer food co-op can continuously evolve based on mutual negotiations between members. The co-op might not always reflect its pre-defined identity as a specific 'community of interest' (Pelling and High 2005), unless the shared purpose forms the fundamental basis of association in the first place. In order to pursue ethical and environmental objectives, it is important that co-operators understand the nature of social capital that is available in their community of practice and invest efforts in building a greater consensus towards achieving their objectives (Portes 1998; Valentinov 2004).

Another strategy to promote environmentally sustainable food consumption through a food co-op may be to build the membership community around health and nutrition as the primary objective instead of an explicit environmental concern. Many studies suggest that increasing the intake of fruit and vegetables and reducing meat intake can provide both health and environmental benefits (cf. Saxe 2014; CAT 2013; Scarborough et al. 2012). A number of food delivery projects in the UK are already run as health promotion initiatives funded by the government or third sector organisations. Evaluation studies covering many of these initiatives have reported an increase in the intake of fruit and vegetables in the economically disadvantaged communities they serve. For instance, the evaluation of pilot initiatives in Wales reported that among those customers who were interviewed, many said that they were already using fresh produce in their meals before joining the co-ops, but the co-ops had enabled them to eat more of it and also try more variety with different methods of preparation (Elliott et al. 2006). Another evaluation report of food co-ops in England, which included a number of health promoting food delivery initiatives, found that among low-income groups majority of the customers (76%) reported an increase in their intake of fruit and vegetables as a result of participating in the co-ops (Smith et al. 2012). To the extent that the increase in the intake of fruit and vegetables displaced a proportional amount of meat in the diet, and reduced carbon-intensive packaging and transport, these initiatives additionally fostered an environmentally sustainable food consumption practice.

Although such food delivery initiatives are often referred to as 'food co-ops' in the literature, they are neither owned by members nor do they systematically attend to other co-operative principles (Caraher et al. 2014). Nevertheless, according to Freathy and Hare's (2004) topology of voluntary food co-operatives, some of these initiatives are perhaps at an early phase of co-op development. They may have the potential to graduate into formal co-operatives with an aim to enhance social learning opportunities within communities and also to establish themselves on a more independent footing. For instance, as a next step up, existing customers could be offered free memberships and involved in consultation on matters of product sourcing and co-op operations. More importantly, however, the case study of TPS suggests that if the funding bodies intend to retain the health focus and develop an environmental awareness of food choices in the co-op setup, new members will need to be informed and sensitised about these

objectives before they join the co-op to set appropriate expectations and motivations from the start. Lack of knowledge of nutritional and environmental benefits of consuming fruit and vegetables was a major hurdle in attracting more customers to the food delivery centres (Elliott et al. 2006). Additionally, evidence from case studies suggests that in the co-op setup, sustaining the focus on health and environmental benefits will only be fruitful if all members of the initial leadership team sufficiently prioritise these goals and are not burdened by high overhead costs that diffuse focus on these objectives as well as increase food costs.

5.2.2 Making sustainable food accessible and affordable

Persuading low-income earners to join the co-op was a significant challenge for TPS. It was unable to offer either cheaper goods or a range of products similar to that available in mainstream supermarkets in the neighbourhood. In their conversations with the documentary film-makers and the co-op's founders, low-income residents had expressed these reasons for not joining TPS. One of the founders, in a conversation with me, felt that most of the low-income earners were not able to look beyond price and convenience when it came to grocery shopping. Another co-op, Stroudco, faced similar hurdles in reaching out to low-income residents of a local housing estate. Despite making marketing concessions such as free membership and free delivery, Stroudco was not able to attract significant membership from the low-income groups it was targeting. To find out more about what factors stopped such people participating, researchers from the University of Cardiff (Stroudco 2012) organised a focus group where residents shared their food buying preferences and shopping behaviour. In the focus group discussions, lack of choice in the category of convenience foods, and high price came up as primary barriers to participation in Stroudco. Similarly, in the case of the True Food Co-operative in Reading, one of the founders stated: 'There are certainly a lot of products we sell that a lot of people just balk at because they just cannot afford to include that in their weekly spend or diet'.

Although these three co-ops were able to offer a selection of products at a competitive or lower cost compared to mainstream supermarkets, they found it difficult to be consistently cheaper across a broad product range. For example, TPS and Stroudco were able to offer some fresh produce cheaper than larger supermarkets, and True Food was additionally able to offer a better deal on unpackaged wholefoods. However, this was

not enough to attract low-income customers, whose intake of fresh produce and whole foods was typically below the national average (Food Standards Agency 2007). Moreover, with only a single local branch, independent co-ops did not have the scale to negotiate low prices directly with suppliers as large supermarkets do. Although TPS identified a significant opportunity to reduce prices and food wastage through sourcing produce that was rejected by larger supermarkets due to cosmetic blemishes, again the relatively small scale of its operations posed logistical and administrative challenges in making use of this opportunity as a consistent practice. In addition, at least for TPS and True Food, high fixed costs of retail space and paying employees required a sufficient margin to be included in the retail price to cover those costs.

Stroudco did not have to pay for retail space, but it did employ a manager. Moreover, its suppliers were producing on a small scale and could not offer their products more cheaply than the suppliers of large supermarkets, who could achieve greater economies of scale. Also, one of the producer members explained to another team of researchers (Franklin, Newton, McEntee 2011: 781):

> I know I am not going to be able to sell my organic eggs or Dexter beef to the [Parliament Estate] because it is more expensive ... small producers with high welfare means more expensive. You need some more of those Stroud greenies.

Franklin et al. (2011) found that other producer members at Stroudco shared similar views. What they considered to be a fair price for their produce was significantly more than low-income residents of the Parliament Estate would be willing to pay. Therefore, producer members wanted the co-operative to target marketing efforts towards middle and higher income groups in Stroud who could afford these type of products and support the producers' businesses. When I asked some members of Stroudco by phone why they had stopped ordering from the co-op, most of the reasons pertained to convenience and access, but price was also mentioned as a constraint by a few. Even members who did not lack appreciation of sustainable and high quality products perceived the prices to be a hurdle to persisting with shopping at Stroudco:

> [1] I do intend to use Stroudco, but my finances are a bit low at the moment…There are very good products, but they are fairly pricey, I suppose. That's the nature of those products, isn't it? I'm not saying that you are charging too much, but these kind of products tend to be pricey.
>
> [2] We've found the produce expensive, which I can understand really, 'cos we're all trying to balance some things. But I guess, when it comes down to it, that kind of often means that we don't need you any more.

The University Co-op, however, neither has the constraints of high operational costs for rent and employees, nor does it limit itself to sourcing only from small-scale local producers. The co-op sources weekly fruit and vegetables boxes from a local distributor. Initially, the founders tried to source directly from local farmers, but found that the farmers required a long term commitment from a large group of people to be able to plant crops specifically for the co-op. Since the co-op's founders wished to make the buying option flexible, not wanting to force students to commit upfront for a yearly supply, they decided to go with the distributor option instead. Other reasons behind this decision included the intention to avoid administrative challenges in co-ordinating supply from several small producers as well as additional transportation costs. The founders' key concern was that their chosen distributor must supply predominantly local, seasonal and affordable produce and they found one who met these criteria. As the co-op does not pay for the university-provided operating space and is run entirely by volunteers, it has minimal financial overheads. Therefore, it can pass on to its members savings from buying wholesale produce. According to one of its founders, the co-op provides 'the cheapest veg in town'. Students are the largest group of members, though some of the university staff as well as residents of the predominantly low-income social housing neighbourhood have also joined the co-op. This co-op has been a successful example of making sustainable produce available at an affordable price for its members.

Members of the Pimlico Co-op are also able to save around 30-33% retail markup on the mostly organic wholefood products they order from their wholesale co-operative supplier. These products are not cheaper compared to non-organic versions in the mainstream supermarkets, but they are better value than buying the organic products through independent health food stores. Additionally, for those organic products that are available in the supermarkets the wholesale price paid by the co-op is cheaper or at least competitive enough to make collective buying viable. The key challenge, however, for a small buying group like Pimlico, was to minimise the co-ordination issues related to collating orders from individuals to make up the minimum bulk ordering quantities required by their wholesale distributor. For instance, if a member just wanted 4 cans of kidney beans, they would have the following options: find other members who wanted to share the rest of 8 offered in the bulk pack of 12; buy all 12 in one go; or forego the item since their chosen quantity could not be easily ordered. This was a lot less convenient than turning up in a shop and taking home exactly the quantity one wanted.

On the contrary, since most items ordered by members were dry and non-perishable and could be stored for months, savings on retail price could be a significant advantage if the members could afford to buy in bulk. Information about the extent of participation of low-income members in this co-op could not be ascertained but the founder suggested that members were satisfied with the price-value bargain afforded them by their association as a buying group.

5.2.2.1 Discussion with reference to other studies

A number of other studies have highlighted that small community-based consumer food co-ops are best able to achieve price advantage in categories of fresh produce and bulk-packaged wholefood items such as sacks of nuts, cereals and pulses (Hines 1976; Ronco 1974; Freathy and Hare 2004). Freathy and Hare (2004) and Ronco (1974) have also pointed out that canned and packaged food items usually carry lower margins and can offer a price advantage only when ordered in very large quantities. Once a co-op adds a retail margin to cover its operational costs, these items do not offer any savings to co-op members.

Research on third-party funded food delivery projects to promote health has demonstrated their ability to make fruit and vegetables more affordable and accessible to economically disadvantaged communities. For instance, at the Welsh community food centres, separate bags of fruit, vegetables and salads were offered for £2 each (Elliott et al. 2006). These bags were supplied by a local farmer or a local wholesaler and, according to the study, represented good value to most customers. Similarly, 11 of the 18 co-ops evaluated in England were started as health initiatives to provide affordable fruit and vegetables (Smith et al. 2012). The organisers at 9 out of 11 of these co-ops felt that it was important to keep prices down and offer a reliable supply of basic staples in this category, and therefore, even though they would have liked to source only local food, they chose instead to purchase from a local wholesaler to meet their cost and choice objectives. However, since all of the health-promoting food delivery projects relied substantially on external funding, it was unclear whether the low cost of fruit and vegetables could be sustained once the funding was withdrawn. It is likely that some of the overhead costs covered by the funding will have to be reflected as an increase in prices of food items if these projects were to be developed into self-reliant member-owned co-operatives.

Furthermore, while the cost of organic food was higher than conventional food and was seen as unaffordable by many in the low-income groups, for those who did prefer organic over conventional options, relatively better prices could still be obtained by buying collectively from wholesalers or growers rather than individually from grocery retailers. In the evaluation study of English co-ops, this was, for instance, shown to be the case at Backwell co-op, which was located in a relatively prosperous neighbourhood, and where sourcing local, organic and ethical food was a primary concern among the co-op's members (Smith et al. 2012). Most of Backwell's members were already incorporating fruit and vegetables in their diet before joining the co-op but low cost of these food options at the co-op had made it easier to sustain their healthy and environmentally responsible eating practice.

Two other key factors crucial to keeping operational costs down were the use of free venues, such as community centres and schools, and unpaid volunteers. Freathy and Hare (2004) recommend a cautious approach to 'trading up' from a volunteer-based, free venue and limited produce set up to one requiring hired staff, fixed location, and a wider range of products. In their assessment of Scottish 'voluntary food co-operatives (VFCs)', they observe (2004: 1573):

> By offering a wider range of merchandise from a permanent location with paid employees, operating costs were increased. The core market that the voluntary co-operative had been established to serve was not able to provide the revenues necessary to sustain this additional expenditure. The voluntary co-operatives were forced to effectively position themselves as a general merchandise retailer. Unfortunately these VFCs lack the scale and resource base (and in many instances the expertise) to deliver superior financial performance in the market in which they now compete. They have little to differentiate themselves from the competition and have found further growth and development difficult.

Moreover, although food co-ops can, given the right conditions, make sustainable food more available and affordable for low-income groups, the evaluation report on Welsh food delivery projects warns against an assumption that easier access alone can change dietary practice of those who are not used to purchasing and consuming fruit and vegetables (Elliott et al. 2006). The main barriers to customer retention in these initiatives were: poor quality of produce; limited choice; lack of awareness of nutritional and environmental benefits of consuming fruit and vegetables; and, inconvenience in collecting produce, particularly in cases where customers were old and infirm. Another study which surveyed 680 residents in low income housing suggested that accessibility

and affordability may not in some cases be as important a barrier as motivation to eat healthily (Dibsdall et al. 2003). In this study most residents (over 90%) felt that their access to fresh, tinned or frozen produce was adequate through one large supermarket in their area. Many found that prices of fruit and vegetables in their area were reasonable but they were not able to budget for more than their habitual intake, which varied across the sample. Additionally, while more than 70% believed they had a healthy diet, only 18% claimed to be eating the recommended five portions of fruit and vegetables. The authors argued that since most people already knew somewhat about what constitutes a healthy diet, this discrepancy could not have been entirely due to lack of knowledge. Instead, the researchers suggested that 'other factors such as motivational, psychosocial or lifestyle factors' (ibid.: 167) may have been more responsible for low intake of fruit and vegetables in their surveyed sample. Government statistics show that lowest income households (lowest 10th percentile) purchase only around 2.9 of the 5 portions recommended and significantly less than higher income households, but even most of the higher income households do not eat the recommended portions (Defra 2014). Hence, while income may be a significant constraint on accessing fruit and vegetable options, simply enabling access at lower price has limited capacity to induce targeted dietary changes.

In terms of making sustainable food affordable, the experience of the co-ops included in this research can be related to evidence from prior research as follows. Fresh produce and bulk-packaged items did provide better value for money in the cases I studied. However, despite identified challenges with offering price advantage in the category of canned and packaged goods, all five co-ops included in this study offer tinned and other cupboard items as many of their members prefer the convenience of purchasing a variety of products from a single point. Moreover, at the Pimlico Co-op where members buy directly from wholesalers in bulk and do not have any additional fixed costs to offset, savings can be made on canned and other packaged shelf-stable items as well. In the case of the University Co-op, low-cost fruit and vegetable options did include locally sourced produce, but through a local wholesaler who aggregated the supply from various local growers and provided more choice. This co-op was most similar to the cases of health promoting food delivery initiatives with respect to choosing its supplier model. Dealing with wholesalers was preferred as there were higher costs and operational difficulties associated with co-ordinating supply from small local growers.

High fixed costs of retail premises and the need to hire paid staff, as in the case of TPS and True Food, were considerable constraints in making environmentally sustainable food choices affordable for low-income groups. Finally, evidence from other studies suggests that food co-ops seeking to encourage sustainable food consumption cannot assume that reducing product prices alone will attract low-income consumers.

5.2.3 Member participation and volunteering

One way for food co-ops to keep their running costs down and pass on savings from overhead expenses was to rely on unpaid volunteer support. However, all the co-op organisers I spoke to reported that getting the majority of members to volunteer their time to run the co-op was a considerable challenge. At TPS, on average fewer than 20% of members turned up for work shifts. The reasons given to membership co-ordinators were mainly lack of time or lack of interest in the kind of shop-floor work required of them at the co-op. Similarly at True Food, many members would come and shop at the co-op but not find time to support the co-op with their labour. One co-founder of True Food spoke about the importance of participation and the variability he saw among members in their commitment to the co-op:

> Then, the … challenge to us in the future is participation. We cannot see ourselves, as I said earlier, differently to what's going on in the rest of the society. Society, in my view, and communities have been fragmented in the last 20-30-40 years and we are having to rebuild our communities. And to get people to participate is actually very very hard. We have some fantastic participation, literally hundreds of hours a month. Our chairman you know is the hardest working guy I've ever met. You know, he's got a full time job and yet as a volunteer he makes a remarkable effort and many other people do too. But we are a co-operative of 450 members and many hundreds of our members just pay 10 pounds a year and that's it. Now I can't go out and drag people in by their collar and say, 'look you're a member of True Food, help us'. They are likely to leave. Some of them are doing 68 hours a week and some of them have young children and some of them have health issues and so forth. But our community is going to become healthy again by participation.

Stroudco required relatively little work from members as it was only open a few hours on Saturdays. But even then it did not receive enough voluntary help from members to run the operation smoothly. There was a small core of members who ended up helping the one part-time employed manager most of the time. At the University Co-op, which required volunteers to help with ordering, distribution and promotion functions, just over 10% of members were actively involved in running the co-op. A co-founder felt that one reason for the lack of involvement of students with the distribution might be because the pick-up is during a working day when most students are busy with their

classes. Nevertheless, he considered getting more students to engage with the operational functions of the co-op a 'struggle'.

Additionally, getting members to sign up did not always mean a proportionate increase in the number of customers. At two of the co-ops I studied only a small section of membership were regular customers at those co-ops. At TPS, members were not the main customers of the co-op. On two occasions that I served at the tills, I found that only around 15% of the customers I served were members. Thinking that this might have been an anomaly, I asked the product buyer if she knew the percentage of members and non-members among all those who shopped at the co-op. She replied that she did not track this statistic regularly but had done so on one occasion and found a figure similar to mine. She estimated that not more than 20% of members were regular customers at TPS. Also at Stroudco, regular orders were made by only 10 to 15 members from a total of around 50 in 2011. After marketing the co-op at many local events in Stroud and getting the membership number up to around 200, the weekly orders increased to only about 25 per week in 2012. This showed that even though marketing efforts had been successful in attracting significant membership, it was still difficult to get members to change their existing shopping patterns. Few new members became regular patrons of the co-op.

Analysing the member surveys at TPS and Stroudco pointed to a few reasons for the discrepancy between membership numbers and purchasing behaviour. Members were used to a wide range of product choices and a certain price level at mainstream supermarkets. The sustainable food co-ops did not meet those price and choice expectations in many product categories. Therefore, despite supporting the values of these co-ops, some members found it onerous to accept the limitations they encountered in changing their preferred grocery store. Moreover, a few members of TPS who had been inspired to sign up due to the television documentary did not live or work in the vicinity of the co-op and hence could not shop at the co-op regularly. Inconvenience was another factor. Stroudco required members to collect their delivery on Saturdays within a certain time-window every week. This, according to some members, made it inconvenient compared to other options they had for shopping local and sustainable food in the town such as at farm shops or at the farmers' market.

An aspect of the co-op that appeared to be crucial to member participation in many cases was its ability to function as a 'social hub'. In the TPS survey, some members expressed their wish for opportunities to socialise with other members. This interest was not just about working together for the co-op, but to get to know other like-minded members, have fun together with them in events, such as parties and quiz nights, and develop more relationships in ways that went beyond the activity at the co-op. At TPS, I saw some such relationships flourish between very active members who regularly volunteered their time on the shop floor and in the committees, and frequently attended the co-op's events. However, this was a small group relative to the size of the membership. There may have been members who did not have any interest in or time for involving themselves with the co-op outside their role as conscious customers. Yet, it was evident from survey responses and also from my conversations with some members in the store that they expected more opportunities for socialising.

At Stroudco, there were fewer opportunities for co-working than at TPS, but also few other socialising occasions for members to get to know one another better. I had the opportunity to speak by phone to about eleven members who had stopped ordering with Stroudco after making a couple of purchases. My questions explored their reasons for doing so. One member said the co-op did not meet her expectations of being a 'welcoming' community. She explained:

> To be honest with you, it wasn't what we kind of imagined it to be..and there was...I don't know how to put this really. Honestly, it wasn't very friendly. So there wasn't this feel from it that people were being friendly, that people were very welcoming. We kind of went up to pick up the stuff and people would be on the computer. There wasn't really any engagement there. It didn't feel like an engagement I guess. And we went there another time and people were sat down there and kind of having a meeting. It was almost like we were an inconvenience to the lot because there was a meeting going on. I kind of had a view of it, a kind of imagined view that it will be very sort of community feel and people would be more friendly. I may sound a bit banal but that was one of the things.

I emphasise that only one member made such a comment and her experience might have been an isolated one, but this kind of feedback is not easy to give in a telephone call to a representative of the co-op. Hence, I suspect that some other members may have felt the same. Stroudco had in the first few months of its existence organised farm visits and some social events. However, in the six months I was in touch with its management and received the co-op's monthly newsletters, I did not come across any socially engaging events that could address this member's concerns. In a slightly

different comment, however, another member gave an example of how she found the co-op's staff helpful:

> They were really helpful and really nice. I didn't quite get it at first. I walked all the way there and then my order was too heavy. So [the co-op manager] actually dropped my order to my house. So that was really helpful.

Thus, at times Stroudco's staff went out of their way to support the co-op's customers. When the other member spoke of co-op's organising members not engaging with her on her visit, it was not customer service that she found lacking. Instead, she was perhaps looking to have a friendly chat as an opportunity to participate in a community that gave her a social sense of belonging with people who shared her interests in sourcing local food. More interaction with other members through events and group activities may have facilitated that sense of community. A co-founder of True Food mentioned that in his experience some people joined not because they were interested in sustainable food, but because they wanted to be part of a community. He hoped that creative ways of bringing people together in networks of interdependence 'will bring about changes in the fragmentation of participation' within the co-op.

At the University Co-op, a co-founder felt that drawing members together, through social events and activities such as sharing recipes, could encourage more members to increase their participation at the co-op and provide volunteer support. Some student-members had provided feedback that the low price at which they were able to order fruit and vegetable boxes had made fresh and local food accessible to them for the first time in their lives. This was especially the case with those students who had before joining the co-op neither made a conscious choice about buying their own food nor cared about food provenance. The founding members wanted to change the way students engaged with the co-op. They did not want them to see the co-op just as a cheap fruit and vegetables shop. Instead, they envisioned the co-op as a vehicle to educate students more about where their food came from and how it was grown, and also develop in students an understanding of the nutritional and environmental implications of food choices. This process of learning, they felt, could be best stimulated through social engagement with other members at the co-op. Unfortunately, organising these opportunities for learning and socialising on a regular basis had not been easy due to lack of adequate volunteer support.

However, at the Pimlico Co-op, getting members to socially engage with each other was not a problem. This buying group was small and most members were already acquainted with one another to some extent. They had a shared interest in environmental sustainability expressed through their involvement in the Transition Town movement. They also used to meet socially, aside from their association with the co-op. Their group was therefore well integrated in their sense of shared purpose and commitment to environmental sustainability. The founder of the Pimlico Co-op elaborated on how he felt community support gave members of his food buying group an opportunity to transition from an awareness of sustainable food consumption to its everyday practice:

> That [pro-environmental behavioural] change in people is possible because as part of the Transition Movement you start to meet lots of people who have similar ideas, who then start to work together, socialise together and they as a group start changing and they become more and more similar in their thought patterns. So there's not exactly a peer pressure but there's a whole support group around you who can help you. While someone may watch Farm for a Future individually at home seeing it on television or whatever and may think 'yeah, this is great, I should make a difference', but then they watch the next film and ok they've forgotten the first one. Unless there's a burning desire in them to make the change, they won't make the change. But if you've got a group of 20-30 people who you are meeting every single day and you know you're working together, you are going out, you are growing food together, you are drinking together, you are socialising, you are watching the same kind of films. You get together to watch films together. It's much much easier. Especially if you are there, typically in these environments, you share meals. So when you meet in the evening everyone brings something to the table. So it just becomes much much easier to make that transition.

This kind of close-knit community where members shared much more than food purchasing practice, was missing, for the most part, at the other four co-ops. Therefore, although all these co-ops, to varying degrees, made sustainable food options available to interested members and customers, attracting and motivating members who were less versed with consuming sustainable food to deepen their practice through social engagement and learning was only possible to the extent the co-ops created opportunities for members to socialise, outside the function of collectively running the co-op.

5.2.3.1 Discussion with reference to other studies

The need to balance volunteer participation of members with paid staff as the co-ops' operations grew in scale and complexity was highlighted by Ronco's (1974) work on the 1970s wave of US food co-ops. Sustaining membership participation was recognised as

a challenge by many of the co-ops Ronco reviewed. Similarly, other studies on food co-ops have identified reliance on members as volunteers as a particularly difficult aspect of managing co-ops' operations (Freathy and Hare 2004; Murtagh and Ward 2009). Smith et al. (2012) found in their evaluative study of some English co-ops that the more established co-ops were more likely to have a mixed model of using both paid employees and member volunteers. Cotterill (1983) identifies an inverse relationship between size and membership participation in co-ops, but also suggests that remaining small may not always be a viable option. He observes (ibid.: 126):

> If volunteer labour fails to offset diseconomies of small size, the small is beautiful hypothesis fails the market test. Co-operatives that insist on remaining small will then be driven out of business by their larger, more cost efficient competitors.

The trade offs between maintaining a small organisation supported exclusively by volunteers and the need for inducting hired staff and introducing more bureaucracy and hierarchy in the organisation was a matter of active debates within many of the 1970s US co-ops that experienced growth (Ronco 1974; Cox 1994; McGrath 2004).

It is hard to envision how a co-op can foster a community around a shared purpose of sustainable food consumption and create opportunities for social learning without finding ways to get members to engage with one another as well as with the environmental objectives of the co-op. Some studies of co-ops have shown that activities that engage members to interact with each other, such as meetings, training sessions, celebrations, and task committees, help members to increase their acquaintance with each other and build interpersonal relationships, fostering both self-confidence and finding value in further association and group participation (Majee and Hoyt 2009, 2010; Bradbury and Middlemiss 2014). Additionally, Quarter and Midha (1999) found that members of a co-op can learn through informal processes, most importantly, through direct experience of practice and observation, through discussions with other members in meetings or one-to-one chats, and by asking internal experts and other members. But for these informal processes to be effective, there must be adequate opportunities for members to interact inside and outside of the co-op, feel comfortable with each other and develop a sense of trust and understanding with each other. Also, Ronco (1974: 86) discusses ways to inculcate more commitment among members and suggests that a food co-op must 'provide opportunities for members to get together away from the co-op, help members develop political skills, and keep open channels of communication among all members'. Similarly, Birchall and Simmons's (2004b)

‘participation chain’ model draws attention to developing skills and resources, mobilising participation opportunities and motivating members based on their interests to improve membership commitment to the co-op. Co-operative organisations can appeal to members’ individualistic as well as collectivistic motivations (Birchall and Simmons 2004a, 2004b). Some scholars have pointed to the ability of co-ops to cater to the material needs of a neglected segment of the marketplace or specific communities (Freathy 2003; Novkovic 2008). Food co-ops can make certain products more available or more affordable by leveraging collective bargaining and offering member discounts. These ‘selective incentives’ (Olson 1965) can thus attract member participation. However, Birchall and Simmons (2004b) found in a study that for a significant majority of participating members collectivistic incentives such as ‘shared goals, shared values, and a sense of community’ outweighed individualistic incentives (Birchall and Simmons 2004b). Hence, as discussed earlier in this chapter, cultivating a sense of shared purpose itself may enhance participation.

Furthermore, for stimulating membership recruitment and participation, the intrinsic satisfaction gained simply from a ‘need to belong’ or desiring a ‘sense of community’ can be an important factor. For instance, in the study of Welsh food delivery projects, where no selective material benefits were available to volunteers, their motivation to get involved was built on their sense of community belonging and community service, influence of social networks and the need for social engagement and interaction with other people in their community (Elliott et al. 2006). Baumeister and Leary (1995) draw from a large body of empirical work to put forward their thesis that the ‘need to belong’, i.e. the motivation to form at least a minimum number of enduring interpersonal relationships that are characterised by frequent interactions, emotionally pleasant experiences and a mutual concern for welfare, is a fundamental drive for all humans. In terms of understanding motives for group affiliation, they suggest that it may not be necessary for some people to derive pragmatic benefits or self-esteem through group associations. ‘People may simply desire to belong to groups’ (Baumeister and Leary 1995: 521). However, studies show that the ‘need to belong’ is satiable and once people feel fulfilled with the quality and quantity of their social relationships, they may not make further efforts to build new relationships (Gere and MacDonald 2010). The implications of this for recruiting members and volunteers in community initiatives is that, apart from the attraction of congruent value orientations, people with an

unsatisfied ‘need to belong’ would more readily join such groups and participate to form and establish new relationships within their group, provided the group environment is conducive to building such relationships. However, those who are not seeking to fulfil their ‘need to belong’ may look for additional material or pragmatic benefits that the group is likely to confer to them (Baumeister, Dale and Muraven 2000).

Returning to the experience of cases I studied and relating it to other research discussed in this section, I would like to note the following. In proportion to the co-ops’ size and to the degree the co-ops’ operations included sourcing from multiple suppliers and maintaining a hired fixed location for storage and distribution functions, co-ops such as TPS (with 22 employees), True Food (with three employees), and Stroudco (with one employee) felt the need to employ professional and paid staff to provide a more reliable and consistent service to their members. The University Co-op sourced from just two suppliers and was able to support its somewhat simpler model of selling pre-defined set of fruit and vegetable boxes and limited cupboard items with the help of student volunteers. Though, even here volunteer shortage was identified as an issue. In contrast, the Pimlico Co-op was sufficiently small, used a private residence to collect and distribute orders sourced from a single wholesale supplier and, therefore, did not need hired help. But here again, at the time I spoke to the founder, the buying group members relied heavily on him to take the lead in organising orders.

Adding to evidence from previous studies on consumer food co-ops, the ethnographic study of TPS showed that not only is it challenging to sustain membership participation, relying solely on member volunteering may introduce other drawbacks such as instability, inconsistency and an overall lack of professional service to the co-ops’ members. Nevertheless, membership participation remains a source of developing commitment to the co-operative ethos and reduces the co-op’s cost of operations. Additionally, members and key informants at some of the food co-ops I studied indicated the value placed on the ‘need to belong’ social-psychological construct. For instance, in the members’ survey at TPS, more members expressed that their motivation to join the co-op was to ‘meet other people through getting involved’ than to obtain the 10% discount.

To an extent, all the five co-ops included in this study created some opportunities for social interaction through members' meetings, participation in the co-op management and social events. Some work-related on-the-job training was also offered at TPS and True Food. At co-ops which had a relatively larger membership base, there were opportunities to contribute through functional committees which could appeal to members' interests. Yet, apart from the Pimlico Co-op whose membership was small and members regularly participated in social activities geared towards raising environmental awareness, the other four co-ops' found only limited success in engaging sustained member participation. This outcome may be a function of a number of factors suggested by findings from case studies: the regularity with which the co-ops could organise spaces and events for social exchange; the effectiveness of events organised in cultivating social relationships that would inspire further participation; the heterogeneity of members and the size of membership — diverse member interests and large member groups demanded more resources to devise interaction opportunities that catered to those interests; the ability of co-ops to meet product range and price expectations of its members; the availability of members' time; and, the persistent shortage of volunteers to support membership engagement activities.

5.3 Co-operative principles and sustainable food co-ops

Thus far I have examined three aspects of food co-ops that could enhance their potential in encouraging sustainable food consumption practices, but were found to be challenging in the ethnographic case study presented in the last chapter. In this section, I briefly reflect on the evidence gathered on the five food co-ops to comment upon how co-operative principles (ICA 2015a) could extend support to community-based consumer food co-ops in their pursuit of environmental objectives.

5.3.1 First Principle: Voluntary and Open Membership

> Co-operatives are voluntary organisations, open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political or religious discrimination (ICA 2015a).

In all five co-ops, people in the community could join if they were attracted to the co-ops' perceived objectives. No co-op restricted its membership to any pre-defined group based on race, gender, political group or religion. Membership fee may have been a perceived limiting factor for people on low-income, though concessional joining fees

were offered in some cases to make memberships appealing for low-income groups. On its own, however, the principle of voluntary and open membership does not directly support environmental responsibility. Members can choose to focus solely on lowering costs or any other goal. Nevertheless, this principle can be built upon by food co-ops to promote pro-environmental consumption if they can 'demonstrate that people want to join co-operatives on the basis of their efforts to address climate change' (SSG and ICA 2014: 18).

Due to the clarity of focus on sustainable food consumption at Stroudco, True Food, and Pimlico Co-op, their membership reflected this interest. At the University Co-op, efforts were made to highlight its pro-environmental values in recruiting its members but, according to an organising member, more student members were perhaps attracted by low prices than concern for the environment. In the case of TPS, although promoting aspects of environmental sustainability was among its objectives, responding to members' demands was prioritised by the management. Since its members had wide-ranging motivations for joining, pursuing pro-environmental consumption was not the primary focus at this co-op, though the co-op did offer some sustainable food options and took significant steps to reduce food waste.

Thus, in the five food co-ops I studied, the membership reflected interest in sustainable food consumption to the extent the clarity and primacy of focus on this objective was reflected within the co-ops' constitutions, operations and leadership. This suggests that the more consumer food co-ops can prioritise and maintain a sharp focus on promoting pro-environmental food practice, and recruit members on the basis of their subscription to this objective, the more likely it is that members will identify with this value-interest and pull their weight in achieving corresponding goals.

5.3.2 Second Principle: Democratic Member Control

> Co-operatives are democratic organisations controlled by their members, who actively participate in setting their policies and making decisions. Men and women serving as elected representatives are accountable to the membership. In primary co-operatives members have equal voting rights (one member, one vote) and co-operatives at other levels are also organised in a democratic manner (ICA 2015a).

Three of the co-ops — TPS, Stroudco and True Food — were formally registered as co-operative businesses and were legally required to offer opportunities to members to

voice their concerns in periodic members' meetings and the Annual General Meeting (AGM) as well as through their elected representatives on the co-ops' board of directors. The other two — University Co-op and Pimlico Co-op — were not registered co-operative businesses but did have provisions for democratic member control. The University Co-op was constituted as a student society based on co-operative principles and offered both democratic representation through office bearers and all members' participation in steering group meetings and the AGM. In contrast, the Pimlico Co-op did not require any member registration, nor did it formalise other co-operative procedures. However, since the group was small and members met frequently to run other community-based environmental projects, key decisions were discussed in person or on the buying group's online mailing list and were taken in general by consensus. Moreover, one of its founders told me that a draft co-operative constitution had been shared with its members with the aim to get members to sign.

For promoting sustainable food consumption, the principle of democratic member control can be helpful if most members jointly co-ordinate and devise plans to address environmental objectives. However, at most of the co-ops I studied, extensive member participation in decision-making was lacking despite organisational provisions to enable members' contributions. Reasons for non-participation given by members and key informants included lack of time, a feeling of alienation from the core management group, diversity of member concerns, and members' dissatisfaction with the products and services offered by the co-ops, both in terms of affordability and convenience.

The challenge of maintaining healthy democratic participation has been widely acknowledged in the co-operative literature (Ronco 1974; Valentinov 2004; Novkovic 2006; Somerville 2007; Murtagh and Ward 2009). Some researchers suggest that many externally funded and volunteer-run community food delivery initiatives operating in the UK could serve their customers' needs better if membership engagement processes were formalised in accordance with the co-operative principles (Smith et al. 2012; Caraher et al. 2014). The case studies in this research additionally emphasise that the democratic structure of co-operatives can be seen as a useful but not a sufficient condition to promote participative pursuit of pro-environmental food consumption objectives. Proactive and concerted efforts were necessary to engage members'

participation and strengthen internal democracy (see also Valentinov 2004; Lipset, Trow and Coleman 1956).

5.3.3 Third Principle: Member Economic Participation

> Members contribute equitably to, and democratically control, the capital of their co-operative. At least part of that capital is usually the common property of the co-operative. Members usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members allocate surpluses for any or all of the following purposes: developing their co-operative, possibly by setting up reserves, part of which at least would be indivisible; benefiting members in proportion to their transactions with the co-operative; and supporting other activities approved by the membership (ICA 2015a).

The third principle must be satisfied as a legal requirement for the registered co-ops — TPS, Stroudco and True Food. On the other hand, for the two co-ops that were not formally registered — University Co-op and Pimlico Co-op — membership control of capital was not as relevant since these co-ops did not hold significant capital. Additionally, their mode of operation, which involved pre-ordered products, volunteer-run operation, little or no retail markup on products, and almost no fixed costs, did not lend itself to capital accumulation.

For food co-ops with environmental objectives, member economic participation can be relevant in another way. Joining the co-op may show members' interest in the co-ops' environmental values. However, unless most members frequently purchase sustainable food items from their co-ops, the co-ops' role in advancing sustainable food consumption practice at the individual and community level is of little consequence. Key informants from True Food, University Co-op and Pimlico Co-op did not share any challenges with respect to getting members to purchase sustainable food through these co-ops. But evidence from TPS and Stroudco showed that only a small proportion of registered members were purchasing from these co-ops.

Closer examination of TPS and Stroudco revealed a few reasons for non-participation. At TPS, members interested in sourcing environmentally sustainable food may have simply not found enough options available at an acceptable price. Besides, since not all active members were perceived to be sufficiently interested in pro-environmental products, the TPS management did not particularly focus on this category of products. At Stroudco, all options available were from environmentally sustainable sources, but

the range of products was small and some members found the prices unaffordable. This was coupled with perceived inconveniences in collection location and timings compared to other sourcing options for similar food items in the community. Hence, evidence suggests that even when members' interests are sufficiently aligned with the co-ops' environmental objectives, product range, convenience and affordability are crucial to increasing economic participation.

5.3.4 Fourth Principle: Autonomy and Independence

> Co-operatives are autonomous, self-help organisations controlled by their members. If they enter into agreements with other organisations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their co-operative autonomy (ICA 2015a).

The fourth principle of autonomy and independence can enable members at food co-ops to take meaningful collective steps at the organisational level to address environmental objectives (SSG and ICA 2014). All co-ops I studied exhibited considerable autonomy, relying on their members or democratically elected representatives to make decisions without outside interference. In the case of formally registered co-op businesses (i.e. TPS, Stroudco and True Food), each had received significant external funding in the startup phase. It is plausible that even in the absence of giving ownership shares in return for investment, at times organisations may alter their plans to suit external funding requirements in ways that could draw resources away from achieving original targets (Wier, Pilley, and Harrison 2007). However, at least from the evidence shared by key participants at these co-ops, it appeared that outside funding supported the co-ops' objectives and did not impose overt external control tied to the capital invested.

The principle of autonomy is particularly relevant for community-based co-ops which are not a subsidiary of a regional or national level co-operative organisation as all decisions in these co-ops can be taken by members at the community level to reflect their particular local needs. This was evident from how the co-ops expanded their product offerings in response to their members' needs. For instance, Stroudco and University Co-op decided to expand their range to include cupboard items. Pimlico Co-op, on the other hand, limited its range to wholefoods and cupboard items as this category was not adequately catered to in their community. TPS offered its members choice of both budget and ethical options where possible, and True Food relaxed the need for organic certification for trusted local suppliers of fresh produce in consultation

with its members. Although the specific relationship between autonomy and membership participation in these co-ops could not be evaluated in this research design, it would be difficult to give a genuine sense of ownership and drive democratic participation among members without putting the co-operative principle of autonomy and independence in practice.

5.3.5 Fifth Principle: Education, Training, and Information

> Co-operatives provide education and training for their members, elected representatives, managers, and employees so they can contribute effectively to the development of their co-operatives. They inform the general public - particularly young people and opinion leaders - about the nature and benefits of co-operation (ICA 2015a).

For the most part, learning about how to accomplish specific tasks and understanding co-operative processes was facilitated at the studied co-ops through on-the-job training, participation in functional committees and members' meetings, and through informal chats and discussions with other members. Similar learning opportunities and processes have been referred to in other studies on co-ops (Quarter and Midha 1999; Majee and Hoyt 2009, 2010; Bradbury and Middlemiss 2014). Members could read the co-ops' constitution document to gather information about the co-ops' objectives and also about organisational aspects particular to being part of a democratically owned food co-op. Some of the other ways co-ops communicated with their members included the use of periodic online newsletters at TPS and Stroudco, extensive use of social media channels at TPS, notice boards in the stores at TPS and True Food, flyers at the distribution point at University Co-op, and online mailing list at the Pimlico Co-op. These means of communication were used to solicit participation in meetings and co-ops' operations, and announce events and new product offerings.

Sustainable food co-ops can build on the fifth principle of education to not only develop member skills to improve co-operative management, but also to 'provide training and education on climate change impacts, risks, and strategies to reduce emissions', and 'identify ways in which the co-operative can support members to reduce their impact on the climate' (SSG and ICA 2014: 18). However, apart from offering sustainable food options and discouraging food and packaging waste in the co-ops' operations, at most co-ops there was hardly any evidence of systematic approaches to influence pro-environmental food consumption practices among members. An exception was the

Pimlico Co-op where the collective buying activity grew out of a group's primary objective to deepen environmental awareness. Hence, the group's members met regularly to discuss films and media with environmental content and worked together on other environmentally-oriented projects in their community. Other co-ops, however, had not developed programmes with the specific aim of continually educating members about the environment, climate change and ways to reduce the negative environmental impact of the food system.

5.3.6 Sixth Principle: Cooperation Amongst Co-operatives

> Co-operatives serve their members most effectively and strengthen the co-operative movement by working together through local, national, regional and international structures (ICA 2015a).

All the co-ops included here collaborated with other co-operatives at various levels. For instance, each co-op sourced some of its food and household products from one or more of the three wholesale co-operatives in the UK: Suma, Infinity Foods, and Essential Trading. These wholesale co-operatives, owned and run by their workers, supply exclusively plant-based foods and exhibit a strong environmental and ethical orientation in their stated objectives (Suma 2015; Infinity Foods 2015; Essential Trading 2015). Additionally, Stroudco sourced some fresh produce from Stroud Community Agriculture (SCA) that was also run as a member-owned co-operative. At SCA, consumer members hired land as well as local farmers to grow and supply food in accordance with organic farming principles. In the co-ops that sourced imported food products, commitment to sourcing Fairtrade also supported growers' co-operatives in developing countries that were part of the Fairtrade network (Fairtrade Foundation 2015).

There was also evidence of other forms of co-operation between co-operatives. TPS had, for example, consulted the Park Slope consumer co-operative in the US in the process of developing its own model of operation. Once TPS became known as an ethical consumer co-operative in the UK, many other groups, such as The People's Supermarket at Oxford, turned to it for advice in starting similar ventures. In the same way, the University Co-op's founders had spoken to organising members of another student run co-op at the School of African and Oriental Studies in London to learn specifically about managing food co-ops with student-based membership. Later, the University Co-op also became a learning resource for other university-based food co-ops. In another instance,

Stroudco freely shared its online group-buying software with many other buying groups and co-operatives; it reported that 67 groups had registered to download the software by July 2012 (Stroudco 2012).

One of the key challenges for community-based food co-ops is to source food at prices low enough to make them affordable for low income groups. However, the small size of these co-ops does not give them the buying power to negotiate best prices with producers and wholesalers. One way to address this could be to develop a consortium of sustainable food co-ops that could leverage better buying power for their member co-ops. Ronco (1974) gives examples of such consortiums which bought large quantities of fresh produce from wholesalers at bargain prices and distributed it to participating consumer co-ops. A case study of English co-ops found a 'co-operative of co-ops' model in practice in two regions and recommended that this model could be further explored in other regions with an aim to effectively pool co-operative resources for community benefit (Smith et al. 2012: 26). Workers' co-operatives such as Suma and Infinity Foods, though not owned by consumer co-ops, already function as reliable nationwide suppliers to consumer co-ops for some types of foods, such as dried goods, long shelf-life processed foods, and whole grains, especially those that are imported. However, there is potential for regional consortiums to source seasonal and local fresh produce at scale and supply to member food co-ops. Such consortiums could also be more effective in absorbing the scale of edible food waste generated on farms and redirecting it at low prices to the supply chain. This could provide a better deal for both producers and consumers, and re-orient food supply chains towards public health and environmental values and away from middlemen seeking profit-maximisation.

5.3.7 Seventh Principle: Concern for Community

> Co-operatives work for the sustainable development of their communities through policies approved by their members (ICA 2015a).

The seventh principle refers to all three dimensions of sustainable development — economic, social and environmental. This principle requires co-operatives to deliver benefits not only to its members but also to the wider community they are embedded in. The primary orientation of benefits is towards local communities but the latest guidance document from ICA (2015d) also emphasises the need to recognise global connectedness of communities. Suggested ways to attend to this principle include 'local

sourcing of supplies to build local economies, encouraging community ownership of shops and other community assets, helping to develop other local co-operatives, supporting cultural events and the arts and supporting environmental campaigns, both locally and globally' (ICA 2015d: 93).

Concern for community was reflected in the practice of local sourcing at all the studied co-ops. Local sourcing stemmed from an aim to build resilience in local agricultural systems through connecting consumer members with local farmers and small-scale producers. Particularly, Stroudco, True Food, and University Co-op maintained a strong focus on local sourcing. To a lesser extent, TPS also promoted small-scale and local producers. Pimlico Co-op members focused on buying food and household products they could not already grow themselves or obtain from their local farmers' markets. Hence, although as a social group they were supporting local food systems, through their co-op the members were trying to minimise the environmental impact of purchasing non-local foods by sourcing them in bulk with minimal packaging from a regional wholesale co-operative. In fact, all the co-ops worked towards reducing waste and encouraged recycling and reuse of packaging. In particular, TPS showcased an innovative example of reducing shop waste by turning produce nearing its use-by date into revenue generating ready-made meals.

Local community needs were also served in two other ways. In True Food, University Co-op and Pimlico Co-op, members were trying to fulfil environmentally sustainable product needs not met by other shops in their communities. Interviews and survey results also showed that members, especially active volunteers, valued the social and community-oriented character of the food co-ops. This aspect was perhaps even more important for members of TPS and Stroudco, since other avenues of sourcing ethical and environmentally sustainable products already existed in their local communities. Additionally, a concern for global community was demonstrated, albeit to varying degrees, in the preferences for environmentally sustainable and Fairtrade products at the co-ops. To summarise, sustainable food co-ops can address the 'concern for community' principle by: prioritising local sourcing and pro-environmental products; reducing food and packaging waste in co-ops' operations; filling product gaps to meet community needs; providing a social space for members; and supporting communities in developing economies through the promotion of Fairtrade products.

5.4 Conclusion

In this chapter, I presented a cross-case analysis of three challenging aspects of sustainable food co-ops: building a community of interest around the shared purpose of sustainable food consumption; making sustainable food options accessible and affordable, in particular to low-income groups; and, recruiting members and gaining their consistent support and participation to fulfill co-ops' objectives. Figure 5.1 summarises the identified challenges and opportunities. Based on the evidence from the case studies, I also reflected on ways in which the seven co-operative principles can be built upon by sustainable food co-ops to promote pro-environmental food consumption practices (for an overview see Appendix E).

FIGURE 5.1 Opportunities and Challenges for Sustainable Food Co-ops

Building community with a shared purpose around sustainable food consumption	
Opportunities	**Challenges**
Commitment to environmental objectives as a basis for joining creates unity of purpose.	High overhead costs increase tensions in prioritising between environmental goals and commercial survival.
Leadership commitment to environmental goals may be important in setting appropriate expectations for members.	When some leaders are committed, but others are not, shared purpose is not clear.
Flexibility in interpreting environmental goals has the potential to make the co-op more inclusive.	Recruiting members without concern for environment can dilute focus on environmental objectives.
Opening the co-op to non-members has the potential to communicate the co-op's values to more people.	When customers are primarily non-members and their motivation to trade at the co-op is not environmental ethics, this might also shift the management's focus away from environmental sustainability.

Making sustainable food options affordable and accessible	
Opportunities	**Challenges**
Using community centres and low-cost premises reduces overhead costs.	High rents and utility costs increase cost of food.
Member labour reduces fixed costs.	Paid employees may be necessary to provide quality of service but increase fixed costs.
Class II and cosmetically blemished produce can be sourced from farmers to offer below-market prices and save food wastage.	Co-ops need to co-ordinate with other co-ops to absorb large quantities of edible food waste from farms.

Making sustainable food options affordable and accessible	
There is more potential to offer low prices on fresh fruit and vegetable produce and unpackaged wholefoods.	Processed and packaged products are difficult to offer at lower prices than supermarkets but members want these items for convenience.
Working through consortium of co-ops can improve access and price competitiveness of goods offered.	Community-based co-ops have much less bargaining power with suppliers compared to large supermarket chains.
Wholesalers of fresh produce offered lower prices than small scale producers. Working with few wholesalers rather than many producers also reduced administrative burden and costs.	Low cost may not be the only constraint in making sustainable food choices. Hence, other factors also need attention.

Engaging participation from members	
Opportunities	**Challenges**
Co-operative structure enables democratic participation.	Democratic structure is not enough on its own to engage members. Co-ops must invest in building forms of social capital compatible with their objectives.
Member labour can reduce costs.	Members' lack of time due to busy family and work schedules is a significant constraint.
More group activities to build awareness, commitment and skills for sustainability practices are required to enable social learning.	Lack of knowledge and resources in developing systematic approaches to foster social learning can be a challenge.
Members' interests in community and social justice issues can be tapped into to engage participation.	If environmental sustainability is a priority then other issues must be appropriately linked to this priority so as to not undermine the focus.
Members with a shared sense of purpose are more likely to engage with one another.	Diversity of concerns among members can reduce members' interest in the co-op.
Participation in more likely in small member groups.	Large groups can reduce cohesiveness and distance members from co-op management.
Price, choice and convenience are important for economic participation by members.	Community co-ops are constrained by their scale and resources to offer better price, range and convenience compared to large supermarkets in some product categories.

The cross-case analysis and reflection on co-operative principles draws attention to a few areas where sustainable food co-ops need to develop more effective strategies to achieve their environmental objectives. A key challenge highlighted here is that, despite organisational provisions for exercising democratic control, significant proportion of members could not always be engaged to participate both in decision making as well as

in purchasing regularly through the co-op. This was the case even where members' concerns for the environment appeared to be congruent with co-ops' environmental objectives. In conceptualising co-operatives as social capital based organisations, Valentinov (2004) emphasises that co-operatives depend on social capital to maintain their competitive advantage and must, therefore, invest in building this capital. Evidence from the case studies suggests that most of the co-ops struggled with finding ways to develop and nurture social capital to enable greater member participation. Furthermore, apart from attempting to offer environmentally sustainable food products, it was unclear what other systematic approaches could be effectively employed by the co-ops to proactively educate, inform and influence their members to practice sustainable food consumption.

Next, I attempt to find some answers to the challenges of membership engagement and persuasion. My approach is based on the premise that community-based sustainable food co-ops could develop better strategies to promote a sustainable diet if those strategies were informed by practical insights on influences on pro-environmental food consumption behaviour. I therefore explore influences on food consumption behaviour of selected individuals who follow pro-environmental dietary practices. The following chapter reviews the literature on behavioural influences.

Chapter 6
INFLUENCING BEHAVIOUR: LITERATURE REVIEW

While physics and mathematics may tell us how the universe began, they are not much use in predicting human behaviour because there are far too many equations to solve.
Stephen Hawking, Theoretical Physicist

Human behaviour has been a subject of investigation for many academic disciplines. In particular, psychology and social psychology have attempted to unravel factors that shape human behaviour and developed constructs that help explain behavioural changes in individuals. Also, work in the field of behavioural economics has added to the understanding of consumer behaviours in market contexts. On the other hand, sociological studies have emphasised the societal and institutional influences on human behaviour as well as the symbolic identity-forming and meaning-making processes that constitute behavioural practices. Some of the research in these disciplines has specifically focused on pro-environmental behaviours. As a result, there is a considerable body of literature assessing the role of, among other factors, awareness, attitudes and beliefs, personal and social norms, values, and habits and emotions, in influencing pro-environmental behaviour change. This chapter attempts to capture some of the key insights on human behaviour gained from psychology, behavioural economics and sociology. The literature review is followed by identification of gaps in knowledge that this research seeks to bridge, and the methodological approach it uses to expand the understanding of mechanisms of influence that underpin an environmentally oriented food consumption practice.

A comprehensive review of all the theories and models animating the field of human behaviour is beyond the scope of this chapter. This is largely due to the magnitude of the task, described by other scholars who have attempted it before as an 'enormous' (Maio et al. 2007: 102), and 'an impossible task' (Jackson 2005: 7). Moreover, many researchers who have conducted systematic reviews of theories of behaviour (see Lucas et al. 2008; Jackson 2005; Kollmus and Agyeman 2002) conclude that no single model will account for all kinds of behaviours enacted in varying contexts. Instead, as Cronbach (1975: 126) suggests, models are to be viewed as 'concepts that will help people use their heads'. Theories of behaviour should help policy makers and community activists identify key variables that shape behaviour and utilise this knowledge in influencing pro-environmental behaviour change in their

communities. The models are not ready-made recipes, but a tool kit which activists and policy makers can pick and choose from and apply in their specific socio-political contexts.

Jackson (2005) has perhaps conducted the most extensive literature review with the aim of understanding individuals' motivations for pro-environmental behaviour, the institutional and social contexts that influence these behavioural patterns, and the evidence collected so far in support of behavioural change models. He found that while simpler models such as Fishbein and Ajzen's (1975) Theory of Reasoned Action were better tested empirically, they were not applicable to many different kinds of behaviour. On the other hand, integrative models such as Bagozzi, Gürnao-Canli and Priester's (2002) Comprehensive Model of Consumer Action were more capable of providing conceptual explanations of a broad range of behaviour patterns. However, such complex multi-variable models posed significant challenges in empirical application and evaluation. Nevertheless, Jackson argues that the more sophisticated models with rich explanatory power are indeed supported with strong evidence for the individual elements that make up the model. As such, they can provide a useful heuristic framework for policy makers to understand a number of relevant factors affecting behaviour change.

In the following sections, an interdisciplinary and eclectic approach is adopted to highlight the most influential and widely used theories that animate contemporary debate and applied work in the field of behaviour change. The objective is to identify and understand factors relevant to behaviour change. First, factors that have received attention from psychology oriented disciplines are discussed, namely, information, cognitive biases, attitudes and beliefs, values and norms, agency and self-efficacy, habits, and emotions. Second, contributions from sociological approaches, such as social practice theory and sociology of food and consumption, towards understanding and explaining behaviours are reviewed.

6.1 Information

Early attempts to explain behaviour change followed a simple linear expectancy-value model. This model is based on the premise that individuals are rational and self-interested. They will evaluate the expected costs and benefits to them of making the

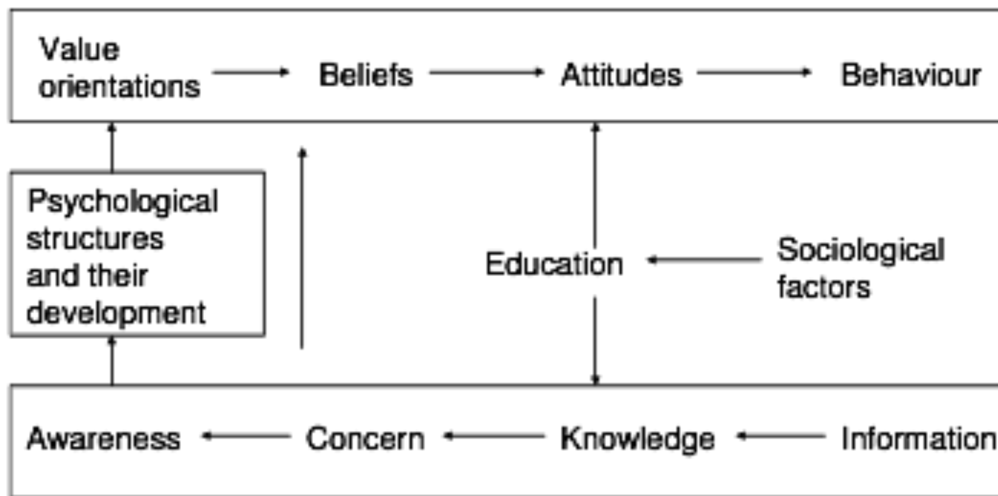

FIGURE 6.1 The Linear Model of Behavioural Action
Source: Finger (1994: 142)

change in behaviour before acting accordingly. Hence, if appropriate information was provided to individuals to convince them of the benefits of a particular behaviour, rational individuals will adopt the new behaviour and give up the old one. The role of policy makers and activist organisations was therefore to remove the 'information deficit' (Burgess, Harrison and Filius 1998; Owens 2000) and facilitate the desirable behaviour change.

Finger's (1994) representation of this model (see Figure 6.1) shows that knowledge and information, among other means imparted through a society's educational system, develop awareness and concern, which in turn activates a cognitive schema of value orientations, beliefs and attitudes leading to the desired behavioural action. In the linear model people's decision-making process is simply based on the information available to them. Value orientations, beliefs and attitudes are products of the evaluation process and have no role in influencing the processing of information itself. Also, the model does not explain how beliefs and attitudes translate into a specific behavioural action.

A number of studies (e.g., Finger 1994, Geller 1981, Bickman 1972) show that both knowledge and attitudes are poor predictors of behaviour. However, many governmental and even non-governmental organisations frequently base their behaviour change campaign strategies on the assumptions that 'irrational' individual behaviour can be 'corrected' by providing information and increasing knowledge and awareness. For instance, based on this premise, the UK government's 'Are you doing your bit?'

initiative, a £28.4 million national level advertising campaign that ran in the period from 1998 to 2000, failed to produce any positive results (Collins et al. 2003). In fact, in many areas, such as car use, electricity consumption, and leisure flights, consumption patterns had become significantly worse in the given period (Hobson 2004). Similarly, another study showed that despite spending of around $200 million annually by California utilities to promote efficiency in household energy consumption through information based campaigns, California's residential energy use had hardly changed (Costanzo et al. 1986). Although these energy reduction campaigns are extremely expensive, they are relatively easy to organise and administer, in the form of airing radio or television advertisements and distributing printed material. They have thus been a tool of preference, outside of legal regulation, for government bodies intending to influence consumer behaviour (McKenzie-Mohr 2000).

Some of the problems in such information-based strategies may result from ineffective messaging that does not take psychological insights about human behaviour into account. However, the weak correlation between awareness and behaviour change has further problems that stem from limitations of the rational choice framework on which these strategies are based. Information-oriented linear models of behaviour fail to capture the complexity of cognitive undertaking that underpins human behaviour. For instance, it is not uncommon to find individuals struggling to break habits like smoking or behaviours that increase chances of obesity, despite being fully aware of the consequences of their behaviour. These behavioural patterns, however, challenge the explanatory potential of the rational choice framework. In the case of smoking, the benefits of behaviour change directly affect the individual making that change; and yet change is not easy. On the contrary, environmental behaviours such as recycling are more rooted in value-orientations towards public good rather than any immediate benefit to the individual. Such value-oriented and somewhat altruistic behaviours are even less understood within the rational choice framework. Consequently, the difficulty of behaviour change is often underestimated.

The assumption that self-interested individuals seek to maximise material and economic gains has been falsified in many empirical studies across cultures (Heinrich et al. 2005). As a result, some rational choice theorists maintain that self-interest need not be economically motivated (cf. Gintis 2007; Becker 1976). They argue instead that the

criteria for evaluation of preferences can be subjective and unique to the individual. In this formulation, any behaviour can be explained by the theory as utility-maximising for a given individual. Critics, however, point out the weakness of this version of the theory in explaining specifically how individuals arrive at their preferences (cf. Hodgson 2012; Sen 1977). In addition, rational choice theory assumes that people have the cognitive capability to acquire and assimilate all the information available and make the complex calculations necessary to determine the best choices. It does not account for risk and uncertainty (Kahneman and Tversky 1979) or 'bounded rationality' (Simon 1957), factors which both constrain and constitute many decision-making contexts.

Research has shown that even when presented with sufficient information in favour of feasible economic options, psychological and social factors connive to render the process of evaluation and decision-making less than straightforward (Dawnay and Shah 2005). The process of framing messages needs to be alert to the cognitive biases that affect how people interpret information. Cognitive phenomena such as asymmetric discounting and loss aversion, for instance, may affect the way individuals perceive costs and benefits. Incorporating the role of factors such as emotions and social norms in theories of behaviour change further enriches the understanding of how individuals confound behaviour predictions generated from a simple cost-benefit economic calculus.

This is not to say that information has no role in influencing behaviour. In fact, it is still an important and accessible tool in the armoury of behaviour change strategists. The role of information in shaping behaviour, however, is now seen to be more indirect and seldom operational in isolation from other relevant factors. A number of studies have focused on making strategic communication more effective by learning about how humans process information towards decision making and how these understandings can be best employed to 'nudge' pro-environmental behaviour changes (CRED 2009; Sunstein and Thaler 2008; Cialdini 1993).

6.2 Attitudes and beliefs

Information-based strategies of behaviour change usually target attitudes as mediators of behaviour. Attitudes are defined as an evaluation of ones disposition, ranging from favourable to unfavourable, towards an object, which might be an idea, issue, event, institution, person or any discriminable thing (Ajzen 2001). It is intuitive to expect that

a favourable disposition towards a certain behaviour will enable one to enact that behaviour. However, studies in the field of pro-environmental behaviour challenge these expectations (cf. Bickman 1972; Gatersleben, Steg and Vlek 2002). Bickman's (1972) study on littering is particularly telling. From the 500 people interviewed about attitudes to littering, 94% acknowledged responsibility, but only 2% picked up litter that had been strategically planted by researchers on their way out.

The weak correlation between measures of attitudes and measures of behaviour observed in many psychological studies (Wicker 1969), which was contrary to common assumptions, motivated scholars such as Fishbein and Ajzen (1975) to explore the attitude-behaviour relationship further. They found that while general attitudes towards objects may not predict a specific behaviour related to that object, attitudes more narrowly defined towards a behaviour are better predictors of that behaviour. For instance, a general concern for the environment may not reduce ones car use. However, a negative attitude towards fossil fuel use is expected to correlate well with specific travel behaviours that seek to minimise fuel consumption. The basic pre-conditions for a strong attitude-behaviour correlation are that the behaviour is deliberative and volitional, and that the attitude and behaviour construct measured correspond to each other with respect to target, context, specificity and time (Ajzen and Fishbein 1977).

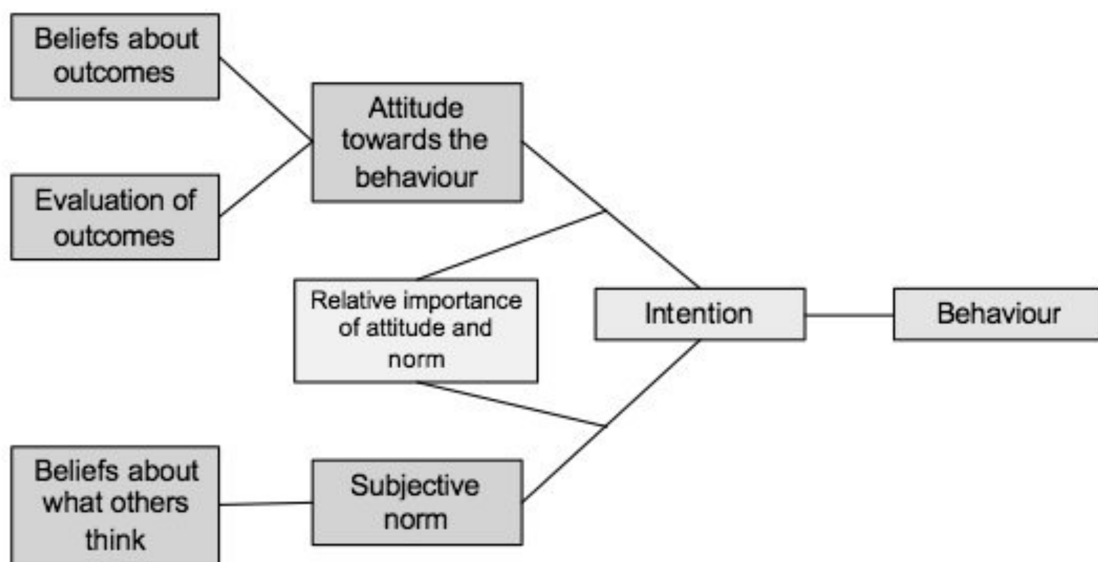

FIGURE 6.2 The Theory of Reasoned Action
Source: Jackson (2005: 46)

The theory of reasoned action (TRA) proposed by Fishbein and Ajzen (1975), as represented in Figure 6.2, stipulates that beliefs about possible outcomes of a behaviour shape attitudes towards that behaviour. These beliefs may be both evaluative, based on information and assumptions, and normative, derived from perceived social norms and their importance to the individual. The Fishbein-Ajzen model introduces the concept of 'behavioural intention' as a mediator between attitudes and behaviour. Accordingly, narrowly defined attitudes can strongly predict a behavioural intention, the immediate antecedent of a behaviour. The behaviour itself, however, is contingent upon 'control factors' like time, cost, skills and opportunities that may constrain or facilitate the translation from behavioural intention to actual behaviour (Ajzen 1985).

Fazio and his colleagues (Fazio and Zanna 1978; Fazio and Williams 1986; Fazio 1989) suggested that attitudes need to be cognitively accessible to affect behaviour, especially when behaviours are performed under cognitive limitations such as time constraints. Attitudes based on direct experiences of behaviour are more likely to be cognitively accessible and, as a result, are stronger determinants of action than those based on indirect experiences or information alone (Fazio and Zanna 1981). In the field of environmental activism, Kallgren and Wood (1986), for example, found that those with higher levels of access to their attitudes regarding environmental preservation were more likely to act in consonance with their attitudes than those who had lower levels of access to their attitudes.

In a variety of behavioural contexts that satisfy its preconditions, TRA has been fairly successfully tested and applied. Ajzen and Fishbein (1980: 5) summarise the assumptions behind their model as follows: 'Generally speaking, the theory [of reasoned action] is based on the assumption that human beings are usually quite rational and make systematic use of the information available to them'. As it is based on the rational choice framework, TRA suffers from the framework's inability to account for automatic and non-volitional behaviours. Emotional and moral influences on behaviour are also not included in this model.

6.3 Values and norms

Some researchers have emphasised the importance of values (Stern and Dietz 1994; Karp 1996; Schultz and Zelezny 1999) and norms (Schwartz 1977) as the basis for

'environmentally significant behaviour'. Values are defined as basic convictions or notions about what is right or wrong in a given context. Stern et al. (1995) place values higher up than beliefs and attitudes in their hierarchical Schematic Causal Model of Concern. Values in this model are seen as fairly general dispositions constructing an individual's worldview, and as such are less closely related with specific behaviours. However, values are relatively more stable and enduring than beliefs and attitudes and are considered particularly relevant in shaping personal norms (Stern 2000; Schwartz 1994).

Norms, on the other hand, are guidelines about how to act and can have both social and personal components. In Fishbein-Ajzen's model (1975), social norms influence individual attitudes to a degree the individual ascribes salience to those norms. Cialdini, Kallgren and Reno (1991) have further expanded the concept of social norms into descriptive and injunctive norms. Descriptive norms are largely based on how most people in a group behave in a certain context. Following descriptive norms, for example, one is likely to drive at a speed similar to other drivers on a motorway, even if this speed is above the legal speed limit (Jackson 2005). In other words, under influence of descriptive norms, one simply follows what others do. Injunctive norms, on the other hand, determine what behaviour is expected of an individual in the group and implies social rewards or sanctions correspondingly. Again adapting the example from Jackson (ibid.), while driving one may slow down if one was approaching a patrol car or an accident site, even if others around might have not immediately responded in the same way. Injunctive norms induce a fear of having to pay fines or perhaps facing disapproval from other drivers.

Together with social norms, personal norms also play an important role in influencing attitudes and behaviour. According to Schwartz and Howard (1981: 191) personal norms are 'feelings of moral obligation to perform or refrain from specific actions'. A range of pro-environmental behaviours have been found to be better explained by personal norms in comparison to social norms (Thogersen 2006). Such behaviours are oriented towards the welfare of other human beings or even plant and animal species, and are not adequately accounted for by the self-interest based rational choice models. For instance, wildlife conservation behaviour or reducing meat consumption may require salience of personal values and norms over and above considerations of

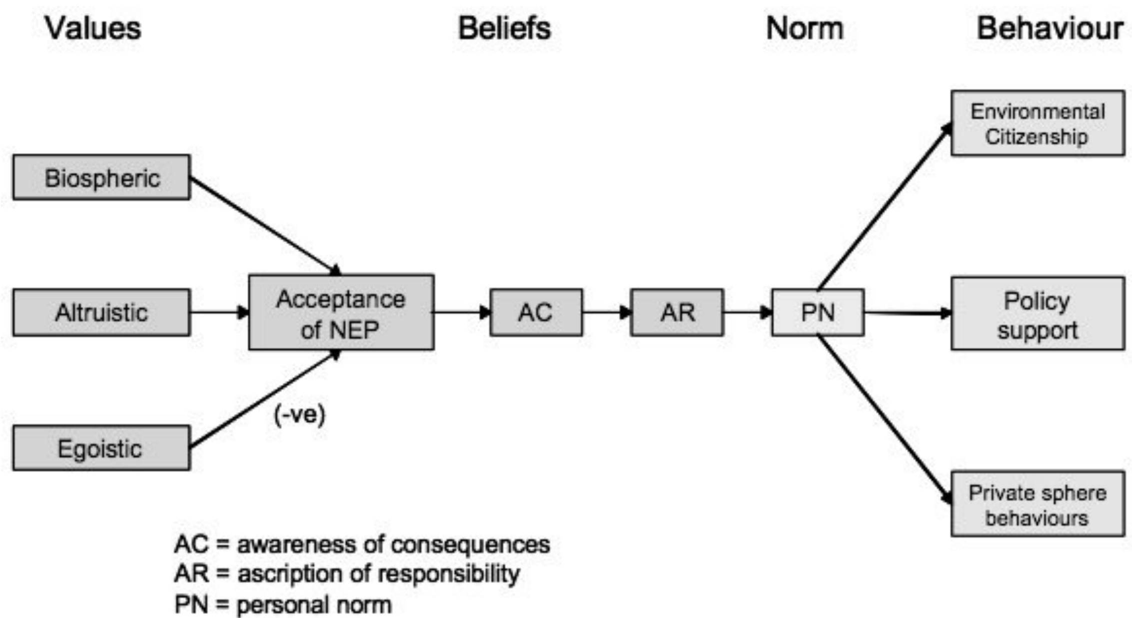

FIGURE 6.3 Stern's Value-Belief-Norm Model
Source: Jackson (2005: 57)

economic self-interest and social norms. Personal norms may arise from an individual's intrinsic values, but they may also be internalised from social norms (Schwartz 1977). However, unlike social norms, personal norms are not subject to external sanctions, but to one's own moral compass.

To explain altruistic behaviours, Schwartz (1977) proposed a norm-activation model (NAM). In this model, personal norms are the main force behind pro-social behavioural action and have two immediate psychological antecedents. Firstly, ones awareness of harmful consequences of a given condition for other people or species, and secondly, ones sense of responsibility about acting to counter the threats posed to others, both activate personal norms that determine whether or not one would undertake a specific pro-social behavioural action.

Stern et al. (1999) have adapted specific concepts from NAM for altruistic behaviours into their more generalised value-belief-norm (VBN) model. The VBN model (see Figure 6.3) develops a causal chain that incorporates in a linear order, general values (borrowed from Schwartz 1977), environmental beliefs (borrowed from the New Ecological Paradigm scale of Dunlap and Van Liere 1978), beliefs about awareness of consequences (AC) and the ascription of responsibility (AR), and personal norms, which in turn lead to various types of pro-environmental actions. The three value orientations are egoistic (self-enhancement), altruistic (self-transcendent) and biospheric (an

intrinsic concern for all members of the ecosystem). Altruistic value orientations correlate more strongly with pro-environmental behaviours than egoistic orientations in many empirical studies (Karp 1996; Nordlund and Garvill 2002; Stern, Dietz and Guagnano 1998). The link between biospheric value orientations and specific behaviours is not yet well understood due to insufficient research on this aspect (Stern et al. 1999). Nonetheless, there is some evidence that biospheric values exist as conceptually distinct from altruistic values. For example, De Groot and Steg (2007) found that where altruistic values conflicted with biospheric values, i.e. a decision had to be made between donating to a humanitarian or an environmental organisation, biospheric values were clearly more salient in influencing pro-environmental behaviour.

Values also inform other theoretical models such as cultural theory (Douglas and Wildavsky 1982) and post-materialist values theory (Inglehart 1977, 1990). Based on the cultural theory, which posits that people act on deep rooted 'cultural biases', Dake (1991) developed a measurement of four value orientations, namely, egalitarianism, hierarchy, individualism and fatalism. Some studies (Dake 1991; Peters and Slovic 1996) have found that people with egalitarian orientations are more likely than those with individualistic orientations to engage in pro-environmental behaviours. The post-materialist values theory suggests that environmental concerns follow from concerns about quality of life and self-expression (post-materialist values), which develop once a society's materialist concerns about economic and personal/national security have decreased in salience. Empirical tests of this theory have produced mixed results (Stern et al. 1999). The most important critique of the post-materialist theory, however, stems from its inability to account for environmental concern in developing countries. Religious and spiritual value systems have also been found to influence pro-environmental behaviours. For instance, some studies have suggested that Judeo-Christian belief systems fostering the idea of man's 'dominion' over their environment may induce less support for conservation efforts (Schultz, Zelezny and Dalrymple 2000; Hayes and Marangudakis 2001) than other belief systems that hold nature sacred.

6.4 Agency and self-efficacy

To improve upon the predictive power of the theory of reasoned action in situations where individuals do not have complete control over their actions, Ajzen (1991) extended the TRA model and proposed the theory of planned behaviour (TPB). In

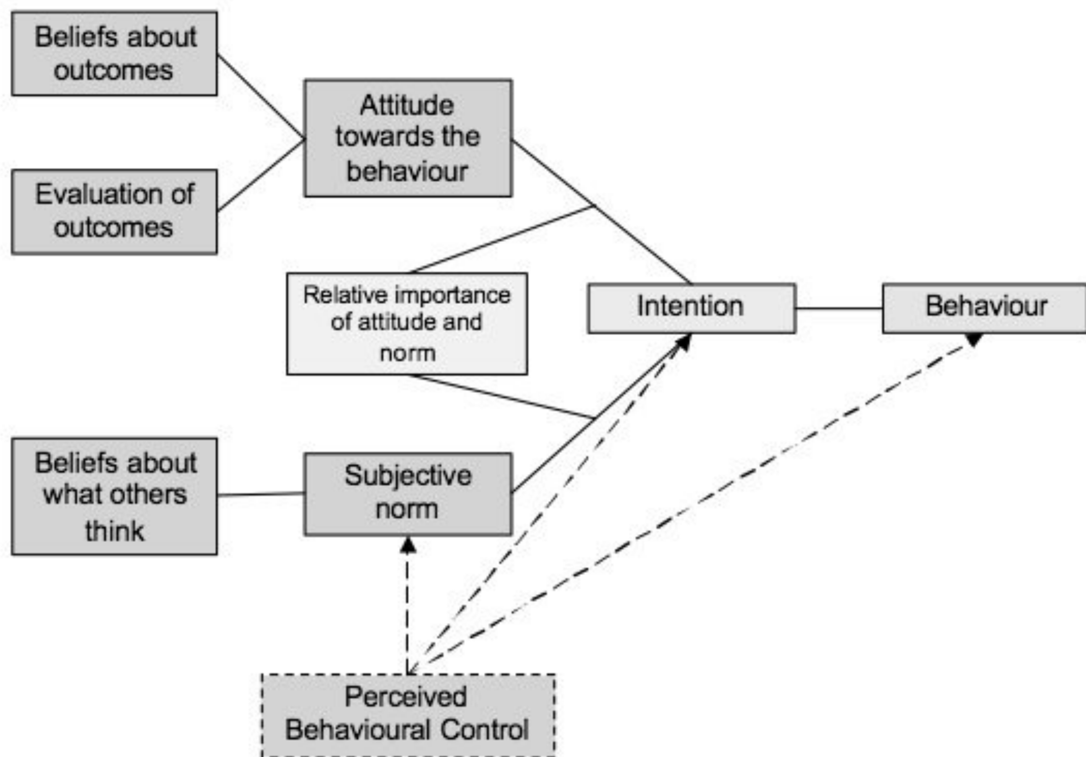

FIGURE 6.4 The Theory of Planned Behaviour
Source: Jackson (2005: 49)

addition to behavioural beliefs and normative beliefs, he introduced control beliefs, which could independently combine with behavioural intentions (see Figure 6.4) to predict behavioural outcomes. Control beliefs depend on people's access to resources and opportunities and their anticipation of factors that might constrain their behaviour. An aggregation of these beliefs multiplied by their perceived strengths is denoted by the 'perceived behavioural control' variable in TPB. The probability of behavioural actions corresponds to how realistic the perceived control is for a specific behaviour. Ajzen admits the limitations on predictability imposed by gaps between actual control and perceived control that might result from lack of information or be due to changed and unfamiliar circumstances. In a meta-analysis of studies based on TPB, Armitage and Connor (2001) confirm that all three belief variables in the TPB significantly contribute towards behaviour prediction.

According to Ajzen, the construct of 'perceived behavioural control' closely follows Bandura's (1977b: 193) concept of self-efficacy, which is defined as 'the conviction that one can successfully execute the behaviour required to produce the outcomes'. Bandura, however, sees these two conceptions of human agency as distinct from each other. He contends that 'perceived behavioural control' is oriented towards external factors

whereas self-efficacy is representative of an internalised sense of capability. To illustrate this point, taxi drivers may score high on self-efficacy in adopting driving behaviour to improve fuel economy, but low on 'perceived behavioural control' as lack of time and congestion on the roads might act as external constraints. Armitage and Connor (2001) find some evidence to support the distinction between self-efficacy and 'perceived behavioural control'. Nonetheless, their analysis endorses the usefulness of both constructs in predicting behaviour.

Agency through an internalised general disposition is also incorporated in Kollmuss and Agyeman's (2001) model of pro-environmental behaviour. This conceptualisation of agency is based on Newhouse's (1991) differentiation of internal versus external locus of control. People with a strong internal locus of control believe that their actions will make a positive difference whereas those with a strong external locus of control believe that their actions will be insignificant in bringing about change and are therefore less likely to engage in pro-environmental behaviour. In a meta-analysis of 128 pro-environmental behaviour research studies, Hines, Hungerford and Tomera (1986) found locus of control to be a key variable associated with pro-environmental behaviours.

6.5 Habits and routines

Human agency may not simply be a product of cognitive deliberations, but may become locked into automated processes that guide behavioural actions (Verplanken and Faess 1999). In everyday life, many behavioural actions, such as, how we take a bath or shower, the breakfast we eat, the route we take to commute to work, the mode of transport we use to commute, whether or not we leave the heating on when we leave our house, or leave our electronic appliances on standby, walk up the stairs or take a lift, and grab a ready-made meal on our way back from work, all may become matters of habit or routine. These behaviours are continuously reinforced by past actions and after a certain point, require little or no conscious evaluation. As a result, new information provided to discourage such behavioural patterns fails to alter them (Garvill, Marrell and Nordlund 2003). The mind becomes trained to rely on past actions as a heuristic device. In situations where contexts hardly change, relegating the decision-making process to habit is more efficient in comparison to conscious deliberation over all available options before the action is undertaken each time. This suggests that habit or

the influence of repetitive past behaviour on future actions deserves serious attention in attempts to change behaviour.

However, habit has been neglected in the most popular theories of behaviour discussed so far. One of the few theories that does take habit into account is Triandis' (1977) Theory of Interpersonal Behaviour (TIB). Triandis (1980: 204) defined habit as 'situation-behavior sequences that are or have become automatic, so that they occur without self-instruction'. The individual is usually not 'conscious' of these sequences. In TIB (Figure 6.5), in addition to behavioural intention, variables directly antecedent to behaviour include habit and objective facilitating conditions (as opposed to a subjective assessment of situational constraints expressed as perceived behavioural control in TPB). The facilitating conditions act as moderators on the influence of intention and habit on behaviour. Triandis explains that a behaviour may be influenced by intention when it is new, but as the frequency of behaviour increases, habit becomes a stronger predictor of behaviour and deliberative processes underlying behavioural intention lose their significance. In a study about students' car use, Bamberg and Schmidt (2003) compared the predictive power of TPB and TIB and found that, in the context of everyday travel choice, the habit construct had a stronger influence than intentions.

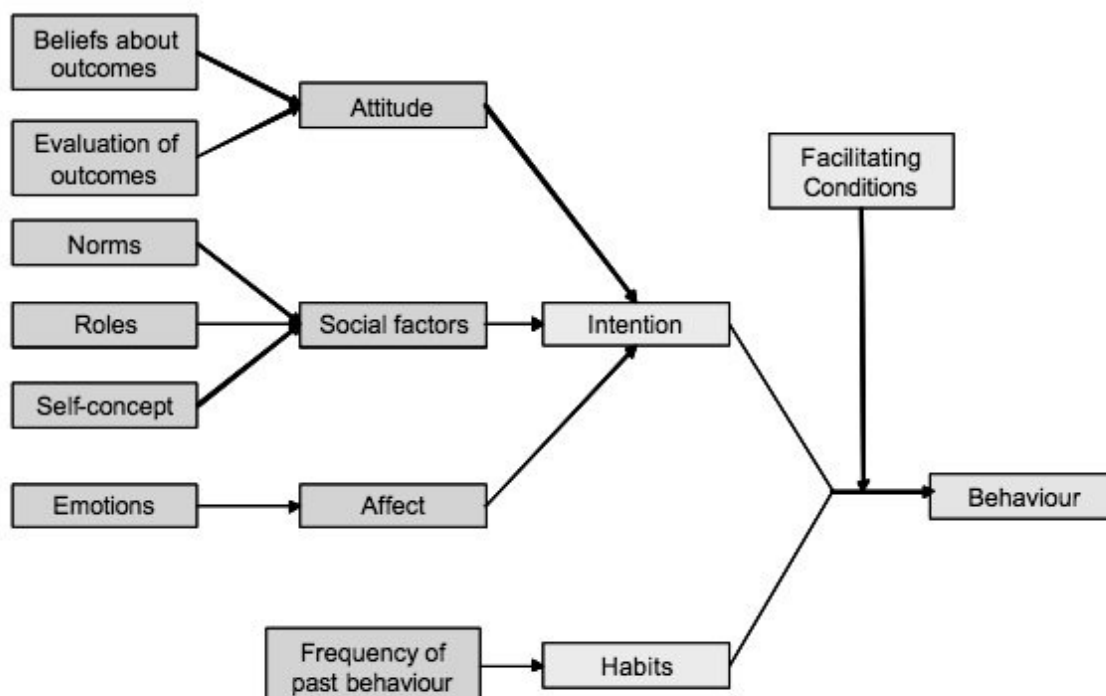

FIGURE 6.5 Triandis' Theory of Interpersonal Behaviour
Source: Jackson (2005: 94)

Among students who used cars, this choice had become a habituated and automated process triggered by the fairly stable context in which this choice was exercised.

Other empirical studies in the domain of pro-environmental behaviour have also supported the claim that past behaviour contributes to future behaviour. Cheung, Chan, and Wong (1999) showed this in the context of wastepaper recycling; Terry, Hogg, and White (1999) did the same in the context of household recycling; and, Aarts and Dijksterhuis (2000) have found evidence for the claim in the context of travel mode choice. In all these cases, habits serve as a shortcut to reduce the cognitive effort required to make a decision regarding behavioural choice. According to Cialdini (1993), behaviour guided by routine is no longer affected by cognitive factors such as attitudes, norms, or intentions that might have originally motivated it. As a result, changing these factors is not enough to produce a change in behaviour. Habitual behaviour can persist against conscious intentions to change it (Verplanken and Faess 1999), and is therefore particularly resilient in the face of behavioural change interventions.

6.6 Emotions

Triandis' theory also factors in the explicit role of emotions in influencing behaviour. Unlike habits that influence behaviour directly in the TIB model, affective factors have a positive or negative influence on the formation of behavioural intentions. But like habits, the role of emotions is considered to be independent of rational-instrumental calculations of expected outcomes. Bamberg and Schmidt's (2003) study, which tested TIB in comparison with TPB, suggested that incorporation of both habit and affective factors could increase predictive ability of expectancy-value based models like TPB. People, for instance, may not just use their cars due to utilitarian need, but may *enjoy* the experiences associated with it, such as listening to music while driving. In a survey to ascertain motives behind car use, Steg (2005) found affective and symbolic motives to be of greater salience than instrumental ones, particularly among male and younger respondents who drove often and had a positive attitude towards cars.

In setting out the affect-heuristic explanation for the role of emotions, Slovic et al. (2004: 313) suggest: 'Although analysis is certainly important in some decision-making circumstances, reliance on affect and emotion is a quicker, easier, and more efficient way to navigate in a complex, uncertain, and sometimes dangerous world'. Evidence of

emotions guiding ecological behaviour has been acknowledged in a number of other studies. Kals, Schumacher, and Montada (1999) and Finger (1994) have shown that emotional affinity with nature can lead to conservation behaviour. Studies by Steg, Vlek and Slotegraaf (2001) and Anabel and Gatersleben (2005) also found travel behaviour to be affected by emotional experiences such as thrill of driving or boredom when waiting for public transport. In addition, many environmental activists in Germany told Christmann (1996, cited in Rucht 1999) that avoiding a sense of guilt was a strong motivator for continuing their activism; these activists wanted to be able to tell their children that they had tried their best to improve the state of the environment and create a better future for coming generations.

6.7 Cognitive biases

Studies in behavioural and experimental economics have found that people display certain inherent biases when making choices, which at times confound the logic of mathematical and economic rationality. Some of the key cognitive biases discussed in this literature are as follows.

6.7.1 Asymmetric discounting and loss aversion

People generally tend to give more importance to immediate or short-term events over distant or long-term ones (Weber et al. 2007), and are more keen to avoid a loss than make an effort to gain something (Kahneman and Tversky 1979; Kahneman, Knetsch and Thaler 1991). In other words, people discount future gains more than current losses. People are also very unwilling to give up something they consider theirs. This is known as the 'endowment effect' (Sunstein and Thaler 2008; Thaler 1992). These biases produce decisions that are inconsistent with the economic rational choice theory. For example, duck-hunters in the US were willing to pay $247 each towards the cost of maintaining a wetland for ducks, but demanded $1044 to give up the wetland (Kagel and Roth 1995). In another study, Weber et al. (2007) found that people asked for more compensation for delaying consumption than they were prepared to pay for accelerating consumption. Preference for immediate gratification and an underestimation of future costs can result in health issues such as obesity or financial issues such as lack of savings for old age (Dawnay and Shah 2005). This has implications for environmental behaviours as well. Where a change in behaviour is perceived to come at an immediate

economic cost and personal discomfort for distant, and perhaps uncertain, gains for the environment, people are less likely to change course toward environmentally sustainable behaviour. However, the order in which options are presented can reduce the asymmetry of discounting. Weber et al (2007) showed that when people were prompted to deliberate about the benefits of delayed consumption, they were much less likely to exhibit intertemporal discounting. Moreover, Hardisty and Weber (2009) found that social norms can influence the order in which people consider decision-making choices.

6.7.2 Status quo bias and defaults

People are generally resistant to change unless the incentives to change are substantial (Thaler 1992). In a series of experiments, Samuelson and Zeckhauser (1988) showed that a default option, i.e. the one representing the status quo, is more popular than other options. Additionally, the bias for the default option increases with an increase in the number of options presented. Hence, people tend to minimise cognitive effort required to evaluate choices by defaulting to the status quo (Lichtenstein, Gregory and Irwin 2007; Irwin and Baron 2001). People may also believe that the default setter has implicitly endorsed that option as the appropriate one for them (Sunstein and Thaler 2008; Johnson and Goldstein 2003). Through real world studies and lab experiments, Pichert and Katsikopoulos (2007) demonstrated that people preferred environmentally friendly electricity providers when those were presented as the default choice. Other studies suggest that in many decision-making scenarios people prefer not to make an explicit choice and stick to the status quo (Dhar 1996; Tykocinski, Pittman and Tuttle 1995). In the domain of food choices, some scholars have attributed obesity in North America to the availability of large portion sizes as a default option in many restaurants and food outlets (Rozin et al. 2003). On the other hand, consumers were more likely to choose low-calorie food options when those were presented as a default option on the menu of a metropolitan sandwich shop (Downs, Loewenstein and Wisdom 2009). These studies show that making people switch from environmentally unsustainable choices to environmentally responsible ones would be difficult unless the desirable choices were available as a default.

6.7.3 Framing and ordering effect

How information is framed can have varying impacts on people even when essentially the same information is offered. Since people are loss averse, framing a decision in terms of avoiding a loss can be more effective than framing the same decision in terms of achieving a gain, even when quantitatively the outcome at stake is the same (Tversky and Kahneman 1992). For example, Sunstein and Thaler (2008) suggest that telling people they can save $X by conserving electricity is going to be much less effective than telling them that by not conserving electricity they will lose $X. Framing can also be used in conjunction with other behavioural influences for better impact. For example, in an experiment where taxpayers were sent different messages to increase the chance of their completing tax returns, those who were told that there was a high compliance rate (90%) were most likely to comply. Appeals to altruism, threats of legal consequences, and offering more guidance on how to fill the returns did not have a significant impact (ibid.).

The order in which choices are presented can also alter responses. When people are primed to consider benefits before losses, they are less likely to place a higher value on losses (Weber et al. 2007). Gertner (2009) cites an experiment in which people were asked to consider a two percent additional surcharge on airline tickets to fund clean technology. This surcharge was framed alternatively as a 'carbon offset' and a 'carbon tax'. People who identified themselves as Republicans were much more willing to pay for a carbon offset than a carbon tax (due to the negative association with the tax frame within this political group). Democrats were generally willing to pay for both. The participants were also asked to note down their thoughts while considering these choices. The carbon offset frame induced both Republicans and Democrats to consider the benefits of clean technology before the economic cost to themselves of funding the technology, resulting in an overall positive response in favour of the carbon offset (Gertner 2009).

6.7.4 Finite pool of worry and single-action bias

At a given time, people can only be worried about a limited number of issues, or in other words have a 'finite pool of worry' (Weber 2006). As certain issues become more salient for a person, other issues are crowded out and lose their significance and

relevance. For example, a report by Pew Research Center (2009) found that the proportion of Americans who were seriously concerned about climate change diminished from 2006 to 2009. The onset of the financial crisis and associated concerns about unemployment seemed to have replaced concerns about the climate. A consequence of the limited capacity to deal with fear and worry is the single action bias. Weber (1997) found that often a single action taken by people may assuage their concerns about a problem so as to reduce their inclination to take further actions. Accordingly, if a person has voted for a Green candidate or bought an energy-saving appliance, their inclination to take other actions to mitigate climate change is strongly diminished. Due to the single action bias, people can take an action that may not be the most effective in dealing with the problem, and yet feel no need to take incremental actions to comprehensively address the problem. In the case of tackling food-related emissions, for instance, people may become satisfied by recycling food waste or reducing their use of packaging, but not address more potent sources of agricultural GHG emissions, such as, meat and dairy consumption.

6.7.5 Confirmation bias

People have a strong inclination to cling to their existing beliefs and practices, and in doing so, are far more likely to seek ways of justifying their beliefs and practices than confront evidence that challenges it (CRED 2009; Lewicka 1998; Gardner 1957). This is 'confirmation bias'. According to Evans (1989: 41): 'Confirmation bias is perhaps the best known and most widely accepted notion of inferential error to come out of the literature on human reasoning'. Nickerson (1998) reviews a substantial number of studies which demonstrate that this bias is strong and pervasive. In fact, the recognition of this bias is longstanding. Francis Bacon ([1620]1939: 36) articulates the confirmation bias thus:

> The human understanding when it has once adopted an opinion (either as being the received opinion or as being agreeable to itself) draws all things else to support and agree with it. And though there be a greater number and weight of instances to be found on the other side, yet these it either neglects and despises, or else by some distinction sets aside and rejects; in order that by this great and pernicious predetermination the authority of its former conclusions may remain inviolate.

Many scholars have found this bias to be one of the relevant explanations of climate change denial despite a strong scientific consensus on the fundamental premise of anthropogenic climate change (Moser and Dilling 2011; Whitmarsh 2011). Also, in a

given piece of information, people often see what they are looking for, identify patterns even when they are not there and interpret information in ways that resist attempts to change their preferred hypotheses (Nickerson 1998). Consider this case from the sustainable food consumption context. Although Simon Fairlie's book, *Meat: A Benign Extravagance*, made the point that eating some meat may do no environmental harm and can support efficient utilisation of land unfit to cultivate crops for direct human consumption, the book still argued for reducing meat consumption by nearly half and farming animals in less intensive ways (Fairlie 2010). However, some journalists and commentators selectively used his book's content to promote their preferred views with an inaccurate interpretation and editorial emphasis. The *Daily Mail* (Renton 2010), for instance, ran a piece on the book titled 'Carnivores rejoice! Eating meat is good for the planet'. Individuals resist attempts to change behaviour due to confirmation bias by significantly overweighting arguments in favour of their preferred behaviour and underweighting arguments against.

6.8 Sociological perspectives

Whereas psychological theories of behaviour place the individual at the centre of their analysis, sociological theories of behaviour afford as much importance to the context in which an individual's behaviour takes shape and, at times, gets routinised. The behavioural context can have various dimensions, such as social, technical, economic, political, cultural, and institutional. From a sociological perspective, as developed in Giddens's (1984, 1991) structuration theory, the individual does not just *react* to cognitive and external variables that influence behaviour, but *interacts* with an array of contextual interdependencies in a reflexive relationship. Individuals share a role in collectively shaping the behavioural contexts, the 'rules and resources' that define them, and at the same time act as agents confined within these contextual boundaries. As such, the potential for behavioural action is constrained by the context in which it is enacted; but, the context is not static and the individual can play a constructive role in altering the contextual dynamic.

Spaargaren and Van Vliet (2000: 53) use concepts from structuration theory to propose, in their view, a more balanced treatment of the actor-structure dynamic in sustainable consumption behaviour than is available in the social-psychological models (see Figure 6.6). They argue that beliefs, norms and values do not exist in a social vacuum.

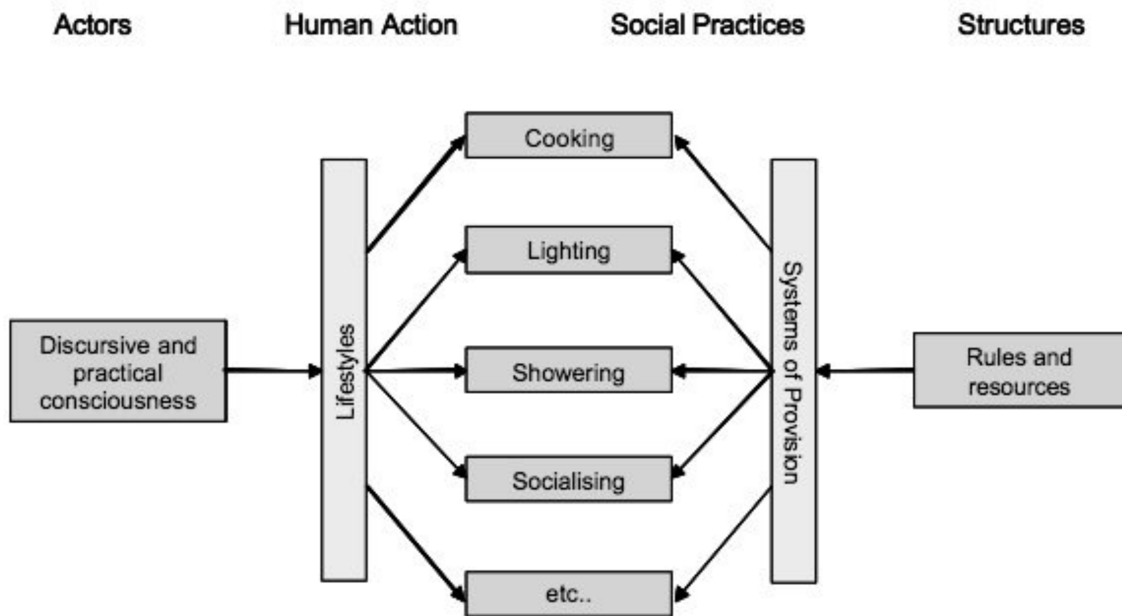

FIGURE 6.6 Consumption as Social Practices (after Spaargaren and Van Vliet 2000)
Source: Jackson (2005: 91)

Lifestyles and consumption patterns are played out as *social practices*. They are influenced, on the one hand, by the agent's practical and discursive consciousness (after Giddens 1984), and on the other hand, by socio-technical systems of provision, the 'rules' that govern them, and the 'resources' that are available to an agent in specific contexts. Routinised behavioural practices become part of the 'practical consciousness' of the individual, shaped by social conventions, among other factors, and require little additional deliberation on a day-to-day basis. Changing such practices requires raising them to the level of 'discursive consciousness' and eliciting an elaboration of the reasoning behind such practices by agents. This may lead to a de-routinisation of existing practices and re-routinisation of new practices through repeated performances.

Spaargaren (2003) suggests that social practices can take the middle ground between structure and agency and identifies three ways in which this model of social practices departs from the individual-centred focus of the various Attitude-Behaviour models (after Fishbein and Ajzen 1975). First, the unit of analysis shifts from individuals and their attitudes to behavioural practices shared by a group of individuals in specific time-space contexts. Second, instead of single behavioural actions, the model focuses on routinised practices as a whole, such as, food, clothing, travel and leisure, and seeks to mitigate the overall environmental impact of the bundle of practices within each

domain. Third, guidelines for environmentally sustainable practices in various domains of social life take into account the agentic capability of individuals with reference to the '*possibilities offered to them in the context of specific systems of provision*' (Spaargaren 2003: 688, emphasis in original).

A single environmental-attitude dimension is no longer seen to influence all environmental behaviours. Spaargaren's model accepts variations in considerations people apply to different segments of behavioural practices; people may, for instance, drive a polluting vehicle, but at the same time be attentive to recycling practice. He suggests practical environmental heuristics or rules of thumb should be developed for each social practice to enable people to easily make pro-environmental choices in daily practice. These guidelines must be context-aware with respect to the specific social and technical systems that characterise the field of practice. Finally, Spaargaren argues that individual responsibility for environmentally sustainable consumption must be contextualised within the enabling and disabling properties of social structures. Some sustainable practices may be better supported by systems of provision in specific places. For example, studies show that in many European countries there is better provisioning for sustainable food consumption (Schuttelaar and Partners 2000, cited in Spaargaren 2003) than for sustainable travel (Beckers et al. 2000, cited in Spaargaren 2003).

The UK government's focus on personal responsibility for behaviour change (Halpern et al. 2004) has been called into question by other social practice theorists. In particular, Shove (2010) argues that behavioural practices are inextricably embedded in the historically co-evolving social, technical and institutional contexts. Scholars following a social practice approach have focused on 'ordinary' or 'inconspicuous' consumption and the material contexts that configure such consumption practices (Shove 2003; Gronow and Warde 2001; Warde 1997, 2005; Shove and Southerton 2000; Shove, Pantzar and Watson 2012). Consumption that is part of routine everyday behaviour, they argue, is not so much an expression of individual choice as a practice governed by habit, convenience, and convention, which are in turn contingent on socio-technical structures. Social practice theorists challenge the implied assumption in the discourse of individual responsibility that ascribes power and resources to individuals for effecting system-level changes.

In a similar vein, recent sociological studies on food waste take the focus away from individual responsibility per se and turn it, for example, on global food waste regimes (Gille 2013), the material function and 'performance' of food packaging (Hawkins 2013), the effects of institutional risk management through mandating date labels (Milne 2013), and the material agency of food waste bins (Metcalfe et al. 2013). Evans's (2011, 2012) ethnographic work on household waste is particularly illustrative. His study shows that household food waste is generated not so much because people do not care about food waste or do not know how to avoid wastage but because household actors often find themselves entangled in multiple competing everyday-life constraints, including: planning meals for the relatively fixed tastes of family members under pressures of family and work schedules (see also DeVault 1991); cultural understandings of what constitutes 'proper meals' (see also Murcott 1982); and the material environment of food provisioning that includes domestic technologies for storage and institutional food safety guidelines. 'The take home message', according to Evans 'is that any effort to reduce household food waste could usefully reach beyond the default position of blaming the consumer in order to target the social and material contexts through which food practices might be changed' (2011: 438).

Looking from the social practice perspective to the field of food consumption, the power of retailers, regulatory bodies and large globalised food-producing companies may overwhelm the ability of many consumers to control the drivers of their consumption practices (Lang 1999a, 2004; Pollan 2009; Stuart 2009; Nestle 2013). In other words, human behaviour is captive within its contextual landscape that structures and limits the available choices for action. It is not possible for individuals alone to bring about societal transformations that are required to alter these landscapes. Policymakers and other institutional actors must, therefore, all share responsibility and combine appropriately to configure the necessary social and infrastructural contexts where pro-environmental behavioural practices can then be carried out. Recent studies on behaviour change commissioned by some government institutions in the UK accept that a whole-systems approach is necessary. Consumers cannot always be seen as 'free to choose'; they often 'find themselves 'locked in' to unsustainable patterns of consumption, either by social norms which lie beyond individual control, or else by the constraints of the institutional context within which individual choice is negotiated' (Jackson 2005: 13). In addition, Darnton (2004: 9) notes that some

sustainability goals 'may be better reached not through behaviour change by individuals but through government-led interventions, the targeted delivery of public services or upstream solutions'.

Another sociological contribution to specifically understanding food consumption behaviour comes from the sociology of consumption, and in particular, the sociology of food (cf. Warde 1997; Beardsworth and Keil 1997; Murcott 1983). Many consumption practices play a role in creating and maintaining a personal identity for individuals in relation to others in the society (Giddens 1991; Baumann 1998; Gabriel and Lang 1995). Consumption may facilitate identity formation in ways that bind people to a group identity or act as markers of social distinction (Bourdieu 1984; Veblen 1899). The symbolic meanings of material possessions and consumption practices are socially constructed (Douglas and Isherwood 1979). For instance, particular consumption practices may be embedded in social rituals such as dinner parties, celebration of cultural festivals, team building events at work, and religious codes. As such, they are important for people in maintaining social relationships and group identities (Shields 1992).

Food is ascribed meanings in various cultures and groups that go beyond its biological utility function (Beardsworth and Keil 1997). Food choices can be integral to the formation of personal and group identities. For example, 'Muslims should not eat pork and alcohol, Catholics should not eat meat on Fridays, Jews should separate milk and meat, and Hindus should not touch cow meat' (Scholliers 2001: 5). The symbolic link between meat, men and masculinity in western culture has been discussed and demonstrated in several studies (Twigg 1979, 1983; Adams 1991; Fiddes 1991; Beardsworth et al. 2002). Meat has the connotation of 'essence' (as in the 'meat of the argument') whereas vegetables are seen as passive, dull and monotonous (as in the verb 'to vegetate') (Adams 1991; Beardsworth and Keil 1997). The identity of vegetarians and the meanings they give to meat, on the other hand, stand in stark contrast and opposition to the dominant meat-based food culture in the west. Reasons for being vegetarian range from concern for animal welfare, health, and ecology to spiritual aspirations of purity and asceticism (Ruby et al. 2013; Fox and Ward 2008; Twigg 1979). But crucially, being a vegetarian requires one to step 'outside the culturally prescribed forms of eating' (Twigg 1983: 19). While accepting that vegetarians and

gourmets may form their identities around food, Warde (1997) questions the salience of food consumption as an identity marker for most people. He argues that food consumption is almost invisible to most people's conscious thought processes, and plays only a marginal role, if at all, in expressing identities. In response, Scholliers (2001: 9) draws on the works of Levi-Strauss and Bourdieu to assert that since consumption choices invariably rely on socially constructed discourses and narratives, 'social identification and demarcation are present even in "simple", "self-evident" and "unconscious" matters'.

In the context of sustainable consumption, Soron (2010) argues for integrating self-identity concerns with socio-structural and material dimensions of consumption in sociological analysis. He suggests that thinking about structural changes towards supporting sustainable consumption also requires consideration of locating agency and cultural drivers for change. He notes: 'The promise of … 'alternative' models of sustainable consumption – comprising bottom-up initiatives such as cooperative local distribution food systems, non-monetary community barter networks and so on – resides not only in their capacity to transform the context and material intensity of everyday consumption practices, but in their ability to challenge the powerlessness that people feel as individuated 'consumers' by reconstituting a social, collective and non-commodified basis for personal identity' (Soron 2010: 180). Moreover, participation in ecological lifestyle and environmental campaign groups has the potential to engender new forms of habitus (i.e internalised dispositions) through doings and learnings that foster shared identities and the routinisation of environmentally sustainable practices (see Haluza-DeLay 2008; Crossley 2003).

At the same time, from the institutional perspective, there is a demand on policy regimes to be alive to the multiple 'values for money' that consumers seek in the marketplace (Lang 2010). Figure 6.7, for instance, shows a matrix of concerns that animate policy considerations on sustainable diet (Lang, Dibb and Reddy 2011). The policy goal, according to Lang (2014, 2010), must be to resolve potential tensions that may arise between some of these values, minimise trade offs, and build on synergies to deliver appropriate systems of provision and regulatory standards that enable sustainable practices throughout the food supply chain, and not just at the end points of consumption.

Quality	Social values
Taste	Pleasure
Seasonality	Identity
Cosmetic	Animal welfare
Fresh (where appropriate)	Equality and justice
Authenticity	Trust
	Choice
	Skills (citizenship)
Environment	**Health**
Climate change	Safety
Energy use	Nutrition
Water	Equal access
Land use	Availability
Soil	Social status/affordability
Biodiversity	Information and education
Waste reduction	
Economy	**Governance**
Food security and resilience	Science and technology evidence base
Affordability (price)	Transparency
Efficiency	Democratic accountability
True competition and fair returns	Ethical values (fairness)
Jobs and decent working conditions	International aid and development
Fully internalised costs	

Figure 6.7 Sustainable food as a complex set of 'omni-standards' or 'poly-values'
Source: Adapted from Lang, Dibb and Reddy (2011: 14)

Sociological studies of food consumption offer important perspectives. Food represents 'both a vignette and a microcosm of wider social realities' (Lang 1999b: 218). In addition to maintaining human health, food is shown at once to be: infused with multiple cultural meanings; a marker of identity; a carrier of social conventions and 'inconspicuous' routines; an expression of political and ethical value preferences; and a vital piece in considerations of environmental sustainability. Additionally, scholars, particularly from the strand of social practice theory, have attempted to shift the dominant policy discourse on pro-environmental behaviour change from an individual choice and responsibility oriented focus to one which needs to account for material and infrastructural contexts, cultural meanings and social conventions.

6.9 Gaps in the literature

The review of literature from the fields of psychology, behavioural economics and sociology has revealed some gaps that are relevant to understanding pro-environmental food consumption behaviour. Identification of these gaps provides the rationale for undertaking further research to inform community-based approaches to influence behaviour change.

First, while scholars in psychology and sociology have studied pro-environmental behaviours (mostly recycling and packaging) and determinants of food choices in general, less attention has been given specifically to pro-environmental food consumption (Tanner, Kaiser and Kast 2004). It is reasonable to expect that understandings of factors that influence human behaviour and consumption patterns in general may also play some role in understanding environmentally responsible food consumption choices. However, studies have shown that different variables may account for different types of pro-environmental behaviour (Siegfried, Tedeschi, and Cann 1982; McKenzie-Mohr et al. 1995; Stern and Oskamp 1987). Also, positive spillover effects from one pro-environmental behaviour to another are not yet supported by evidence presented in the literature (Thoegersen 1999; De Young 1993; Dwyer et al. 1993; Schultz, Oskamp, and Mainieri 1995). Consequently, each domain of behaviour needs careful exploration and unpacking of the sources of influence that are specific to its field of practice (Spaargaren 2003).

Second, studies in psychology and social psychology are often conducted in laboratories and in contexts that are far from natural settings for the behaviours studied. Also, attention to the complexity of varying contexts that shape those behaviours in practice is ill-afforded in laboratory research. Rozin and Tuorila (1993: 12), who conducted various psychological studies to examine food choices, critique the de-contextualised nature of psychological research thus:

> Contextual influences are a nuisance, because they complicate the simplification process that is so successful in scientific analysis ...This facilitates identification of causes but entails the risk of stripping away contextual features that are essential to the phenomenon under study.

Rozin (2006) suggests that psychological studies usually study the 'moment of food choice', at which point psychological factors, such as, expectations, beliefs, and values become more salient. However, these laboratory moments cannot capture crucial

aspects of food choice, such as, availability and accessibility of foods in lived experience. Therefore, for a better understanding of influences on food behaviours, more contextualised accounts are needed that look beyond the 'moment of food choice'. Furthermore, as social practice theorists point out (Shove 2010; Evans 2011), the context of food practice is not just a peripheral variable affecting individual choice, as employed in some psychological theories, but one that is an inextricable and constitutive element of food practice, and thus, deserves a central place in the analysis of transition possibilities.

Third, whereas social practice scholars have carefully examined a few everyday practices *as they are* in their stabilised contexts or in terms of how social conventions for certain practices develop over time (Shove 2003; Warde 2005; Evans 2011), they have not given the same attention to conscious agentic behaviour within a field of practice that is countercultural and challenges prevailing customs, such as the case of sustainable food consumption. Perhaps to compensate for the individual-centred approach of psychological studies of behaviour, which social practice scholars strongly critique, studies of consumption behaviour guided by social practice theories tend to overemphasise structural influences (Campbell 1996; Whitmarsh, O'Neill, and Lorenzoni 2011). As a consequence, although these studies are helpful in understanding structural barriers and constraints to adopting sustainable practices, it is not well understood in this literature, how agents can 'identify opportunities for change in consumption patterns rooted in the recursive relation of structural dynamics and everyday practices' (Brand 2010: 232). In other words, identifying the characteristics of environmentally unsustainable infrastructures of provision does not explain the intentional behaviour of individuals who make environmentally responsible changes to their food consumption practices. Community-based approaches to influence sustainable behaviour seek to develop micro- and meso-level opportunities for individual action despite the absence of an ideal macro-level environment conducive to bringing about these changes on a mass scale. I have argued that such efforts are important both for their direct positive environmental impact and in asserting collective political and economic pressure to influence institutional responses. Hence, while it is important to recognise the limits of individual action and responsibility in tackling global scale environmental impacts of the food system, it is equally important to understand ways to

enable individuals to exercise their agency and participate in sustainability-oriented transitions.

Fourth, previous research on pro-environmental consumption has primarily focused on motivations that drive it. Psychological studies have concentrated on examining the association of people's attitudes, and other psychological constructs, with environmentally significant behaviours. For instance, where attention has been paid to elements of sustainable food consumption practice, such as, choice of organic food (cf. Aertsens et al. 2009; Pellegrini and Farinello 2009; Gotschi et al. 2009; Verhoef 2005; Timmins 2010; Lockie et al. 2010), the focus of analysis has remained at the level of identifying consumption patterns, motivations, attitudes, and moralities. Alternatively, sociological studies have tried to uncover meanings and materialities embodied in consumption practices, situated practices in their contextual environments and tracked trends and conventions that develop over time (Murcott 2002, 1995; Mennell 1985; Shove and Southerton 2000; Warde 1997, 2005; Evans 2012; Shove et al. 2012). However, not enough is known about the processes through which pro-environmental motivations and attitudes come about or how meanings ascribed to and supportive of sustainable food consumption practices evolve over the course of ones life. Also, there is a need to understand under what conditions environmentally-relevant attitudes and meaning-making activate aspects of everyday lifestyle practices.

The next stage of this research attempts to address the gaps identified above. It aims to understand the formative processes that shape the specific practice of environmentally sustainable food consumption through exploration of context-rich accounts of people who come to adopt sustainable food choices over the course of their lives. More specifically, it seeks to answer two questions:

- What mechanisms of behavioural influence guide individuals towards environmentally friendly food consumption practices over time?
- How can sustainable food co-ops incorporate understandings about behavioural influence in their approach to promote sustainable food consumption?

In the next chapter I set out the research design and methods employed for this study.

Chapter 7
LIFE HISTORY METHODOLOGY

Prefigurative work in establishing alternative ways of interacting with nature in the interstices of existing society can give some glimpses of what might be gained from larger scale social changes.
Benton (2008: 218)

The objective of this research is to gain practical and contextualised understanding of a specific issue (i.e. environmentally responsible food consumption) so that change agents at community-based sustainable food co-ops (i.e. leadership and active members in the organisation) may be empowered to address the issue. As such, the methodology of this study is 'problem-driven' rather than 'theory-driven' (Shapiro 2005). It is not theory-driven in the sense that instead of applying an established theory to explain researched phenomena or test that theory's validity and representativeness, this research examines phenomena in order to develop theoretical insights with implications for praxis. I explore life experiences of people who consciously choose specific dietary practices to minimise their environmental impact. The intention is to learn about factors that influence their food choices over their lifespan. I am interested in discovering common patterns in the process of diet-related pro-environmental behavioural changes rather than conducting an analysis of discrete moments of food choice. Finally, I propose that learning from experiences of people who have successfully transitioned, albeit to varying degrees, to adopting environmentally responsible dietary practices, will inform community initiatives such as sustainable food co-ops towards facilitating conditions that enable these transitions.

This research primarily uses an inductive approach to explore data, identify patterns that emerge from data, and analyse them to develop theoretical insights. This approach is akin to grounded theory methodology, defined by its authors as 'the discovery of theory from data systematically obtained from social research' (Glaser and Strauss 1967: 2). However, in conducting my research, I do not follow all the rules and procedures prescribed by Glaser and Strauss; it seems that grounded theory practitioners rarely do (Heath and Cowley 2004; Charmaz 2008). Instead, I have found it useful to borrow some concepts from this methodology and apply them to my research design.

Since its first conceptualisation by Glaser and Strauss, grounded theory methodology has been interpreted in diverse ways, and differences have emerged even between the original authors (Glaser 1998; Strauss and Corbin 1990). However, despite differences between scholars over how they apply grounded theory methodology to their respective research designs, a few basic tenets guide research practice within this methodological framework. These include: allowing theory to emerge from data and minimising the influence of preconceived ideas on the theory generation process; carrying out data collection and analysis concurrently so that they inform one another; and, focusing on developing middle-range theories to explain findings (Charmaz 2008). I aspire here to uphold these tenets. In the following sections, I discuss my research design with reference to literature review, data collection, analysis and theory development.

7.1 Literature review

After selecting sustainable food consumption behaviour as the central focus of my study, I carried out a multidisciplinary review of literature that attempts to explain influences on human behaviour and identified gaps in understanding that I felt needed to be further explored for my specific area of interest. Glaser (1978, 1992) seems to suggest that reviewing the literature prior to collecting data and analysing it may interfere with an original interpretation of the data and bias the theory development process toward pre-existing concepts. He recommends reading widely and more generally to become alert to a wide range of possibilities, but postponing a more focused reading to a later stage when the categories for new theory are sufficiently developed. Information gained from more focused reading is then treated as additional data to be included in the theoretical analysis.

Strauss and Corbin (1990), however, have a more accepting view of literature review and encourage both general and focused reading to develop theoretical sensitivity and generate hypotheses. They consider it important to identify both the phenomenon and what is already known about it. In my research experience, although I did not specifically intend to ignore any literature that appeared to enhance my understanding of the research subject, I found that my initial review was more general and my readings became more specific after the initial stages of data analysis.

7.2 Data collection

Grounded theory methodology does not prescribe a particular qualitative data collection method, but recommends that data collection, analysis and theory development be undertaken as an iterative process, constantly feeding into each other until the researcher senses that further data collection is not adding value to theory development (Glaser and Strauss 1967). Since I wanted to go beyond an individual's current consumption patterns and examine food consumption behaviour as it developed across an individual's lifetime, I chose to interrogate people's life histories with specific reference to the aspect of food consumption. Ramirez-Valles (1999: 25) suggests: 'Personal changes and the events that precipitate them are often told in a form of narrative'.

There is some precedent for using the life history approach in the field of environmental education research to explore antecedents of general environmental concern and activism (cf. Tanner 1980; James 1993; Palmer 1993; Palmer et al. 1998; Sward 1999; Chawla 1999). The life history approach enabled me to draw from my subjects' memories and experiences and build an account of how specific food consumption patterns formed and changed over their lifetime, and how individual and external factors were perceived to influence their behaviour. Where longitudinal research is not possible, the life history approach offers a reasonable alternative to assess changes over time (Settersten and Mayer 1997). However, it is important to note that life history accounts rely on the subject's present constructions of past events and perceived influences. Besides, the validity of these accounts is dependent on the accuracy of the autobiographical memory of the subjects.

Chawla (1998: 387) reviewed studies on the reliability of human memory and concluded: 'Although memories may often confuse the precise details of what happened during a specific event, they are usually accurate about the general course of events'. She found that research shows that people's memories are more reliable: of events that are of personal significance; when people are able to recall without constraints of time pressure; and, when people are given relevant prompts or cues related to a specific topic or event of interest. To the extent data collection methods satisfy these conditions, memory can provide a 'durable and roughly accurate' account (Chawla 1998: 388). Moreover, in defence of biographical interviews, Neisser (1988) urges researchers to

consider not just memory's verity, but also its utility. He argues that it is not just past details that matter, but how one constructs the past and uses it to make decisions in the present and plans for the future. In terms of the value of life history approach for theory development, Armstrong (1982: 10) suggests that examining a variety of life-accounts makes 'it possible to generalise... by showing that certain biographies have, for all the idiosyncrasy, some common elements'. Taking confidence from these arguments, I use the life history approach as detailed below.

In-depth semi-structured interviews, lasting nearly an hour or more in most instances, were conducted with subjects chosen for their expressed interest in the topic of investigation. Sampling was purposive and guided by the aim to identify emerging categories of behavioural influences on pro-environmental food consumption (Charmaz 2008). Emphasis was on exploring the participants' life history accounts in greater depth than is possible using quantitative methods, and hence the sample size is intentionally small (Chase 2005). I started by interviewing a few members of the sustainable food co-ops that I studied in the first stage of this research. Subsequently, I included interviewees who were involved with other forms of sustainable food initiatives in the UK, such as community gardening, farmers' markets, permaculture education, developing cooking skills with fruit and vegetables, community agriculture, and sustainable food advocacy. These initiatives were mostly identified through Internet-based surveys and a key organiser or activist within the selected initiatives was requested to participate in the interview. In a few cases, one interviewee referred another, and thus some interview subjects were selected through snowball-sampling. The interviewee's involvement as an active participant in a sustainable food initiative was taken as an initial verification of their subscription to pro-environmental food practice, and therefore, their relevance to the theory-building objectives of my research. I tried to include different types of food initiatives in diverse locations to increase the possibility of covering multiple aspects of sustainable food practices and a variety of life-contexts.

Interestingly, a number of interview subjects were involved in their local chapters of the Transition Town movement (Hopkins 2008). Participants in this movement attempt to build resilience in their local communities to withstand potential threats from climate change and future declines in availability of fossil fuels. Transition Town initiatives

typically include developing plans to reduce non-renewable energy use in their communities and re-localising essential goods and services. For example, community food projects aim to build local food security and reduce the environmental impact of centralised and resource intensive food systems.

Initially, seven pilot interviews were carried out in the United States to assess the utility of this methodological approach and to test whether the interview schedule would generate adequate responses. Subsequently, eighteen subjects in the UK consented to be interviewed. I was also interested in preparing grounds for developing this part of the research on behavioural influences into a larger scale cross-national comparative study in the future. Responses from the pilot interviews were rich and meaningful for the overall research. However, in order to keep the geographical focus on the UK, in line with the food co-op case studies, these pilot interviews have not been included in the final analysis.

Informed consent and confidentiality were the key ethical considerations. Besides, for narrative based research, Hollway and Jefferson (2010) suggest that an ethical approach must be honest, sympathetic and respectful towards research participants. The consent form (see Appendix A) informed interview participants about the broad aims of the research. Permission was requested to make digital recordings of their interviews and to include the interview content in publications that may result from the research. Although some interviewees gave permission to use their names in the research, all have been anonymised to protect confidentiality. Figure 7.1 lists the interview participants (using pseudonyms) with information about the geographical region where they lived when I interviewed them and their associations with different types of sustainable food initiatives. Figure 7.2 lists some of the demographic characteristics of interviewees. Importantly, all interview participants were university-educated. This is not surprising since other studies have correlated environmental concern and activism in the UK with higher levels of education (Diamantopoulos et al. 2003; Ray et al. 2003). The small interview sample does not warrant statistical inferences based on the demographic characteristics of the interviewees. Instead, the analysis rests entirely on the evidence that emerges from the interviewees' life history narratives.

FIGURE 7.1 Profile of interview participants	
Alice	• Member of a Transition Town group in South East England • Participates as a key organiser in a local community gardening project *Employment status*: Pensioner
Andy	• Member of the local Transition Town group • Organises permaculture talks and workshops *Employment status*: Works part-time at a local community gardening project in South East England; and, bakes bread from locally grown cereals and sells at local farmers markets
Brian	• Member of a Transition Town group in South West England • Part of a community allotment *Employment status*: Works as a marketing and outreach officer at a local co-op
Charlie	• Founder of a sustainable food co-op in South West England • Founding member of the local community supported agriculture group • Involved in many community-based initiatives concerned with environmental sustainability *Employment status*: Freelance consultant on local food projects and food grower.
Dave	• Founding member of a sustainable food co-op based in a university in the south of England *Employment status*: Student
John	• Involved with a nationwide organisation promoting organic gardening in the past *Employment status*: Academic with focus on social policy
Laura	• Member of a food co-op in South West England • Founded a food co-op in South London when she lived there and was involved in the local Transition Town chapter *Employment status*: Student and housewife
Lily	• Member of a sustainable food co-op. *Employment status*: Works in a non-profit organisation in the south of England supporting local and sustainable food projects, and focuses on reducing food waste.
Maria	• Member of a local food promotion group *Employment status*: Works as a project co-ordinator at a community-based non-profit organisation promoting local food diet in Scotland

FIGURE 7.1 Profile of interview participants	
Mark	• One of the leaders of the Transition Town movement, based in South West England • Involved in many local community-based food projects such as tree planting, community allotments, and creating a sustainable food buying group *Employment status*: Works in a non-profit environmental organisation as an organiser and consultant
Melissa	• Organising member of a sustainable food co-op in South West England • Member of a community supported agriculture group *Employment status*: Formerly teacher; caring for her children full-time at the time of the interview.
Mike	• Founding member of a sustainable food co-op in South East England. *Employment status*: Works as an employee of the sustainable food co-op he co-founded
Neal	• Founded a farmers' market in his rural town in South East England • Co-ordinates a network of farmers' markets in the South East region of England *Employment status*: Previously in a public sector job; now a freelance consultant conducting commissioned research on environmentally oriented topics
Olivia	• Runs a community-based project in North London that teaches participants to cook meals almost entirely from locally grown organic fruit and vegetables. *Employment status*: Employed full-time with the organisation running the sustainable cooking initiative
Ruby	• Member of a sustainable food co-op in London. *Employment status*: Works part-time as a product buyer at the food co-op.
Sid	• Member of the Permaculture Association and runs several courses and workshops on Permaculture in the UK and abroad • Participates in many community-based food growing projects in South London and participates in local Transition Town initiatives • Founder of a sustainable food buying group. *Employment status*: Formerly IT professional; now a permaculture teacher and consultant.
Tom	• Member of a Transition Town group in South East England • Participates in a local community gardening project • Co-manages the local farmers' market *Employment status*: Teacher of students with learning difficulties.
Tracy	• Member of a Transition Town group in South East England • Manager of a local community gardening project • Co-manages the local farmers' market *Employment status*: Works at a non-profit charitable trust focused on developing skills and employment in the local economy

FIGURE 7.2 Characteristics of interviewees	
	No. of interviewees
Gender	Male: 10 Female: 8
Age	18-34: 3 35-55: 12 55+: 3
Ethnicity	White British: 14 White Other: 3 Indian: 1
Household composition	Single occupant: 1 Living with partner without children: 8 Living with partner and children: 9 Not known: 1
Education	College education: 18

Except for one instance where the subject requested a face-to-face interview as he was hard of hearing, interviews were conducted by telephone. All interviews were recorded with a digital audio recorder and transcribed for coding and analysis. The first couple of pilot interviews were done face-to-face in public settings, which resulted in somewhat noisy recordings and made transcription challenging. Thereafter, I chose to interview over the telephone. Interviewing by telephone not only allowed for quieter recordings, but offered the advantage of wider reach without significant travel costs. Organising interviews by telephone also reduced considerations of time and location for both interviewees and interviewer.

These advantages of telephone interviewing are recognised in the literature on quantitative research (Aday 1996). In fact, telephone may be the most used survey mode in industrialised nations (Bernard 2002). However, 'much less has been written about telephone interviewing as a means of gathering qualitative data' (Chapple 1999: 93). Telephone interviewing is typically considered inferior to face-to-face interviewing for qualitative research, the major concern being the absence of visual cues, including facial expressions, gestures, and body language, which may lead to difficulties in probing, building rapport and interpreting responses (Garbett and McCormack 2001; Gillham 2005; Rubin and Rubin 2005).

Although the lack of visual cues is undeniable, Novick (2008) found that there was little evidence to substantiate claims that interviewing by telephone yielded poorer quality data than face-to-face interviewing. She argues that non-verbal cues are not always essential for final data analysis and can also be misinterpreted (see also Burnard 1994; Chapple 1999). Besides, lack of visual cues can, to some extent, be compensated by sensitivity to verbal cues such as pauses and changes in intonation which can indicate feelings such as anger, anxiety and sarcasm (Tausig and Freeman 1988).

Building rapport is essential for getting in-depth and qualitatively rich responses, and face-to-face interviewing is again seen as better suited for this purpose (Sweet 2002). But certain visual cues such as ethnicity, attire, physical appearance, and neighbourhood may not always be conducive to building rapport (Novick 2008). Telephone interviewers can also take steps to build rapport, for example, by chatting informally at the beginning of the interview (Burnard 1994) and, through careful selection of words and intonation, respond empathically to participants' responses (Tausig and Freeman 1988). On the other hand, telephone interviewing can potentially offer greater anonymity to interview participants, put them at ease when sharing sensitive information and allow them to focus on the substantive issues of the interview (Kavanaugh and Ayres 1998; Smith 2005; Opdenakker 2006).

Some researchers have suggested that telephone interviews tend to be shorter and provide fewer opportunities for in-depth discussion (Gillham 2005; Shuy 2003; McCoyd and Kerson 2006). In a study comparing telephone versus face-to-face interviewing, Irvine (2011) found that telephone interviews were on average of shorter duration. However, other authors comparing these modalities have reported no loss in the quality of data and depth of discussions (Sweet 2002; Sturges and Hanrahan 2004; Stephens 2007). I was concerned about this issue, but when I tested telephone interviewing in two of my pilot interviews I was able to have rich conversations with the participants that lasted over an hour in both cases. That gave me some confidence to proceed with using telephone for the rest of the interviews. Most of my final interviews were between one and one and a half hours long, and I was satisfied with the quality of data they generated.

The interview schedule (see Appendix C) acted as a guide to keep my focus on particular points of research interest. It helped me ensure that key research questions were reliably covered by the end of each interview and consistently across interviews. But I did not follow the schedule prescriptively in a linear order in every interview. For the most part, interview participants were allowed to construct their own narratives in response to questions. Following Portelli (1997) on life history interview approach, I tried to keep the tone of the interview conversational. Questions were asked where they seemed most relevant in the course of the conversation. Interviewees played a major role in determining the structure of the interview and the order of the questions. Their recall of events and influences was not always chronological. Many times, at a given point in their narrative, they would go back into the past or jump ahead in time as they weaved thematically-related memories of events and influences interspersed in time. Appropriate prompts and cues were given only when I felt that specific stages of life or typical sources of influence might have been missed in the first instance of recall. As the interviews progressed, I learnt more about the different aspects that interviewees were elaborating on and this experience fed into how I used prompts to elicit responses on particular aspects. When cues and prompts were given, I looked for detailed and specific explanations rather than accepting 'yes' or 'no' answers, in order to rule out as far as possible any prompt-induced bias in responses.

7.3 Data analysis and theory development

Preliminary analysis and coding of key themes started immediately after the second interview, and subsequent interviews were analysed using the constant comparative method (Glaser 1978). I did not transcribe the interview recordings immediately but derived codes from listening to the audio content and kept memos of themes and patterns that were emerging from the data. New interviews were coded and compared for similarities and differences with the previous ones. This helped in identifying emerging patterns as the interviews progressed and suggested prompts and cues for subsequent interviews. The initial step in coding was perhaps not as detailed as Glaser (1978) recommends, but was targeted towards answering the core research questions and advancing the analysis through integration of specific codes into broader conceptual categories. Listening to the recordings, I was looking for what factors are recognised as influences on sustainable food consumption by the interview subjects and

how do these influences take shape in practice. When I observed that no new themes were emerging from interviews anymore, I stopped the data collection process.

I then transcribed all my recordings and went through another iteration of coding and analysis. This process of transcription and coding was important as I wished to present the evidence from research, as much as possible, in the interviewees' words. Having those words in written form and organised into categories made the presentation easier. In qualitative research, giving voice to as many research participants as possible is a way to demonstrate the credibility and authenticity of the evidence employed (Whittmore, Chase and Mandel 2001). I used the NVivo software to code data and build categories. In the first instance, my analysis resulted in the categorisation of key influential factors relevant to the development of a sustainable food consumption practice (see Chapter 8). However, as I elaborated on how these factors shaped behaviours, some patterns began to emerge with respect to the underlying mechanisms of influence that were in play across various nodes of influence. Identification of these mechanisms led to more focused reading of the attendant literature and resulted in further analysis (see Chapter 9). At this stage, the inductive approach of data collection and analysis was complemented with elements of deductive reasoning through an engagement with relevant literature and scholarship.

7.4 Conclusion

Based on a selective and small sample, I cannot make strong claims for generalisability of my findings. Nonetheless, borrowing words from Heath and Cowley (2004: 149, emphasis in original), the aim of this research 'is not to discover *the* theory, but *a* theory that aids understanding and action in the area under investigation'.

Next, I present evidence from life history interviews of people engaged in sustainable food consumption practices to understand the formative sources of influence on their practices.

Chapter 8
LIFE PATHS INTO SUSTAINABLE FOOD CONSUMPTION

Food links with everything - with culture, with economy, with environment…
Maria, Local Food Activist (Personal Interview)

In this chapter I discuss the salient influences on sustainable food consumption practices of 18 interview participants. The interviews were semi-structured and explored the life paths of individuals currently engaged in some form of group or community level sustainable food initiative. I asked interviewees about when they first became aware of issues pertaining to environmental sustainability and what factors influenced their food consumption practice over the course of their lives. Based on the evidence gathered from the interviews, the most important factors contributing to pro-environmental food consumption behaviour were: the influence of family members, social peers, and role models; significant experiences shaped by the environment; education; work; concern for health; involvement with pro-environmental organisations; ethical concerns for social justice and animal welfare; accessibility of sustainable food options; and, innate interest. Figure 8.1 shows the numerical support for each factor of influence.

In every case, it was a combination of several factors that influenced food choices over time. In some cases, one factor had a direct influence on motivating sustainable food choices. In others, certain factors were responsible for creating a pro-environment attitude or simply a deeper interest in food; these impacts then combined with other factors to effect an eventual change in food consumption behaviour. In the following sections, I present the evidence from interviews that draws attention to these factors of influence. With the help of direct quotes from my interview subjects I also attempt to illustrate the contexts in which these factors shape consumption behaviours.

Figure 8.1 Factors influencing environmentally sustainable food consumption (Total number of respondents = 18)

Factors of influence	No. of respondents	% of respondents
Parents, grandparents, and siblings	12	66
Role models	5	27
Partners, friends and peers	9	50

Figure 8.1 Factors influencing environmentally sustainable food consumption (Total number of respondents = 18)		
Experiences shaped by the environment	6	33
Pro-environmental organisations	9	50
Books, audio-visual media	15	83
Education (including permaculture courses)	8	44
Work	9	50
Health concern	7	38
Accessibility	10	55
Ethical concerns (social justice and animal welfare)	18	100
Innate interest	5	27

8.1 Personally significant people

A number of interviewees mentioned that important influences in their understanding about environmental and food related issues came through people with whom they developed close relationships, either through their family environment, place of education, friendships or interests. In this section, I present a few instances of ways in which family members, teachers, role-models, partners, friends and social peers made an impact on the interviewees with respect to their awareness about the environment and sustainable food.

8.1.1 Parents, grandparents and siblings

Parents are primarily responsible for providing the dietary choices for children in their early years. In some cases children may live with or spend significant time with other adult family members or caregivers who might play a similar role in food provision. Therefore, parental influence may be crucial in introducing more environmentally efficient sources of food such as fruit and vegetables into children's diet. However, direct parental influence on environmentally responsible food habits was rarely reported in the interviews. Only one interviewee mentioned that his parents played an important role in getting him interested in food and environmental sustainability issues at an early age. Other interviewees did not recall that they were educated by their parents about the

environmental implications of selecting different types of food or even environmental issues in general. Also, none of them was aware whether their parents followed a particular diet overtly shaped by environmental concerns. Nevertheless, many interviewees drew upon indirect influences from their parents or other family members which they felt had contributed in some part to the pro-environmental dietary choices they made later on in their lives.

The most commonly shared influence from parents or grandparents with respect to food was their practice of growing food or helping their children to do so. Many interviewees mentioned that some older family members were maintaining a vegetable garden or farming during their childhood. In most instances, what appears to be relevant is not just the fact that a family member was growing food, but that the interviewees had fond memories of one or more experiences related to it.

For instance, Tracy felt that her grandparents must have had an influence on creating an interest in her for growing food and becoming self-sufficient. She remembers:

> They grew their whole garden and it was as it had been since 1939. You know it was growing vegetables and I remember eating delicious fresh beans with them and then picking blackberries with grandmother in Wales as well. That was the sort of...and I always had a real kind of I can do it for myself; I want to be self-sufficient [approach].

Tom had a similar experience with his mother. She grew a big vegetable garden and involved her children in foraging berries which they would together make into jams and jellies. Brian also reminisces how he enjoyed his trips to his parents' allotment even though all he used to do was sit around while they worked on their plot. He believes that it is easier to come back to growing food later on in your life if you have been exposed to it as a child.

In another instance, Maria's grandparents were farmers in rural Spain and she lived initially with her family on a farm. But later, when her family moved to a big city, she missed the healthy produce she had access to while living on the farm. Her family would keep coming back to her grandparents' farm to help them over the summer and she became more and more aware of the quality of food she could eat on the farm as opposed to that in the city. For Maria, her experience of the loss of tasty and healthy

food after she moved away from a rural and farm-connected environment to an urban dwelling made her realise her preference for fresh and locally grown produce.

In most cases where interviewees were exposed to an experience of growing food through their families, they had developed some deeper interest in food, be it enjoying the process of growing and preparing food or appreciating the taste and health aspects of fresh produce. This experience did not directly relate to a conscious concern for the environment for most of them at that time. However, consuming produce from their family-maintained gardens enabled them to incorporate locally grown fresh fruit and vegetables into their dietary practice at an early age. In some cases, the respondents started growing food themselves at a later stage in their lives.

Parents shaped and supported their children's interest in food in other ways as well. For instance, Neal felt that spending time with his mother in the kitchen, enjoying her cooking, learning how to cook from her, and talking with her about healthy eating certainly created and nurtured his interest in food in general. Even though he does not give her credit for creating awareness for environmental issues in him, he found his mother supportive whenever he had conversations with her about his environmental interests. Maria suggested that the role of food in maintaining health and in social celebration was largely due to her parents' influence. In another instance, for Sid, sharing meals with his vegetarian mother, and learning to cook vegetarian meals from her, eventually eased his own transition to a plant-based diet. When Olivia became the only vegetarian in her family, her mother, a Home Economics teacher, was able to support Olivia's different dietary practice by providing her healthy and tasty vegetarian meals.

There were some other cases of even more indirect parental influence. Dave, for example, recalls that although his parents never spoke to him about environmental issues, they were into alternative medicines, which exposed him to thinking about food a bit differently, perhaps as a medicine. He became vegetarian at the age of 14, convinced that red meat was unhealthy. He did not find giving up meat particularly difficult because his family did not consume a great deal of meat anyway. Initially, he could not remember what might have brought about the awareness about red meat being unhealthy. But when I asked specifically about the influence of books, he

remembered that he used to read his parents' collection of books on 'environmentalism and spirituality' and that was a key influence on how he started thinking about food. In another instance, Melissa observed her parents, especially her mother who came from a farming family background, often talk about how it was their dream to become self-sufficient. They used to read guides and books about achieving self-sufficiency. This context within the family, she felt, must have played a small role in influencing her own interest in local food and community supported agriculture later on.

In some instances, parents encouraged and supported their children's interest in the natural world around them. Charlie's parents, for example, introduced him to the Worldwide Fund for Nature at an early age. Also, Andy relates how his parents, especially his mother, greatly encouraged his love for animals. After he joined the Royal Society for the Protection of Birds, his mother would accompany him to the Society's meetings and bird-watching trips. For as long as he could remember Andy was always encouraged to have pets, and this nourished his desire to create a more natural environment around him.

Yet another form of indirect family influence on food practice in one case was circumstantial rather than intentional. Lily elaborated on how her family's religious traditions prepared her to be more selective about her food choices:

> ...we used to be Russian Orthodox, which is a Russian Christian denomination. And one of the things as a Christian that you do every year is Lent. And so for forty days every single year, while we were churchgoing...during Lent we would always cut out meat and fish. We would essentially be vegetarian for those weeks. And I think in the last week we might even have cut out milk products. We would be entirely vegan...And so having done that every single year, for probably about, let's see, nine through fourteen or something... like having the experience and having that as an exercise, of being aware that you can really enjoy food without having to have your steak in the middle of your plate, that inspired me and my brothers. And as a teenager I would kind of go in to the summers continuing not to eat meat, because I felt great. You know, I didn't really need it. Of course come autumn, as soon as the cold weather would arrive, I'd be like, right, I need chicken, I need beef. But I think that had a bit of an influence in terms of...knowing that you can get by without having access and choice in every category.

Not only parents and grandparents, but also siblings sometimes created an awareness of environment and food-related issues in some interviewees. For example, Tom's elder brother became a source of knowledge for important environmental changes shaping the Earth. His brother would read science magazines and explain to Tom concepts like global warming and climate change. In another instance, Lily was touched by her

brother's love for animals and his feeling of sadness and pain at the thought of killing animals for food. Although she did not share her brother's sentiment with the same emotional intensity, she admitted that it made her think about food choices and reduce her meat intake. Also, Sid mentioned that his sister had become a vegetarian before him; because his mother was already a vegetarian, meals at home were predominantly vegetarian even before he gave up eating meat.

8.1.2 Role models

Celebrity role-models also contributed in raising awareness about environmental issues and food ethics. For Mark, the determining influence on his decision to become a vegetarian was a punk band he followed, called Crass. Their songs were full of political content and so were the sleeves of their records. One of their songs was entirely about the production and consumption of meat, which was supplemented with material about this on the record sleeves. Laura remembers Sting, who raised awareness in her about the depletion of the Amazon rainforest. Some of Sting's band members went to spend time with indigenous communities living in the rainforest and this was covered by various media channels. Lily mentioned the influence of vegetarian musicians, such as Curt Cobain and Jimi Hendrix, on her brother who looked up to them. Brian's interest in environment and natural history was influenced by the natural history author Gerald Durrell and the presenter of TV wildlife programmes, David Attenborough.

Other figures closer to home also served as role models. Laura, for instance, had become close to a friend's mother who was a vegetarian and had strong left-leaning political views. They had many conversations about politics in general and about ethical issues around food as well. Laura's family had already given up red meat due to her father's health problems, and at some point Laura, inspired by her friend's mother, decided to go further and become completely vegetarian. In another instance, Charlie vividly reminisces how a friend of his mother would often take him and his brother for walks in the countryside telling them the names of the flowers they saw along their way and describing the natural processes and wildlife that animated the surrounding fields. She was a massive influence, Charlie felt, in building his connection with the natural life around him. In Maria's case, her role-model was her manager from the time she worked at the UNICEF. One stream of her work concerned food sustainability and food security. In this, she was particularly inspired by the way her supervisor, a medical doctor, lived

his life, and his ability to reach out to many people despite having few resources at his disposal. In her words, 'he was like a total hero, an inspiration'. Although Maria did not clearly elaborate on the kind of influence her manager had on her in terms of food consumption, she alluded to looking up to him for the way he incorporated ethics into his lifestyle practice and inspired her to live by the ideals she held dear.

8.1.3 Partners, friends and peers

A crucial influence in the category of personally significant people was exerted by spouses and partners as well as close friends and social peers. Maria explains how vital it is to receive support from the people one lives with in order to sustain a principled dietary practice:

> You need support from the people very close to you. Like if you are the only one in the household trying to do that, it becomes very difficult. So everyone has to agree in the house and you actually have to have a discussion about it. If you receive a veggie box or you grow your own food and you don't want to waste what you produce or you don't want to waste what you pay every week for what you are receiving, you really have to get organised and you have to see which dishes you prepare with everything, so that at the end of the week or two weeks, you have consumed everything. It has to be a teamwork. So people in the household have to care about it as well and as much as you do.

Support from partners and friends was forthcoming for many of the interviewees who were successful in changing to a more sustainable diet and thereafter sustaining their new practice. For instance, Lily shifted to a vegetarian diet, except for eating fish once in a while, largely due to the influence of her vegetarian partner. She had always wanted to do this, but the decisive change happened only after she started living with her partner. In turn she brought to her partner more knowledge and passion for growing food. In another instance, Andy acknowledged that it was easier to live on a low-meat and more environmentally friendly diet because his partner bought into that idea and was happy to follow the same dietary practice.

Friends and social peers also had a significant bearing upon some interviewees' food consumption behaviour. In some cases, it was friends and peers who initiated the change. For example, when Andy went to study zoology at the university he met a number of people who already had an interest in nutritious and sustainable food and some of them were vegetarians. After speaking to them about their reasons behind the choices they made, Andy felt that those reasons resonated with him and he decided to

become a vegetarian as well. Some years later, his interest in permaculture and growing food sustainably was also instigated by a couple of friends who were passionate about these topics. He had had long and in-depth conversations with them about permaculture during the three months they worked together on a conservation project in Madagascar.

In some other cases, friends and social peers were supportive in sustaining the dietary change that the interviewees had already undertaken. After Mark, for instance, decided to give up meat at the age of 14, he found support from family friends who were vegetarians and lived in the same house as he did. They taught Mark how to prepare vegetarian meals and that helped him immensely in expanding his food options and continuing with his new diet. Maria, who initially missed the social celebration of food she was accustomed to when growing up in Spain, rejoices in the 'wider support network' for sustainable food she has now found with friends in her town in Scotland. Finally, Mike underscores the importance of social support in helping him sustain his practice of making pro-environmental dietary choices over the years:

> Meeting other people. That is the primary answer to your question. Meeting other people that are like-minded, that shop for the same food in the same place with a community connection means that that is a big change and it is itself a catalyst. [This is] even more [so] because then we discover there's a link between food miles and social justice with the Fairtrade movement. Lots of things were happening during those initial years like discovering new labels. Fairtrade - what's Fairtrade? I didn't know anything about it. Anti-GM – no GM used on this product – what on earth does that mean? Well, it becomes quite interesting when you are surrounded by people who either know or are asking the same questions. And so there is a major community benefit in being interested, involved and sort of feeling all this new-found benefit.

8.2 Significant experiences shaped by the environment

Another source of influence for many of the interviewees has been their direct experience, both positive and negative, of the natural environment and the human impact on it. In some cases, it was time spent outdoors that made them appreciate the value of unspoiled nature and the need to conserve it. In other cases, there were first-hand experiences of seeing the changing face of farming from low resource to high resource inputs, and observing significant environmental pollution. Whilst some of the outdoor experiences were brought about through the influence of other people, there were other accounts of outdoor experiences that were not directly mediated through people, but through the environment in which the subjects lived or worked or studied in.

For instance, Andy loved the time he spent on the moors and the countryside in Cornwall when he and his brother visited their father. He was particularly enchanted with the wildlife he encountered there as a child. Also for Neal, taking time out to be in nature with wildlife has been a constant source of inspiration and 'renewal'. He feels a strong bond with wildlife and expresses frustration about how, due to the irresponsible actions of human beings, climate change is going to destroy wildlife habitats. In the quote that follows, John highlights how the environment he lived in at various points in his life made him conscious about issues related to sustainable food:

> As a child in India, I was acutely aware of heat, water shortage, people hungry. As a young man … I rented a one pound a week farmhouse to write my PhD and I saw ruined farms, and I started getting interested in landscape and why had uplands been colonised, let go, re-colonised, let go… [I] started getting interested in how landscape has been transformed by people. And when I was a farmer I had to deal with the landscape, making judgements about: how do you farm, what do you do? Are you looking after it so that it can survive or doing a short term fix?

Work, especially in the food sector, also exposed people to environmentally significant experiences. In one instance, while working as a product buyer for a sustainable food co-op and visiting the suppliers, Ruby had a positive experience of animal care in free range and organic farms which strengthened her personal commitment towards it. She recalls:

> The one [visit] that stuck in my mind I suppose was going down to the West country to meet the pig farmer and seeing his pigs running around and have a great old time. I mean they were just hilarious and they just seemed to be having such a great time. They really were happy pigs and to hear him talking about the pigs and the life that they had…You just could see how much he really loved them and wanted the best for them. That was really heart-warming and really nice to see first-hand. And also seeing the ducks and chickens and seeing how they were reared and how they were looked after and the sort of life they were getting. That made you feel really good.

In certain cases, a negative experience related to the natural environment or food made a telling contribution towards raising sustainability consciousness. For instance, Lily remembers how she came across deplorable farm conditions in the meat and dairy industry in California when she was studying at a university there:

> I think [by] actually being in California [one understands] more about our food production system, because you literally drive through factory farms and you drive right by massive mega calf rearing facilities, where you see that the cows aren't eating grass, that they are in dirt lots with limited access to the outdoors and you kind of see the pain of it. I think most Californians who have driven through that area, most people from California you talk to they know what factory farming of

> cows looks like and they know what it smells like and they know how depressing it looks as well.

This experience contributed to Lily's moving away from the consumption of beef and all conventionally farmed meat products.

In another instance, Maria's immersive experience of the daily life of indigenous communities in Peru and Ecuador helped her recognise how food meant much more than an edible commodity in the social and cultural fabric of these communities. After finishing school in Spain, she travelled to Latin America to learn a bit more about the indigenous people in that part of the world and to take time to figure out what she wanted to do next in life. After she spent some time with these communities, she became painfully aware of the connection between the high demand for oil and mineral resources in the economically developed world and its detrimental environmental consequences for resource-rich albeit economically less developed countries like Peru and Ecuador. Maria describes her experience in Latin America as follows:

> I lived basically in a community environment for quite a while where all the food is communal. There is no private ownership and there's little variety; and everything is eaten, whatever you have in the season. And it made me really aware that food was actually the main cultural representation for these people. Without their food, they weren't anything. Food was relevant for everything. And I got involved in all these things and the food sovereignty movement in Latin America and the environmental movement there, and how, you know, well, if you live there because it was in the Amazon area, the whole food production of people was affected by different things - obviously by climate and floods, but also by oil companies, mining companies. The whole fish and game, we could never eat because there was huge contamination of the rivers by the oil companies. So everything became very clear in my head that these people cannot live here because they cannot eat because of contamination, because we need fossil fuels to feed people in another part of the world at the same time that we exploit our communities.

8.3 Pro-environmental organisations

All the interviewees in this research were connected to one or more environmental or food sustainability groups and networks at the time they were interviewed, since that was the target population in this research design. In most cases it seemed that the interviewees had already made a change in their diets or been environmentally aware before they joined their current groups. In this section however, I focus on formative influences of environmentally significant organisations on individuals in ways that might have directly or indirectly shaped their initial awareness and practice of sustainable food consumption.

For some interviewees, membership of well-known environmental organisations, such as Greenpeace and Friends of the Earth, acted as an important catalyst for developing more concern for the environment in general. Some of these organisations' campaigns were specifically about food issues, such as the campaigns against the intensive use of chemical fertilisers and the application of genetic modification technology in commercial farming. Mike, for instance, talks about how he became aware of the need for organic methods of farming through his association with Greenpeace:

> That was probably at the end of the 1970s or early 1980s. And I became involved with Greenpeace. And just started to become aware of what was tampering by man of something as important as food through various campaigns that Greenpeace, Friends of the Earth and various other environmental organisations were campaigning on in those days. And so you know problems in [the] 70s and 80s with water supplies becoming contaminated by run-offs from farms where there was heavy use of fertilisers with chemicals. And during my 20s and 30s I became aware that something big was going on than the rural idyll so to speak.

Greenpeace also had an influence on Charlie. As a teenager he was passionate about whale conservation and did a good amount of fundraising for the organisation; he aspired to be part of Greenpeace's expeditions to stop whale hunting ships. His parents had also introduced him to the Worldwide Fund for Nature at an early age. These two organisations, among other influences, were instrumental in developing his awareness of environmental conservation and animal welfare. Charlie mentioned a number of local environmental and food related projects that he was actively participating in at the time of the interview. His concern for sourcing sustainable food is but a facet of his overall concern for protecting the environment from adverse human impact.

Also Laura, who in her teens was inspired initially by what she had learnt of the Deep Green movement from the media, became a member of the Green Party, Friends of the Earth, and Greenpeace when she went to university. She concedes that as a member of these organisations she was not really active in any political demonstrations and public campaigns. Nonetheless, partly due to the influence of these organisations, at that time she focused on more local environmentally-minded practical projects, such as, running a bicycle-repair and recycling centre at her university, and helping with a vegetarian café, also at her university. Many years later, she got involved with the Transition Town movement and started a local food buying group in her community.

For Melissa, the Soil Association, an organisation that promotes organic agriculture, was the first food specific organisation of which she became a member. However, she also mentions that, before joining the Soil Association, as a fourteen year old she had taken part in tree planting with the Wildlife Trust. She had also spent time studying at a Canadian college where she had joined anti-deforestation groups and taken part in protests in the temperate rainforests. Thus, thinking about and acting on environmental issues was not new to her. But it was a campaign by the Co-operative Bank on ethical banking on her university campus that increased her awareness about ethical consumption. And at some point on this path of discovering ethical consumption options, Melissa became interested in ethical food and was drawn to the Soil Association. She is now an active member of a community-supported agriculture group, a partnership between farmers and local food consumers, which is promoted by the Soil Association as a sustainable food production and distribution model.

In two instances, the organisations of influence were not entirely focused on environmental issues. For instance, John's involvement with the British Society for Social Responsibility in Science (BSSRS) animated his thinking about the pro-environmental ways in which food should be produced and the appropriate technologies that should be used in food production. He spoke of two groups within BSSRS that interested him the most — one concerned with the relationship between food and agricultural technology and the other between food and health. The process of raising fundamental questions on food related issues and seeking their answers drew John to an academic career focused on food policy. In another instance, Tracy credits some of the socio-political and environmental awareness she gained during her childhood to being part of the Woodcraft Folk organisation that her mother was leading in her neighbourhood. During her school holidays, Tracy went to many cross-cultural camps organised by this organisation and met other children from around the world, engaging in learning through play. Woodcraft Folk is an educational wing of the Co-operative Movement and its website states: 'Through our activities, outings and camps we help our members understand important issues like the environment, world debt and global conflict and, in recent years, we have focused on sustainable development' (Woodcraft Folk 2013). Tracy now leads a number of local food initiatives, including managing the local farmers' market and a community gardening project.

Engaging with environmental groups also helped in expanding the domain of concern for some interviewees. For instance, Mark, who had already become a vegetarian due to concerns about industrial methods of meat production, reported that when he was at the age of around twenty, engaging with the Permaculture Association and learning about the organic movement helped him get better at growing food sustainably and eating seasonally. He had also attended a number of talks by the Agroforestry Research Trust which he found a valuable knowledge resource. In another instance, after Tracy bought some woodland she joined the Small Woods Association and was keen on learning more about land management, food and forestry. Similarly, once Alice had developed more interest in growing food and taken a course in permaculture, she was drawn to learn more about the larger issues around sustainability. Hence, she joined the local chapter of the Transition Town movement, attended their meetings and also got involved with a community gardening project started by this group. As Dave suggests in the quote that follows, an existing environmental awareness may have drawn some of these interviewees to an environmentally-minded group, but in many cases, once they joined that group, they developed appreciation for a broader set of environmental issues:

> Now in school, when I started becoming interested in environmental issues and things like that and I think that probably did play a big issue in my becoming vegetarian and starting to think about food and environmental issues just generally. And so I did join...in my high school we had … an environmental group and they would talk about a whole wide range of environmental issues, not specifically food...and that certainly piqued my interest in a lot of different things.

8.4 Books, magazines, television, and films

For most interviewees, books and other popular forms of media were an important source of influence towards building environmental awareness and informing pro-environmental behaviour. In one striking case, Olivia gave up meat at the age of nine when she read a 'distressing' article, in a magazine that she found lying around in her house, about how cows were transported for slaughter. This was, however, the only instance where an interviewee reported that information received from a printed source was the primary and pivotal influence on food-related behaviour change.

In a few other instances, changes in diet were instigated, in addition to other factors, by books that focused on health and nutrition. These dietary choices, in as much as they involved eating less meat and less processed foods, also had a positive environmental

impact; an understanding of the environmental impact of particular food choices often developed later. Andy, for example, feels that although he had been interested since childhood in environment and food (in terms of wanting to grow and cook it well and make ethical choices about it) and cared passionately about animals, he had 'just never really related that to the bacon or the sausage on [his] plate till quite a few years [later]'. During his university days, Andy was introduced to The Optimum Nutrition Bible by one of his friends. Together with discussions with his friends on food related issues, this book got him thinking about eating as healthily as possible. This book was not at all about environmentally sustainable food, but Andy felt that he started thinking differently about food after reading it and was inspired to make some changes towards a more plant-based diet for the first time.

In most cases, books and media were means for seeking both depth and breadth of knowledge around environmental and food sustainability issues once awareness had already been created through other factors. Mike, for instance, reports that at some point after getting involved with Greenpeace, he read E.F. Schumacher's *Small is Beautiful*, which talked about the ecological footprint of economic activity, and left a deep impression on him. In another instance, Mark had already become a vegetarian due to ethical concerns, but his interest in permaculture was triggered by a book on the subject passed to him by a friend. For Maria, facing environmental problems while living with indigenous communities made her conscious of those issues, but it was Andrew Simm's *The Ecological Debt*, which became her 'mantra' and a 'big inspiration' as it connected key issues she cared about, such as social justice and the environment. In her words, the book is 'about why our food choices and our environmental choices have an impact in the life of others, and it is something we should redress and we are not doing [it] because we take it for granted'. Apart from creating environmental awareness, books were also a resource for gaining skills to enable new dietary practices. Laura taught herself to cook vegetarian meals through cookbooks as she was the only person in the family to have embarked on that lifestyle choice. Also, Olivia used cookbooks to help her make the shift from a vegetarian to a vegan diet.

Charlie, Neal and John did not mention one particular book, but all said that they read voluminously about sustainable food and issues related to the environment as their awareness and interest grew in these subjects. Tom spoke of a number of books that,

together with other factors, such as parental and peer influence, inculcated a strong community-minded spirit in him. He mentioned George Orwell's works he read in the 1970s, John Steinbeck's *Grapes of Wrath*, and Robert Tressell's *Ragged-Trousered Philanthropists* as key influences. Tom's involvement with local food projects stemmed from both a sense of community values and an awareness of food sustainability issues, which were inspired by relevant works of English literature and pro-environment magazines; one of his favourite stories still emotionally resonates with his ideals:

> When I was fifteen I read a short story in English Literature called 'Lie Thee Down, Oddity' by T. F. Powys. So this is a real crunch one for me. Basically in this story there is a man who always does what he can to help people. It really struck a chord. It really powerfully struck a chord. So if I can do something I will. And I'm emotional [his eyes welling up], because that's exactly what my father was like.

Periodicals covering environmental and social justice issues have also been influential in imparting knowledge and understanding of sustainability issues. For example, Andy found *The Ecologist* magazine 'very influential' in raising his awareness of ethical consumerism and ways to lead a sustainable lifestyle. Lily identified *The Guardian* newspaper as an important avenue for finding information about environmental issues. She also read the *Soil Association News Digest* to keep abreast of relevant news about organic and sustainable food. John subscribed to *Undercurrents*, a radical science magazine, which featured debates on environmentally efficient ways of procuring food and pro-environmental technologies for agriculture. *Ethical Consumer* magazine provided Melissa with good guidance about making pro-environmental and ethical choices in the marketplace. Finally, Tom read issues of *New International*, which featured writings on the need to strengthen local communities. These readings made him aware of how sourcing local food and spending money in local businesses were important ways of supporting local communities.

Documentary films and television programmes were a source of information and inspiration for many interviewees. Ruby said that images from two documentaries have stuck with her — *The End of the Line*, which showed the devastation caused by commercial overfishing, and *Food Inc*, which exposed the costs of putting value and convenience over environment and health in the US food industry. Sid mentioned how his Transition Town group and many others in the UK used collective viewings of environmentally-oriented films with discussions thereafter to develop their group's understanding of relevant issues around climate change and peak oil. He gave an

example of the BBC's documentary, *A Farm for the Future*, which highlighted the heavy dependence of farming on oil-based products and how this is hurting the environment and humans' ability to grow food sustainably in the future. Also, Lily and Olivia mentioned *Food Inc* and *A Farm for the Future* as two of the many influential documentaries that augmented their understanding about the carbon footprint of food production.

Wildlife programmes on television were a must-watch for Andy, Brian and Liz when they were growing up, and these programmes fostered their general interest in animal welfare and the environment. Some interviewees, such as Laura and Mike, mentioned that they were aware of the environmental movement that was shaping up in the 1970s and 1980s and to some extent this awareness grew through media coverage about these issues and environmental activism in newspapers and television. Leaflets and television campaigns of third sector organisations focused on issues related to food also made an impact on dietary changes. Lily, for example, spoke of how she stopped eating red meat completely after she came across campaigns from People for the Ethical Treatment of Animals (PETA) that drew attention to issues around meat production such as animal welfare, risks of using hormones and antibiotics in farmed animals and its negative impact on human health. This campaign from PETA was not the only source of information for Lily, but it triggered concern and an interest in seeking more information from other sources about the subject and helped her make conscientious choices when it came to her diet.

To summarise, books, environmentally-oriented periodicals, newspapers, films and television have all been good sources of information for most interviewees. In only three instances did books and magazines play a direct role in persuading people to change their diet. Nevertheless, in almost all cases books and other media brought about a deepening of awareness and knowledge of issues that the interviewees were already interested in. Additionally, in many cases, the search for information about one issue led to an awareness of other related issues and broadened the sphere of understanding. Lily expressed this process of information seeking as follows:

> I think once you get interested in this kind of information, get interested in sustainable food choices and for myself I've ended up seeking out films and documentaries as well as articles and websites of different organisations that do this kind of work, to actually get more and more knowledge and information. I think in a way the interest and concern sparked the passion, you know kind of like going

> beyond just being interested in that and actually wanting to do more and wanting to facilitate that kind of education for other people. I mean just by watching films like Food Inc, A Farm for the Future, you're interested in a subject and suddenly it opens up all these other issues. Suddenly you are thinking about the carbon impact of food production when looking at the heavy machinery used to harvest and what does that do for soil quality as well. I got really interested in soil qualities as well [and] biodiversity. It makes sense. I look at everything as an ecosystem including urban ecosystems, but also just the actual place where our food is grown is itself an ecosystem and that that needs to be fostered.

Lily's experience of the role of information in developing an environmental awareness and instigating pro-environmental action is fairly representative of other interviewees' experiences.

8.5 Education

In this section I look at formal educational experiences that made a difference towards fostering a pro-environmental outlook, and in some cases, also in shaping interviewees' food consumption patterns. Teachers and fellow students exerted an influence, and so did the subject matter of the studied courses. The role of fellow students has already been covered in a previous section that discusses the influence of personally significant people. In this section I focus on the aspect of engaging with particular subjects related to food and the environment.

In one instance, Neal credits his geography teacher at school with nurturing his passion for the subject and also for initiating an enquiry into overriding environmental concerns. He recollects:

> I read geography at university and I loved geography from an early age and one of my chaps who taught me geography every year between the big 13 and 18 was definitely at heart an old-fashioned eco-warrior hippy. And he did a lot to raise my awareness of environmental issues which were inherent within the geography that we were studying, but he was definitely provoking discussions and thought processes. And I think I was at school and doing O Levels and A Levels in the 80s when, not for the first time, but there was definitely a sort of environmental consciousness around and I think I probably picked up from those sort of discussions. And the way geography was taught, it was very much as a discussion of current affairs, and so I think that is probably when I started to engage with the issues. And then as I studied it through university I became committed to it rather than an observer of it.

Also, Tracy's higher education was a salient influence in both informing and enabling her sustainable food practice. Her formal education in environmental issues already started in school where she took Environmental Studies as an A-level subject. However,

this choice of subject was determined by the lack of vacancies in her school for her first choice — Biology. Studying Environmental Studies taught Tracy about human needs and their interaction with their environment and she became particularly enthusiastic about soil science. She then went on to study Anthropology at university and became aware of land access rights and food production issues in the developing world. After working with developmental organisations, Tracy returned to a horticultural college to do a postgraduate course in landscape management. While doing an assignment on sustainable food, she thought, 'I can't just do this academically. I've got to put some of this in practice'. So she started growing her own food, got involved with community food growing projects and established a regular farmers' market in her town.

In another instance, Lily did not study a subject that was directly concerned with food or the environment. However, she used her undergraduate education in Fine Arts to engage with issues pertinent to food. For example, her main project for the course explored the relationship between people and their food through performances and videos. She described it as follows:

> … my university work through Fine Arts had to do with the relationship between people and their food, and also where their food grows, where it comes from, and how can you have a direct relationship with your food source. And actually my work was all about that, because it was the thing that really impassioned me the most to encourage other people to develop... Yeah, so I did these performances and videos about urban foraging, well, calling it urban fruit picking, because it was specifically about the fruit trees in Los Angeles. To engage people in reaching out and picking a fruit from a tree and understanding where it comes from but also developing that whole relationship of respect for this plant that not only breathes in what you breath out, it breathes out what you breath in, and you already have that direct relationship. But the fact that it feeds you and the fact that it has the capacity to even clean up your mess in the sense that it is sucking up other carbon dioxide that we through our unsustainable practices are creating. So all of that to sort of foster that relationship … I wasn't thinking about what does this mean in terms of organic, but it was sort of within that kind of frame of mind.

Some interviewees reported that taking permaculture courses had a defining influence in changing how they thought about environment and food. The Permaculture Association of UK (2013) introduces permaculture on its website as follows:

> The word 'permaculture' comes from 'permanent agriculture' and 'permanent culture' - it is about living lightly on the planet, and making sure that we can sustain human activities for many generations to come, in harmony with nature. Permanence is not about everything staying the same. It is about stability, about deepening soils and cleaner water, thriving communities in self-reliant regions, bio-diverse agriculture and social justice, peace and abundance.

Hence, courses in permaculture are designed to develop both theoretical knowledge and practical understanding of sustainability principles with an emphasis on ethics and social justice. Andy spoke about how taking a permaculture design course made him eager to finally start growing his own food, something he had always wanted to do but never got around to. In another instance, Alice attended a permaculture design course which she thoroughly enjoyed. She found that the ideas and the concepts behind permaculture resonated with her own food growing practice. Permaculture principles have also shaped her involvement with community-based sustainable food projects.

In two specific cases, interviewees were so taken by learning about permaculture that they became passionate advocates of its principles and now run their own courses and workshops on permaculture. After reading a book on permaculture, Mark was inspired and tried hard to get the Permaculture Association to arrange a course in his area. He took that course, went on to do a degree in sustainability, and subsequently became a permaculture teacher. Through his work as a permaculture teacher, he has become more deeply involved with community-based initiatives that focus on increasing reliance on local and sustainable food and reducing carbon footprint in all lifestyle practices. In a similar way, studying permaculture made Sid more aware of the resource intensive nature of conventional food production systems and broadened his understanding of practical ways to exercise what he considered an ethical, just and ecologically sound lifestyle. He is now heavily involved with imparting permaculture training in many European countries.

8.6 Health concern

Concern over health and nutrition was in many cases a strong determinant of changing dietary choices to begin with. Whether this change was a shift from an animal-based diet to a plant-based diet, or to less processed food, it had positive implications for the environment as well. In most cases, the environmental motivation came later, and may have strengthened the commitment to dietary changes that were initially motivated by health concerns. Interviewees reported changes in diet on the grounds of concerns about both their own health and that of significant family members.

In most cases, concerns over health were not specifically related to personal medical issues but pertained to getting adequate nutrition from food in general. Both Andy and

Dave were initially persuaded by books that a vegetarian diet was better for their health. For Laura and Lily, it was not health issues of their own but of their family members that affected changes in their diet. Laura's father had angina, for which reducing red meat intake is highly recommended by medical practitioners. Her family eliminated red meat entirely from their diet to support her father's recovery. When she was later persuaded by political and ethical reasons in favour of vegetarianism, Laura did not find it too difficult to give up other forms of meat. Also, Lily's father had given up meat due to health reasons which had an impact on her diet as well. Growing up with her family Lily did not eat a lot of meat, and once she became more sensitive towards animal welfare and environmental concerns, she significantly reduced her meat consumption.

8.7 Work

Work experiences, in some instances, provided interview participants the opportunity to engage more deeply with issues relevant to sustainability than would have otherwise been possible through information alone. For instance, Ruby's work experience in the food sector shaped her food preferences in many important ways. First, when she was employed at a large bakery in England, she became aware of the enormous wastage of food in modern supply chains. She would daily see nearly six million loaves of frozen bread arrive on trucks from Italy. This bread could just as well have been made in England, she felt, without incurring the carbon footprint of chilled transportation. Much of this bread went to waste every day when: products reached their use-by date; the manufacturer decided to stop a line of production; or when there were simply too many left over samples. Ruby did not feel good about working in this type of industrial food manufacturing sector and the wastage upset her. Later in her career, she became a buyer at a food co-operative with a mission to reduce retail wastage and procure local and sustainable food. In this role, Ruby learnt more about how to source sustainable fish and what label information to look out for. As a buyer she had opportunities to speak to sustainable fish wholesalers, visit their workplaces and attend workshops and meetings organised by their association. She also visited farms of local fruit and vegetable growers, and of free-range and organic meat producers. All these experiences made her very conscious of making sustainable choices for her own diet.

Mike, on the other hand, worked at one point for an organic farmer. He was involved in all aspects of the business such as planting and harvesting crops, packaging them for sale and then delivering them to the customers. Although Mike was already convinced about the environmental credentials of organic farming before he worked for this business, he feels that seeing the customers' support for organic produce did inspire and encourage his own commitment to that dietary choice. Similarly, John came to farming after a degree in psychology and although his was not an organic farm, his work as a farmer made him highly attentive to issues around food policy and sustainability. Consequently, he pursued those interests as an academic and a food policy consultant later in his career.

Work experiences in the food sector were not the only source of influence however. Olivia's work in journalism gradually developed in her a concern for the environment. She had given up meat at a very early age due to concerns about animal welfare. And then in her early twenties, while researching for a journalistic piece on the Reggae music scene in Jamaica, she was introduced to some 'amazing' and 'incredible' vegan cuisine by a number of Rastafarian chefs she met and interviewed for the piece. In addition, Olivia found that giving up dairy made her feel more healthy, and therefore she transitioned to a vegan diet. However, at this stage in her life, even though her diet had a low carbon footprint, Olivia had not factored in environmental concerns in making her food choices. The next 'leap in consciousness', as she calls it, towards thinking about environment and sustainability came about over a number of years as her journalistic work began to focus more on these issues. Increasingly, she realised:

> Everything I care about boils down to caring for the environment. And without looking after the environment, all the other things I cared about were impossible to have an impact on…So if you were worried about desertification, climate induced famine, food speculation and all this stuff…just putting all the pieces together, it all boils down to really looking after your environment.

This realisation moved Olivia towards seeking more organic, seasonal and local foods for her diet, and made environmental concerns more central to all aspects of her lifestyle practice.

In another instance, after finishing his degree in geography, Neal joined the Civil Service and started working for the UK Department for the Environment which later became Department for Environment, Food and Rural Affairs (Defra). His work may have

covered food issues but also included other aspects of environment such as water and resource policy. More importantly, he was devoting all his time at work to environmental issues which he said, 'sort of provoked an interest and sensitivity to, well, my own purchasing behaviour because it was reflecting my values'.

8.8 Accessibility

Even a strong intention to make sustainable food choices demands that those choices are accessible, i.e., those choices must be easily available and affordable. A number of interview subjects spoke of how accessibility to sustainable food options made it possible for them to begin and also continue making their diets more sustainable. Due to the purposive sample selection of interview participants, it was a given that every interviewee was at the time of interview able to access sustainable food options through supermarkets, ethical stores, health food stores, community gardens, farmers markets or food co-ops. Hence, the focus in this section is on instances where interviewees reported access and convenience as important factors in the formative phases of their behaviour transformation.

For instance, while at college John found it easy to stick to a plant-based diet, thanks to several Asian restaurants in the town that provided plenty of cheap vegetarian options. Both Andy and Dave reported that the availability of meat substitute products in the supermarkets, such as Quorn and Linda McCartney brands, eased their transition to a vegetarian diet. Some supermarkets also provided a good range of organic and locally sourced options. Ruby mentioned that although she was knowledgeable about food choices through recipe books and television programs, she felt lucky to have a branch of Waitrose nearby that she trusted on quality. And once her awareness about free-range and organic grew, she found that those options were also available at Waitrose and that she could get sufficient information from the supermarket about the products to make an informed choice.

Supermarkets, for Neal, are convenient places to shop if one has a busy professional life and lives in an urban environment. Also, environmental certification schemes make it easy to opt for sustainable choices without having to undertake independent research about the product's environmental credentials, he felt. Hence, when he was living in London and wanted to buy food that was kinder to the environment, Neal looked for

certified organic food in his neighbourhood's supermarkets. When asked about whether it was difficult to change his food choices, Neal answered:

> I think probably it wasn't difficult in so far as latching on to organic and the Soil Association's clear accreditation. That sort of assurance early on allowed me to make decisions, or at least think I was making decisions, to express what I wanted to achieve, which was that eating more sustainable food was better for me. And in a way I think what that notion of organic allows people to do is to make that step confidently without actually needing too much knowledge. I don't need to know how an organic carrot is grown. I don't really need to know much about why an organic carrot is better than a conventional carrot, if you argue that they are, because somebody has done all that thinking for me. All I have to do is walk into Waitrose and choose organic or walk into Sainsburys and choose organic, or whatever supermarket it is. And it's not dumbing down the decision but it's actually facilitating that decision.

When Neal moved away from London to a village in Kent, he found that he had more options to support local food at farm shops and farmers markets. In his experience, rural locations gave more opportunities to buy directly from producers. But even in city centres, farmers' markets make it possible for urban dwellers to connect with producers and educate themselves about the practices of growing food. When living in Los Angeles, Dave and Lily had access to many farmers' markets which allowed them to buy local and fresh vegetables. Similarly in Brighton, when studying at a college, Melissa lived close to a farmers' market which made conscious buying of sustainable food a convenient and, therefore, regular practice for her.

Health food and natural food stores were generally reported to offer more ethical and sustainable food choices than conventional supermarkets. Three different interviewees who lived in Brighton at some point in their lives mentioned the Infinity Foods shop as a good source of ethical and sustainable food products. In another instance, for Dave, working and shopping at one of the Whole Foods Market stores in New Orleans was an educational experience. Initially, Dave used to just avoid certain foods such as meat and a few other products that he considered unhealthy. However, once he was exposed to the products stocked by the Whole Foods Market and read more about where they came from and how they were produced, he added more sustainable food options to his diet. In the same way, Canterbury Wholefoods was the sustainable food source for two interviewees who had lived close by. Mike lived in Ashford, but although Ashford was 20 minutes by train from Canterbury, Mike would visit Canterbury every week simply to do his weekly shopping at this store. He describes the profound impact the store had on

his food consumption behaviour as well as his current work as a food co-operative manager as follows:

> It was sometime during the 1980s when I was active with Greenpeace and Oxfam as campaigner and fundraiser. And I was very lucky to live at that time in Kent, and I visited Canterbury and came across a large store called Canterbury Wholefoods. The reason I tell you this is that sometimes a catalyst is needed for an individual to start making changes. This is something I personally believe. So it's all very well being involved in something like charitable work or campaigning. But sometimes it needs a push to make bigger changes in my personal life, I found. And stumbling across this store in Canterbury full of organic foods and sustainable produce and varieties of products, basically the unpackaged cheeses and the delicatessen range and all that, certainly I was hooked. And I wanted to spend most of the money I spent on my food on this kind of food because it just looked right, tasted right, and I knew it was coming from more sustainable sources. So that was a major catalyst and it relates to today and right now with the work I do. If I can influence somebody who walks past the store where I work, an organic food shop, to come in and see what's on offer. Then, you know, it's up to the person.

When Mike moved to Reading, he felt the need for a store like Canterbury Wholefoods, and helped people in his community to establish a sustainable food co-op there. This co-op continues to provide him access to a wide array of sustainable food choices.

A few other interviewees responded to the lack of sustainable food options in their locality by starting their own community-based food initiatives. For instance, Tracy could not find local and sustainably produced meat options where she lived and that was the key driver for her to start a farmers' market in her town. In another instance, Laura started an organic fruit and vegetable co-op in London to access a better range of sustainable fresh produce. In another part of south London, fresh produce was not a problem for Sid and his friends. They had access to farmers' markets and local food growing spaces, but they lacked access to organic and ethically traded cereals, nuts and household cleaning products. So they started a food buying group to cater to their needs.

Availability of sustainable food options, however, was not always a sufficient enabler of purchasing those options. Particularly with respect to organic foods, affordability was a constraining influence. Despite their preference for organic over conventionally grown produce, many interviewees expressed their inability to afford the higher cost of certified organic produce. In some cases, interviewees are able to overcome this constraint to an extent by opting for produce grown by local farmers, which is not organically certified but is grown with minimal or no use of pesticides and harmful

chemicals. In a couple of instances, interviewees felt very fortunate to have access to relatively low-priced organic produce through their participation in community supported agriculture and non-profit organic food delivery schemes. Another way for people to gain access to fresh organic produce is by growing their own fruit and vegetables using organic methods, be it in their gardens, allotments or community growing spaces. This option, however, requires time and commitment. But given that the selection of the interviewee population is based on their commitment to sustainable food consumption and their engagement with community food projects, it is not surprising that many interviewees grow a portion of the fruit and vegetables they consume.

8.9 Ethical concerns

'In some ways food to me', remarks Tom, 'is just embedded in everything'. For many interviewees, food is inextricably related to a range of social issues. Hence, thinking about the social, ethical and political dimensions of food preceded, or to an extent led to, thinking about the environmental implications of food as well. In this respect, two ethical concerns emerged as most prominent — the concern for social justice and the concern for animal welfare.

At times, an interest in other cultures in less industrially developed parts of the world drew attention to food and environmental sustainability issues, since these issues were often more visible as a primary concern in those cultures. For instance, as an anthropology student, Laura developed an interest in the indigenous tribes of the Amazon and made an effort to understand issues that affected them. It was then that she became aware of the destruction of the Amazon rainforest and felt concerned about its far-reaching impact on the planet's environment. Tracy, also an anthropology student, was concerned about land use issues in Africa and the unequal place afforded to women in the gender politics of food production there. Maria's interest in the indigenous people of Latin America, with whom she spent time as a volunteer, made her realise the serious challenges these people faced in securing their natural food resources. As with Tracy and Laura, food was just one of the many social issues that animated Maria's concerns. Nevertheless, it was a special one. In her words:

> [Food] links with everything - with culture, with economy, with environment, and I think it is one of the only things that you can actually make people change the way they live because it is so basic, because it relates to your kids… It's about why our

> food choices and our environmental choices have an impact on the life of others, and it is something we should redress and we are not doing because we take it for granted. So yeah, that's probably one of my big inspirations. It's not just environmental justice, this ecological debt concept, of how we use the others and how we owe other people because of the way we use them.

For some interviewees, food became a medium for expressing solidarity with one's own community. For instance, support for local food was driven not just by the need to reduce food miles and transport emissions, but also to protect local jobs and create regional food security. For example, although Neal knows that buying local may not always mean a smaller carbon footprint, as in the case of summer Spanish tomatoes versus tomatoes from energy intensive greenhouses in the UK, he still prefers to buy local food directly from the farmer because he wants to be sure that the grower gets 'the full whack of [his] quid'. According to him, sustainability has a social side and circulating money locally means creating locally resilient economies that can better withstand global economic and environmental shocks. Also Tom, who admits to being more passionate about building communities than focusing solely on environment or food, echoes Neal's sentiments for supporting local food. He adds that he wants to blend the values of socialism with a concern for the environment. Therefore, supporting local food and community food projects is a way for him to bring people together and build trust and relationships within members of the local community.

Another motivation for some interviewees to support local food systems is to protest against what they view as exploitative practices by the large supermarkets. Charlie rejects shopping at supermarkets as he feels that they do not treat producers and consumers fairly. Andy, a baker who sells at farmers markets, buys as little as possible at supermarkets, explaining that as a food producer he is aware of how supermarkets drive prices down by paying unsustainably low amounts to both primary and secondary food producers. On the one hand, this pushes some producers to skimp on nutritional quality to reduce their prices; on the other, it sets an unrealistic price expectation for consumers and undermines demand for higher quality products from small and independent producers, which are seen as unaffordable by most consumers. Mark's reason for avoiding supermarkets and supporting local retailers and producers is to stop the outflow of capital from the local economy through large supermarket chains. He wants instead, through his activism and research work, to encourage circulation of money within the local economy and for people to benefit from the multiplier effect of this

circulation. Even though these interviewees could buy at least some locally grown and produced food at their neighbourhood supermarket branches, they prefer to buy local food from other local sources. Through their shopping preferences they are articulating values that merged their concern for food sustainability with concerns for local jobs, food security, social justice and community building.

Ethical concern about the treatment of animals in the meat industry and sensitivity to their suffering was another motivation for some people to move towards an environmentally sustainable plant-based diet. For these subjects, at least initially, lowering carbon emissions through personal food consumption was not a conscious objective. Only later did other factors make them aware of the beneficial environmental impact of their choice.

Moral concerns had a strong emotional resonance for Sid. He recollected the moment he decided to stop eating meat as follows:

> My very first reason was because I looked at the meat that I was eating and just realised that it had a soul, that it was a living being and that I've deprived something of its life. And I think that absolutely sickened me and I literally threw it away that day and I've never eaten meat since.

Similarly, Dave, Mark, Olivia and Laura became vegetarians because they found the meat industry morally repugnant. In another instance, Andy, who was already a selective meat eater for both health and environmental reasons, decided to significantly reduce his dairy consumption because he did not want to support the veal industry. He felt that, 'through buying dairy products you can be investing in the veal industry, which is really really barbaric in the way that it produces its meat'.

In some cases, concern for animal welfare led people to opt for humanely farmed meat instead. For instance, Neal and Ruby expressed that they were passionate about animal welfare and factored it into their decisions when purchasing food. In most cases, this meant opting for organic and free-range rather than factory-farmed meat-based products. Although there is some debate over whether free-range and organic farming involves lower carbon emissions than conventional factory-farming, animal welfare concerns often contributed to interviewees reducing their meat intake and thus resulted in lowering their carbon footprint.

8.10 Innate interest

In a few instances, interviewees expressed an innate interest in nature or love for wildlife. It is possible that they had internalised the influence from a source that they could no longer recall but, based on the evidence from interviews alone, one cannot rule out the possibility that some people are intrinsically sensitive to environmental, wildlife and animal welfare concerns. For example, Laura said that as a child she was always interested in nature and spent a lot of time in her garden observing wildlife. In other instances, Andy, Liz, Neal and Brian talked about their love for animals since childhood. In all these cases, however, other influential factors played a role in nurturing interest in nature and translating that interest from a pro-environmental attitude or intention to sustainability-oriented everyday practices.

8.11 A life path into sustainable food consumption

In previous sections, I have discussed factors that have contributed directly or indirectly to an environment-friendly diet among the people I interviewed. In every case a number of factors combined, often over a long period of time, to create an awareness that translated into a routine behavioural practice. In almost all cases, no one factor can be isolated as the only meaningful influence in effecting a change in food consumption behaviour. This can be illustrated by looking at one interviewee's life path into sustainable food consumption in its entirety. This case is a fairly typical example of all the interviews in that it demonstrates that a constellation of factors together, and not singly, is responsible for inspiring sustainable behaviour change and providing the context for the change in behaviour.

As a child Brian was curious about wildlife and natural history. His mother shared this interest with him and nurtured it, introducing him to television wildlife programmes and accompanying him to natural history museums. Brian's curiosity found succour and inspiration from books by Gerald Durell and David Attenborough, and, while pursuing information about wildlife and natural history, Brian discovered other environmental issues. Exposed to the practice of growing food through his parent's allotment, Brian enjoyed accompanying his parents and watching them work the soil. Around the time he was 16, Brian's concern for the environment was expanding to include social justice issues in developing countries through news of events such as the famine in Ethiopia

where both climatic factors and local politics combined with devastating effect. Partly as a result of this new interest in food, Brian attended a summer school course on food and nutrition. After school, he went on to study Environmental Sciences in college and pursued a professional career as a biodiversity conservationist, with some assignments abroad, such as in Hong Kong and Vietnam. When the 9/11 terror attacks happened in the US, Brian was drawn to reading more about world politics. Among the books he read during this time, were Noam Chomsky's, which alerted him to the overwhelming control of a few corporations over the US food system. Thereafter, he read another book, Fast Food Nation by Eric Schlosser, which discusses the damaging impact of fast food culture and the associated industrial farming practices, in particular factory-farming in the meat industry, on the health of the US population and the rural environment. These books made Brian conscious about the political, social and environmental dimensions of food. Nevertheless, his awareness and knowledge about the environment and wildlife, food and nutrition, and social justice issues, did not prompt a significant impact on his diet at that time. That began happening much later.

After Brian returned from abroad to settle in Bristol, he got to know Chloe, who lived in Stroud. Chloe was already interested in sustainable food and environmental issues and Stroud offered a number of opportunities to obtain local and sustainable food. There was a popular and easily accessible farmers' market in the town centre, some farm shops in nearby villages, a community supported agriculture project, and also a local food co-op, among other retail outlets. Once Brian moved in with Chloe, he was introduced to the places where she shopped and her pro-environmental dietary choices started to influence him. At the same time, Brian became aware of the pro-environment community projects in the Stroud area through Chloe, and eventually took up a paid position with a non-governmental environmental organisation. His work involved promoting many local environmental projects, and in particular, a local food co-op. He recognises that his efforts to persuade others to purchase local and sustainable food from the co-op have increased his practice of sustainable food consumption. In addition, Brian started growing his own food at an allotment, and this, he feels, made him care more about the quality, provenance, and environmental impact of the food that he buys. Spending time at his parent's allotment during his childhood has, he believes, made it easier to come back to the practice of growing food again, and he hopes that his children will pick that up too.

In the last three years Brian has had to change his expectations about how much he should pay for sustainable food. It may cost more at times, but he is willing to pay more for, what is in his assessment, better quality. He remarks that he realises how important sustainable food is for his and his family's health, for the local economy, and for the environment. Therefore, he is prepared to prioritise it in his budget and not spend as much on some of the other things he used to spend on. Besides, Brian feels that by not using supermarkets very often, he saves on the impulsive buying that he used to get into at times due to the tempting offers that supermarkets throw at their customers. This way, although the proportion of money spent on food has increased since he made changes in his food choices, it has not necessarily increased the overall expenditure for the family. When I asked Brian about what helps him stick to his practice of consuming sustainable food, he replied:

> I think I find it very enjoyable I suppose. I think it is a very satisfying thing. Given that we all have to make purchases and spend money on things, I mean I get depressed if I have to go to the supermarkets. But I like going to Stroudco. I like going to the allotment. I work at a market garden locally where we just split the produce between us. So you know there are all really nice positive things. And you feel good about yourself I suppose or that what you are doing is having a positive impact rather than a negative impact. So I don't kind of struggle. But yeah yeah, financially sometimes I think I could just go to Tesco and get a load of you know, save some money. But it is not enough to make me do it. It's not really a struggle. It's easy in Stroud because there is so much on offer in the local food arena. So you don't have to spend too much energy seeking it out. And once you're in the habit of doing it, it's actually quite feasible. And you know I think it is quite important for my children.

Brian's life path into sustainable food consumption shows that despite being very concerned about the environment and biodiversity, and even about the political and social dimensions of food and nutrition, he did not initially make the connection between his diet and its impact on the environment. In fact, he reported that many of his friends who were similarly interested in environmental sustainability simply carried on with their everyday food consumption practices as usual. It was difficult for Brian to put his finger on why that might have been the case. He reckoned that even though Bristol, where used to live, had avenues that offered sustainable food, in Stroud the local and sustainable food options were much more visible, accessible and celebrated as part of the city's social culture. It was the move to Stroud to live with Chloe, who not only shared his concern for the environment but also was already actively seeking out sustainable food options, that set in motion the shift in Brian's food consumption

practices. Through Chloe, Brian became part of a social circle that was more favourable to pro-environment and pro-local food. Finally, working professionally to promote sustainable food options in the community and tending to his allotment space cemented his commitment to local and sustainable food and further aligned his pro-environmental beliefs and values with his lifestyle practices. As Brian puts it, this alignment of attitude with behaviour gives him an emotional satisfaction of 'doing the right thing' which continuously reinforces his chosen consumption practices.

8.12 Conclusion

The key insight from the accounts of interviewees is not only *what* factors influenced sustainable food consumption behaviour, but *how* these influences were shaped over time; see Figure 8.2 for an overview.

Figure 8.2 Ways in which various factors influence sustainable food consumption	
Parents, grandparents, and siblings	• creating environmental awareness through information • providing children the experience of growing food • teaching cooking skills, especially plant-based meals • creating awareness about health and food • sharing family traditions which give exposure to plant-based foods • sharing interest in wildlife and natural history • sharing concerns about social justice and animal welfare
Role models	• providing examples of sustainable lifestyle practice • raising awareness about environmental issues among followers and admirers
Partners, friends and peers	• introducing food choices that are healthy as well as environmentally sustainable • sharing regular sustainable food consumption practice and supporting one another
Experiences shaped by the environment	• spending time outdoors and appreciating wildlife and beauty in nature • directly experiencing the positive impact of sustainable farming practices and good animal welfare conditions • directly experiencing the negative impact of intensive agriculture and factory farming practices, and also other forms of environmental pollution
Pro-environmental organisations	• providing information to increase awareness of environmental issues • connecting different aspects of environmental issues • providing experience of environmental campaigning and strengthening pro-environmental attitudes • providing a social network for diffusing group norms supportive of pro-environmental practices

Figure 8.2 Ways in which various factors influence sustainable food consumption	
Books, audio-visual media	• creating awareness about relevant issues • making the connections between food, health, social justice, animal welfare, community development and the environment • broadening and deepening the level of awareness of relevant issues
Education	• getting inspired by teachers to take interest in environment related subjects • learning about the environment through the study of subjects, such as, biology, zoology, conservation, geology, anthropology, sustainable development, horticulture, landscape management, permaculture • coming into contact with fellow students with like-minded interests and thus offering the potential to learn about environmental issues from one another
Work	• getting exposure through work in the food production sector to enormous wastage in the food supply chain • becoming aware as a farmer about the dangers of chemicals used in intensive farming practices • developing an understanding of sustainability certifications and standards in the food industry • developing an awareness of sustainability issues and exposure to sustainable food through work in journalism • seeing the connections between sustainable food and community development through work in the civil sector and developmental organisations
Health concern	• seeking general health improvement through a more varied and nutritious diet • supporting family members in dealing with their health issues by sharing their meat-free or red meat-free diet
Accessibility	• finding a range of sustainable food choices easily at a nearby grocery outlet, farmers' market or community food initiative • using certification standards to help identify sustainable and ethical food options • finding affordable sources of sustainable food through initiatives such as co-ops, farm delivery schemes, and community supported agriculture
Ethical concerns (social justice and animal welfare)	• connecting interest in community development and social justice to caring for the environment • giving up meat initially due to concerns about animal welfare • protesting against the unethical and environmentally unsustainable practices of large supermarket chains by supporting local producers
Innate interest	• finding intrinsic satisfaction in caring about plants, wildlife, animal welfare and the environment in general

Every interview presented a case that was unique in the matrix of factors that contributed to eventual behavioural change in food consumption. However, all the life

paths of the interviewees indicated that the process of behavioural change with respect to food consumption involved the following.

First, information derived from the media, related people or role models, and personal life-experiences created a value-oriented concern. This concern was not always for the environment in the first instance, but in some cases for health, social justice, and animal welfare issues. Food was seen as a critical element that had the capacity to manifest in itself the value-oriented choices people made in the marketplace and in the way they engaged with groups in their communities.

Second, social and market contexts determined whether or not attitudes motivating change were translated into sustainable consumption behaviour. Favourable circumstances to effect change include social acceptability, in terms of peer approval, and economic accessibility, in terms of convenience, availability and low cost of transaction. However, where social and economic contexts for change were less conducive, strong personal norms and the self-belief to effect change were at times able to create the context where individual behavioural change became feasible.

Finally, changes in behaviour became established as a routine practice over the course of time. Additional information, personal experiences and social influences affirming change deepened the commitment and reinforced both value-orientations and corresponding practices.

Next, I examine the evidence presented here to identify processes underlying behavioural change which may be useful in informing efforts to encourage more people to adopt sustainable food consumption practices, in particular through community-based food co-ops.

Chapter 9
MECHANISMS OF INFLUENCE

Everybody experiences far more than he understands. Yet it is experience, rather than understanding, that influences behavior.
Marshall McLuhan, Philosopher

Analysis of the ways in which various factors influenced sustainable food practices of interview participants led to the identification of five specific mechanisms of influence: direct experience, social learning, knowledge, facilitating context, and personal agency. Figure 9.1 shows a diagrammatic representation of the suggested theoretical model for understanding both factors and mechanisms of influence that animate environmentally sustainable food consumption behaviour. I propose that the behavioural impact of factors of influence is mediated through the identified mechanisms of influence.

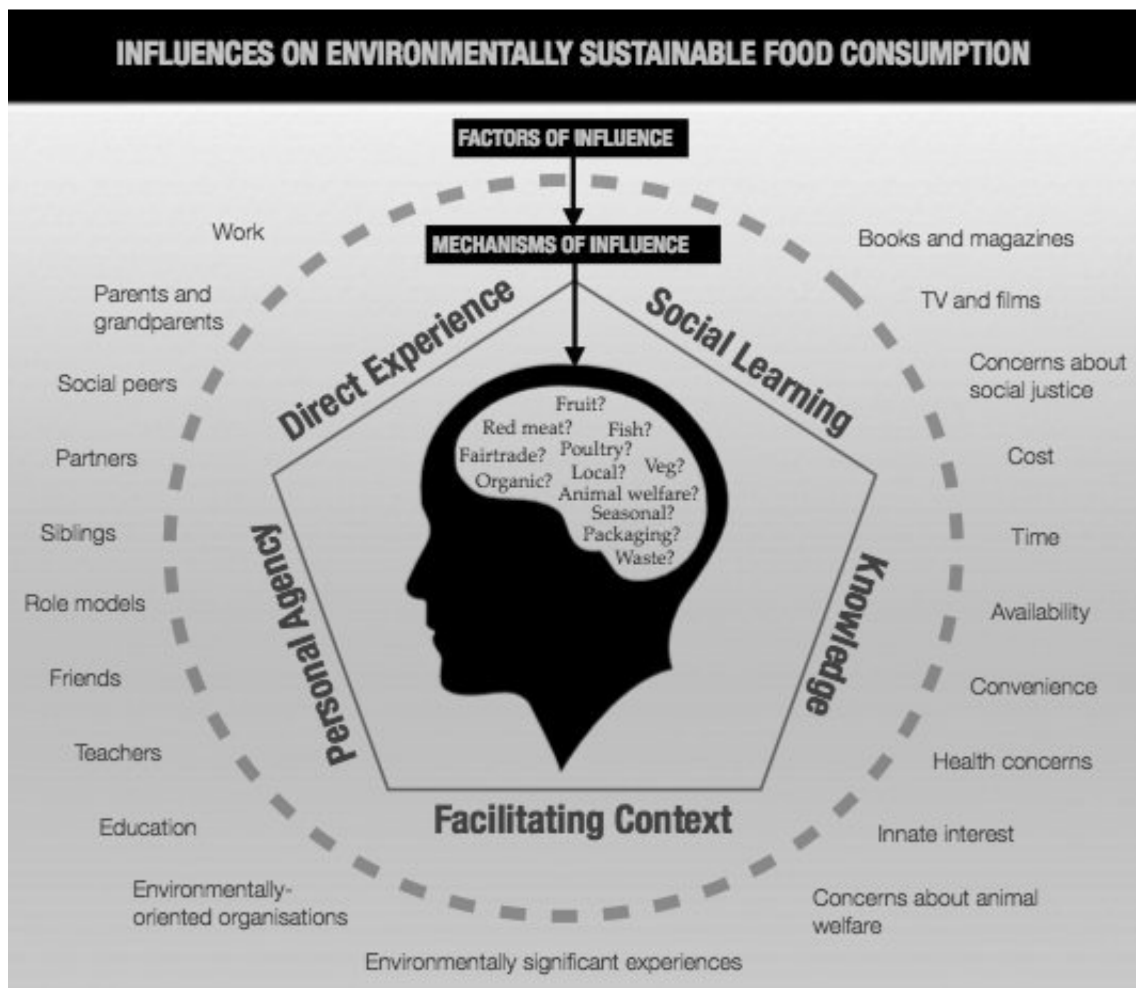

FIGURE 9.1 Factors and mechanisms of influence that shape pro-environmental food consumption behaviour

Many factors are capable of engaging multiple mechanisms to influence attitudes and behaviour. For instance, parents can introduce children to an enjoyable *experience* of gardening. They can also impart *knowledge* about caring for plants and ways to use them in cooking and preparing meals. It was evident from interview responses that influences worked on the subjects at both cognitive and affective levels, and often simultaneously. For instance, a documentary film can provide information and increase awareness about specific issues. And at the same time, this information can combine with audio-visual media to produce an effect of moving people to tears or making them feel excited and empowered to take action for a cause. It seemed futile to separate the analysis of deliberative versus emotional components of influences on behaviour. Hence, I simply acknowledge that both cognitive and affective processes of decision-making can be activated by the factors and mechanisms of influence identified in this study.

In the following sections, I discuss the roles of direct experience, social learning, knowledge, facilitating context, and personal agency in explaining the sustainable food consumption behaviour of my research participants. This discussion is based on a multidisciplinary review of literature that helps to understand some of the underlying social and cognitive processes that affect food consumption behaviour and behaviour change. Through the analysis of mechanisms of influence, I derive lessons that can enable community-based sustainable food co-ops to pursue the goal of encouraging sustainable food consumption more effectively.

9.1 Direct experience

After researchers showed inconsistencies in the attitude-behaviour relationship (Festinger 1964; Wicker 1969), some psychologists turned their attention to investigate methods of attitude formation that could better explain the predictability of that relationship. A number of studies found that attitudes that were formed as a result of direct interaction with the attitude object were more likely to predict corresponding behaviour (cf. a meta-analysis of the attitude-behaviour relation by Glasman and Albarracin 2006). For example, Regan and Fazio (1977) showed that, between two groups of students, those who suffered the consequences of a housing crisis on a university campus were more likely to take campaign action on the housing problem than those who were aware of the crisis and its attendant issues but had escaped its direct effects. This difference between the two groups was more pronounced for actions

that required more effort, such as writing a letter or attending a committee meeting, than merely signing a petition. In another study, Fazio and Zanna (1978) showed that students who had developed a favourable attitude to participating in a psychological research project based on prior experience of participating in such research were more likely to volunteer in a subsequent research exercise than those who expressed a favourable attitude based solely on receiving descriptive information about psychology experiments. Hence, a pro-environmental attitude induced by direct experiences of subjects with aspects of the environment and food would be expected to predict corresponding behaviours more consistently.

For many of my interview subjects, direct experiences with nature and sustainable food choices played a significant role in forming pro-environmental food attitudes. These experiences were introduced in a number of ways through significant people and particular contexts to which the subjects were exposed. For example, as children, some subjects shared the experience of growing food with their parents in allotments or on family farms. Many of them were able to come back to growing food later in their adult lives. Also, parents who involved their children in cooking developed in them a deeper interest in food and transferred to them skills to prepare meals from fresh fruit and vegetables in some cases. Families who incorporated a diverse range of flavours in their meals, such as those where one of the parents enjoyed cooking or where food was an important part of cultural celebration, may have prepared their members to more readily adapt to the introduction of novel sustainable food options in their diet later on (Gerrish and Mennella 2001). Educational context in fields such as landscape management, permaculture and environmental sciences afforded participants the opportunity to directly experience growing food and learning techniques to conserve biodiversity. Similarly, subjects who worked in the food industry and experienced enormous food wastage formed an attitude against it. Those who were involved in the farming sector and experienced the damage to soil fertility as a result of chemical-intensive farming developed a concern for producing and consuming food with an aim to support more organic ways of soil management and reduce or eliminate the use of pesticides harmful to human and wildlife health. In some instances, the proximity of their living environment to the industrial farms where livestock were intensively reared for meat allowed some subjects to see first hand the cramped spaces where animals were held and smell the stench from the dirty feedlots. In these instances, subjects

developed a strong aversion to factory-farmed meat. Conversely, visiting organic and free range farms and seeing animals well cared for had reinforced attitudes and consumption practices that were supportive of animal welfare and environmental sustainability. Finally, interview subjects who joined environmental and sustainable food-related organisations and took part in campaigns or local community projects were directly engaged with attendant issues, and thus had a strong experiential foundation for developing correspondingly favourable attitudes towards environmental sustainability.

Psychological research suggests that in the above examples, where there was an increase in the number of experiences with the same attitude object, i.e. environment, sustainable food, or animal welfare, behaviour would become more consistent with the corresponding attitude. Fazio and Zanna (1978) found that the influence of direct experience on attitude-behaviour consistency is mediated through its effect on two other qualities of the attitude. The amount of direct experience people have with the attitude object increases the degree of certainty with which they hold associated attitudes and the extent to which they have clarity about the attitudes they hold. In other words, personal involvement with an object assists in forming well-defined attitudes about that object, thus enhancing clarity. It also develops in people confidence in the attitudes they have, thereby enhancing certainty. Fazio (1989) also demonstrated in an experiment that the more an attitude is formed as a result of direct experience, the easier it is to recall attitudes in an action context, and behave in a manner predicted by the attitudes. Personal involvement and direct experience with the object may also induce individuals to think more carefully about their attitudes and this cognitive effort in turn makes those attitudes more accessible (Petty, Haugtvedt, and Smith 1995). Thus, when direct experience is a strong component of attitude formation, it increases attitude-behaviour consistency by making the attitude less ambiguous, more definite and more easily accessible at the point of decision-making. Additionally, when direct experience is used as a tool for learning a specific behaviour, it may also improve attitude-behaviour consistency by 'creating competence' in performing that behaviour (de Haan 2007; Jensen 2002). Baur and Haase (2013) demonstrated that getting students involved in preparing a campaign and educating other pupils in the school about waste separation was a better predictor of their subsequent recycling behaviour than providing tuition alone. Competency is also a central theme in social practice

analysis where performances of practices are seen to develop skills which enable people to carry them out as increasingly normalised and routinised functions of everyday-life (Shove and Pantzar 2005; Shove, Pantzar and Watson 2012).

Direct experience of the desired behaviour in the past can have an effect on repetition of the same behaviour in the future through the habit formation process (Triandis 1977). Ouellette and Wood (1998) carried out a review of prior research on the relationship between past behaviour and its ability to predict future behaviour. They explain that in the case of routine behaviours, such as food consumption, people rely on past actions as a 'heuristic device' to perform future actions. Especially when the context in which the behaviour occurs does not change, the behavioural performance becomes more or less automatic and people do not resort to cognitive evaluations of other choices they can make, simply because it is less efficient to do so. This is even more likely where the nature of a particular behaviour, such as consuming food, itself entails several repetitions every day in people's daily routine since birth. On the one hand, this makes food consumption behaviours particularly resistant to change unless the contexts that maintain it are disrupted. But on the other hand, once a sustainable food consumption habit is formed through repeat performances in stable contexts, past behaviour becomes a strong predictor of future behaviour in the same contexts.

Support for the salience of direct experiences with nature in encouraging pro-environmental concerns has been found in research in environmental education. Researchers have explored environmental activists' and environmental educators' accounts of their 'significant life experiences' to uncover formative influences on their environmental concern and environmental action (cf. Tanner 1980; James 1993; Palmer 1993; Palmer et al. 1998; Sward 1999; Chawla 1999). Chawla (1998) notes that across many studies that asked differently worded questions and covered disparate sample of people in various countries, some formative influences have been consistently reported. Foremost among them are 'positive experiences in natural areas' and 'negative experiences of habitat destruction' (ibid.: 377). Positive experiences may include both experiences in 'wild' nature, such as, playing or walking in the woods and pastures, hiking, camping, fishing and foraging, as well as experiences with 'domesticated' nature, such as growing plants and caring for them, and picking flowers, fruit and vegetables (Wells and Lekies 2006). Negative experiences included seeing rural landscapes change

from fertile lands to barren pastures, visible impacts of resource-intensive agriculture, destruction of natural habitats of indigenous people and wildlife, and urban pollution. Many of my interview subjects reported similar experiences as influential sources of their concern for food sustainability, and the environment in general. Therefore, this study further confirms the positive linkage between childhood and adult experiences of natural areas and a concern for the environment that has been reported in the environmental education literature.

Although studies on attitude-behaviour correlation enable understanding of the underlying cognitive processes, evidence from life history interviews challenges an assumption common to dominant psychological models of behaviour. These models tend to pre-suppose formation of attitudes prior to action (see for example, Fishbein and Ajzen 1975, 1977; Ajzen 1985, 2001; Stern et al. 1999). Accounts of interview participants suggest that the attitude-behaviour relationship need not be uni-directional. In some cases, people had acquired sustainable food practices such as growing food and consuming less meat through parental or peer influences and their pro-environmental practices preceded the development of pro-environmental attitudes. Importantly, becoming aware that one's practice was in tune with environmental sustainability contributed towards deeper involvement with environmental concerns. Ways of doing and ways of thinking were mutually reinforcing. Thus, attitude cannot just be seen as an independent variable to be targeted for policy interventions designed to change behaviour, for example, through information provision. Instead, the complex and bi-directional nature of the attitude-behaviour relationship, which is gaining currency in social practice scholarship (Spaargaren 2011; Warde 2005), needs to be recognised and explored further in the realms of policy and community-based approaches to enable sustainable consumption.

9.1.2 Implications for community-based sustainable food co-ops

Findings from this study suggest a number of opportunities for direct experience that can be offered by sustainable food co-ops to their members. Farm visits and fruit and vegetable picking, especially at farms that adopt environmentally responsible growing practices and maintain good animal welfare standards, can help people connect with local farmers, gain knowledge about seasonality of local produce and develop appreciation of the economic and environmental impacts of different farming methods.

Thus, Stroudco and TPS had organised at least one farm visit. Evidence from life history interviews and also from members survey at TPS suggests that seasonal farm visits could be an engaging activity for members of sustainable food co-ops. Additionally, there may be opportunities to participate in local allotment groups and community food growing projects to both source fresh produce and enable food growing experiences for members. Pimlico Co-op's members were already engaged in local food growing initiatives and some of Stroudco's members were active in the Stroud Community Agriculture initiative.

Members can also get together to enjoy wildlife and national parks and other excursions in nature such as hiking, camping, foraging and picnic. Regular events to cook and share meals based on fruit and vegetables that can be sourced from the co-ops can provide direct experience of preparing food with healthy and low-carbon ingredients, build cooking competencies, and also develop and expand taste for sustainable food options. Additionally, this can enable more members to expand the range of sustainable food they purchase from their co-op. Thus, to develop cooking skills, TPS provided members with opportunities to volunteer in the kitchen and learn from a professional chef about ways to cook meals from fresh produce that may be close to its use-by date. Members can also be given responsibility to organise waste management at the co-op on a rolling basis to sensitise them about food waste.

9.2 Social learning

Apart from internalising the positive and negative consequences of direct experiences to aid future decision-making, people also observe and learn from others. Studies in sociology (Wentworth 1980), anthropology (Mead 1934; Ochs and Shohet 2006) and social psychology (Bandura 1977a) have suggested that people's behaviours and lifestyles are often influenced by how they socialise with others from childhood through adolescence to adulthood. Perceived social and cultural norms can affect behaviour, and people may choose to model their behaviour on people they respect and admire. According to Bandura (1989) social learning involves both learning how to perform a behaviour (a skill component) and evaluating the observed positive or negative effect of the consequences of the behaviour on the observed model (a motivation component). Learning how to cook and prepare certain types of foods and seeing admired or respected others enjoy particular foods could have a transformative influence on the

observer's food consumption behaviour. Personally significant people were reported by many of my interview subjects to have shaped their environmental interests and food preferences in the context of home, educational, work and interest-group settings.

Some nutrition studies suggest that, especially during childhood, children followed the example of parents, siblings and care-givers in the kinds of foods they accepted (cf. Savage, Fisher and Birch 2007; Nicklas et al. 2001). Therefore, if parents, in particular mothers (Seagren and Terry 1991) or older siblings, would eat more fruit and vegetables, children were more likely to include those items in their diet. Branen and Fletcher (1999) found that college students' eating habits, in terms of meal structure, regularity and schedule of meals, quantity eaten, and even the use of food as an incentive or threat, were related to how they were brought up to eat by their parents. Moreover, young adults who thought about nutrition in selecting their meal items related it to talking about nutrition with their parents during childhood. Thus parental influence on dietary practices in childhood can have a lasting impact. Sociological studies of food have also emphasised familial contexts, and especially women's roles as primary organisers of food practices, in developing shared notions of what constitutes a 'proper meal' (Mitchell 1999; Murcott 1982; Charles and Kerr 1988; DeVault 1991).

In my interviews, although no subject reported parental influence in specifically relating food consumption practices to a concern for the environment, many interviewees related their own interest in nutrition and incorporating more fruit and vegetables in their diet to some form of parental influence. Either the parents were generally concerned about nutrition or had some health condition and needed to avoid food items such as red meat. In other cases parents simply enjoyed gardening and used home-grown produce in family meals. In each of these cases children followed a similar diet to that of their parents, which included more fruit and vegetables.

In addition to dietary influences, some children also followed their parents' interests, such as in natural history, bird watching, bio-conservation and community service, which they felt contributed to the development of their pro-environment attitudes and concern for others. This kind of parental influence was also reported by Chawla (1999), who found that some of the environmental activists she interviewed in Norway and the USA traced their awareness of environmental issues, social justice and social

responsibility back to their observation of their parents' engagement with those topics. Palmer et al. (1998) conducted a study similar to that of Chawla across nine countries among environmental educators and saw a consistent pattern of parents and close family members being sources of influence for generating a concern for the environment. They cite (ibid.: 447), for example, a Sri Lankan educator, who narrated how his father's practice of planting a tree on his birthdays and encouraging him to do the same developed his affinity towards plant life and the natural world.

Friends and peers were also remembered as sources of influence on diet. Some interview subjects were introduced to a vegetarian diet by college friends and roommates and were persuaded on the grounds of health, environmental and ethical concerns. In the contexts of horticultural and permaculture education, preference for local and organic food was also shaped by peer influence. In one case, an interview subject went food-shopping with friends who had similar environmental and ethical leanings concerning food choices. In adulthood, partners with a pro-environmental outlook shared a sustainable diet at home. Supportive partners also helped deepen the commitment towards a pro-environment lifestyle and made sustainable food consumption a more consistent practice in everyday life. For those subjects who joined pro-environmental organisations as volunteers or employees, their social network within these organisations was an important element of influence and approval of their environmentally responsible food practices.

One way of understanding how participants related food consumption behaviour at a later stage in life to indirect social influences early on could be through Bourdieu's (1984) concept of habitus, in particular its invocations as 'ecological habitus' by Haluza-DeLay (2008) and 'radical habitus' by Crossley (2003). Parental or peer influences leading to subjects' enjoyment of nature and wildlife and participation in outdoor and conservation activities at an early age may have embodied ecological dispositions, or an 'ecological habitus', that were generative of other ecologically responsible practices at later stages in subjects' lives. Similarly, when parents and other significant people were seen to be leading a lifestyle or making choices different from conventional norms, such as an interest in alternative medicine, self-sufficiency, environmental activism, or vegetarian diet, subjects may have developed radical dispositions, or a 'radical habitus', that made them more likely to question the status quo and adopt countercultural

practices themselves. The formation and evolution of ecological and radical habitus would have also been possible through interactions with others and the collective practices people engaged in 'communities of practice' (Lave and Wenger 1991) such as pro-environmental and community service groups and organisations.

Sociological studies have also shown how people's 'ordinary' consumption practices such as planning meals, grocery shopping, preparing meals, eating, cleaning up, and managing waste can require complex co-ordination with those with whom these practices are shared. They could be partners, other family members, housemates, friends, and co-workers. Many choices made in performing these practices are not just individual but contingent on negotiations with the tastes, preferences, values, and time schedules of all commensal participants (Murcott 1982; DeVault 1991; Brannen et al. 1994; Dobson et al. 1994; Miller 1998; Sobal and Nelson 2003; Evans 2011, 2012; Cappellini and Parsons 2013). Many interview subjects emphasised that having like-minded partners and friends made the enacting of pro-environmental food practices easier, more consistent, and in some cases provided an impetus for deeper engagement with related practices.

Also, other studies have emphasised the social influence of family and peer groups on individuals' dietary choices, including the quantity of food eaten and acceptance of new foods (cf. McIntosh 1996; Birch 1980; Gable and Lutz 2001). In a study of determinants of pro-environmental consumption, Welsch and Kuehling (2009) reported that consumption of organic foods was shaped by behavioural conformity with reference to neighbours, friends or relatives. Many years earlier, Lewin (1947) had described how participation in discussion groups was more effective than listening to lectures in persuading people to consume types of foods that were considered unattractive. As with a few of my interview respondents who adopted a vegetarian diet in adolescence or college years, Worsley and Skrzypiec (1998) found that support for a vegetarian diet came especially from mothers (50%) and classmates (30%). Research on factors that can strengthen attitude-behaviour correspondence also suggests the role of peer and social group influence. White, Hogg, and Terry (2002) and Smith and Terry (2003) found that where behaviour is based on attitudinal foundation, in-group norms can influence the attitude-behaviour relation. In addition, Visser and Mirabile (2004) underscored the influence of social networks on attitude stability, which can in turn

improve attitude-behaviour consistency. Studies exploring mid-life intra-family influences indicate some level of congruence in spousal and partner food consumption, especially if the couple have children and eat their meals together (Laitinen, Högström and Räsänen 1997; Macario and Sorenson 1998; Hannon et al. 2003). Moreover, medical studies on dietary intervention for treatment of conditions such as obesity (Epstein et al. 1987) and coronary heart disease (Knutsen and Knutsen 1991) have emphasised the importance of family support in making and sustaining dietary changes. Finally, studies on formative influences on the development of environmental concerns have consistently reported the positive contribution of close friends and peers (Palmer et al. 1998; Chawla 1999; Sward 1999; Hsu 2009).

In addition to the direct influence of role models such as family members and teachers, vicarious role models 'with which the adolescent has little or no direct contact' (Martin and Bush 2000: 443), such as admired and respected public celebrities, were also salient influences on some of my interviewees' pro-environmental attitudes and sustainable dietary preferences. In particular, wildlife television presenters, authors, and several popular musical artists motivated environment-oriented career aspirations, pro-environmental concern, and changes to a vegetarian diet. Here again, previous studies have shown that young adults may emulate perceived attitudes and behaviours of their chosen idols (Caughey 1984). In a study of undergraduates in western Canada who declared a strong attraction for a celebrity, Boon and Lomore (2001) found that though the majority of idols identified were musicians and actors, others were from a variety of other professions. Around 47% of respondents had altered aspects of their lifestyle to make them more congruent with that of their idol, and around 60% acknowledged that their idols had shaped their attitudes and personal values. Getting involved in acting (16.7%) and music-related activities (13.9%) were the most popular lifestyle changes, but other aspects of behavioural changes that were reported, and were similar to some of my interviewees' responses, included taking up studies in the idol's field of expertise, increasing community work, and becoming a vegetarian. This study was consistent with findings from Caughey's (1984, 1994) research in that young adults took steps towards self-transformation to achieve a better match between their own identity and that of their idol. In other studies, television and movie stars have been found to influence career aspirations (King and Multon 1996) and self-images of young adults (Lockwood and Kunda 1997). Marketing and advertising professionals frequently use celebrity

endorsements based on findings from social psychological literature indicating that consumers can transfer qualities they attribute to a celebrity to the product they endorse (for a review, see Erdogan 1999). Thus, a substantial body of work suggests that celebrities, through their publicly expressed beliefs, values and lifestyles, can act as vicarious models with potential to shape behaviours of individuals, especially adolescents and young adults, who show selective affinity towards those celebrities.

9.2.2 Implications for community-based sustainable food co-ops

This study provides further evidence that people's social relationships and references influence how they learn and negotiate sustainable food consumption practices in everyday life. Social learning also takes place when people select to follow vicarious models they come across through various media sources. Sustainable food co-ops could create social learning opportunities in a number of ways. As a first step, maintaining a clear focus on environmental sustainability principles can attract a group of people with at least a shared interest in these values as a basis for connecting with one another. Working together to run the co-op can provide some scope for social interaction, but evidence from the cases I studied suggested that this was not enough to engage many members and generate sustained participation.

Group activities such as those suggested in the previous section on direct experiences can bring people together and provide additional opportunities to develop friendships. Increasing the variety of activities offered by each co-op has the potential of appealing to more people's interests and hence engaging more members to participate. The evidence from life history interviews suggests that sustainable food practitioners were more likely to be influenced by those with whom they had close social ties. Hence, activities must be particularly suited to introducing members to one another and providing scope for deeper interaction and building meaningful relationships. Furthermore, there may be a case for co-op leaders to make special efforts to recruit respected figures in the community, or invite celebrity pro-environmental campaigners from outside the community, to inspire others in the community to support the co-ops' environmental objectives. In the case of TPS, Arthur Potts Dawson's status as a celebrity chef with pro-environment credentials, which was portrayed through the televised documentary, appeared at least in part to have increased membership signups. Finally, arrangements can be made to involve children in many of the co-ops' activities related

to experiencing sustainable food practices as some evidence suggests that early influences can have an enduring impact.

9.3 Knowledge

In a broad sense, knowledge can be acquired from information that is conveyed through experiences and observation of people and processes. However, in this section I consider material sources of information such as books, magazines, films, mass media and activist campaigns. The provision of information as the sole motivator of behavioural change has received only limited support from research (Finger 1994; Geller 1981; Bickman 1972; Ratner et al. 2008; Stern 1999). Information campaigns may raise awareness and increase the intention to perform a behaviour (Abrahamse et al. 2005), but in the absence of removing additional constraints to the targeted behaviour (Gardner and Stern 1996) and reconfiguring the environmental context of routine behaviours (Verplanken and Wood 2006), information-based efforts to change behaviour may have only a limited impact. Studies evaluating the effectiveness of information in motivating healthier food choices have found that despite an awareness of direct benefits from healthy eating, individuals are constrained by other psychological and environmental factors in following health-related dietary recommendations (Downs, Loewenstein and Wisdom 2009; Just and Payne 2009). Nevertheless, some researchers suggest that information can be the basis of long term behavioural changes through increasing awareness of the consequences of one's actions. For those with a pro-environmental attitude, information can help identify additional ways to reduce their impact on the environment (Stern et al. 1995). Information that raises awareness about the environmental and social consequences of mundane practices like eating and shopping can also bring these practices from the level of 'practical unconsciousness', where these acts do not elicit much deliberation, to 'discursive consciousness' enabling people to re-evaluate and re-craft their practices (Giddens 1984; Spaargaren 2003).

Among my interviewees, only one reported that information provision, in the form of a magazine article on animal cruelty in the meat industry, had almost singly turned her away from eating meat ever again. However, in many cases information from various sources such as formal education in environment- and horticulture-related subjects, books and magazines, films and documentaries, and news from mass media sources, had contributed to shaping interviewees' pro-environmental practices. Some felt that

information played a role in increasing knowledge and awareness about relevant issues, but other factors were necessary to effect an eventual change in behaviour. Interview participants reported how acquiring knowledge about environmental issues, sustainability, health, social justice and animal welfare concerns had enabled them to develop a better understanding of issues they had become concerned about through direct experience or through the influence of other people. Information helped them see connections between a number of related issues they cared about, such as personal health and environmental sustainability or social sustainability and environmental sustainability. A deeper understanding of sustainability issues had in turn strengthened pro-environmental values and attitudes, and where feasible, increased the range of sustainable consumption practices. For instance, if someone had practiced a vegetarian diet initially due to a concern about personal health or animal welfare, informing themselves about environmental benefits of a plant-based diet coupled with developing an ecological consciousness motivated the inclusion of organic and local food choices in their dietary practice. Similar to findings from other studies about the value of eco-labels (Loureiro and Lotade 2005; Teisl, Rubin, and Noblet 2008), some interview subjects suggested that information in the form of organic certification had made shopping for ecological products less time consuming and hence more convenient and regular. Others had used information from cookbooks to equip themselves with the skills necessary to adapt to dietary changes that departed from the norm in their family. Social practice theorists acknowledge the role of information in building practice-relevant competences, but emphasise that social and material contexts must also appropriately align with these competences to shape sustainable practices (cf. Spaargaren 2003; Shove 2010; Evans 2012).

Research on attitude-behaviour correspondence suggests that information can be an effective mediator of attitude-behaviour consistency: when it is relevant to the specific behaviour in question (Ajzen and Fishbein 1977, 1980; Kraus 1995); when it motivates people to think carefully about the attitude object (Petty and Cacioppo 1986; Petty et al. 1995); and, when the attitude-relevant information is one-sided and less ambivalent (Schwarz and Bohner 2001; Wilson and Hodges 1992). A number of my interview respondents spoke of influences from literature and films that specifically linked dietary practice with health, social justice and environmental sustainability. Actions such as reading relevant books and magazine articles, following news stories and watching

documentaries were also likely to induce people to cogitate more on the issues they cared about and reflect on the implications of their own behaviour on the environment. Moreover, many books interview subjects mentioned, such as *Fast Food Nation*, and documentaries, such as *Food Inc.*, argue and campaign explicitly for pro-health and pro-environmental consumption behaviour. Hence, they fit the category of sources providing one-sided information, which results in clear and confident attitudes that are better predictors of corresponding behaviour. However, a study has also shown that if someone cares deeply about an issue, then even information that presents various sides of a debate can be effective in influencing attitude and behaviour as long as the person is motivated to think about the information presented and integrate potentially ambivalent information into a clear and non-ambivalent attitude (Sengupta and Johar 2002).

Despite reservations in the literature about the definitive role of information in influencing behaviour and not just attitudes, most of my informants acknowledged that gaining relevant knowledge made an important contribution, albeit in conjunction with other factors, in raising their environmental awareness and motivating sustainable consumption. Other studies focusing on general environmental concern support these findings. For example, both formal education and self-education through books and other media were reported as significant influences by environmentalists in many countries (Palmer et al. 1998; Chawla 1999; Hsu 2009). A large scale (n = 7,379) web-based survey of a population sample in the United States (Mobley, Vagias, and DeWard 2010) found that reading environmental literature was an important predictor of environmentally responsible behaviour.

9.3.2 Implications for community-based sustainable food co-ops

Knowledge about food and its many attendant aspects such as environmental impact, nutritional content, and social justice impact can be shared at a sustainable food co-op in many ways. For instance, where co-ops create their own product labels for fresh produce and unpackaged products, they could include information on producers, production methods, provenance, environmental certifications and nutrition. They can also encourage their suppliers to do the same for packaged products. Moreover, co-operatives' constitutions can clearly document sustainable product sourcing policies and the rationale behind it and require members to sign up to these policies upon joining

the co-op. Among the cases studied, Stroudco and True Food provided good examples of well-defined policies on sustainable product sourcing.

To increase awareness and understanding of environmental, health and social justice issues pertaining to food, members can hold screenings of films and follow up with discussions on the issues raised, as exemplified in practice by Pimlico Co-op members. Additionally, book and video exchange clubs as well as online information exchange through members' mailing lists can allow members to share and discuss sustainable food related information with other fellow members. There may be scope for organising hands-on training sessions run by experienced cooks among members, or professional chefs may be invited to develop cooking skills in the community, especially using seasonal and local fresh fruit and vegetables. Recognised experts on food issues can also be invited to speak to members about environmental sustainability of food and its connection with other issues that members care about such as fair trade, local community resilience, food security, and animal welfare. Finally, exchange with practitioners from other co-ops with environmental objectives can help identify best practices to promote sustainability goals at the co-ops.

9.4 Facilitating context

Despite the appropriate attitudinal strength to support corresponding behaviour, situational factors can become barriers to enacting desired pro-environmental behaviours (Black, Stern and Elworth 1985; Guagnano, Stern and Dietz 1995). For example, the unavailability of organic produce in shops located close to people's residence can hamper their ability to consume organic produce, notwithstanding their intent to do so. Contextual influences on ecological behaviour are highlighted by many researchers (cf. Kaiser and Keller 2001; Stern 2000; Tanner 1999). Increasingly, the role of context is acknowledged by psychologists investigating factors that shape an individual's food choices (Rozin and Tuorila 1993; Meiselman 2006). Meiselman claims that many of his fellow researchers believe that 'context has as much influence as product considerations even though it is still rarely included in research on food choice' (2006: 179). He contends, however, that 'context' in terms of food choice may be difficult to define as it can encompass numerous and varied variables such as location, situation, distinguishing bite, meal pattern and emotional environment. In this section I discuss context in a limited perspective contingent on the data from the life history

interviews. The types of contextual factors that were brought up by my interviewees included family, living, and work environments, choice configuration, convenience, and affordability. Accordingly, options available as food choices in the market environment as well as home and commensal settings, the ease and convenience with respect to the level of effort required to select and consume sustainable food options, and the economic costs incurred in selecting sustainable food options, were crucial to many interview subjects in structuring their food consumption behaviour over the course of their lives. Additionally, certain situational, historical and geographical contexts that were considered important in developing a concern for the community and the environment eventually had a bearing on sustainable food consumption practices.

Many interviewees reported that they were familiar with eating fruit and vegetables before they consciously decided to give up meat or reduce their meat intake. The influence of role models, and the direct experience of tasting these food options, was augmented by other contextual facilitators. Research suggests that exposure to fruit and vegetables (Cooke 2007), finding those items in close proximity in dining environments (Sobal and Wansink 2007), and being presented with those options as part of a 'default' meal in commensal settings (Hanks et al. 2012), can enable people to become accustomed to those options, try them out during meals, and increasingly incorporate more fruit and vegetables in their diet. Where family members maintained a garden or an allotment or worked on non-livestock farms, fruit and vegetables would have been an easily accessible option in the household. Also when parents or housemates included plant-based options in daily meals simply because they cared about health and nutrition or because it was traditionally a part of their overall meal, interview subjects would have had the opportunity to taste those items and make them a part of their routine diet. In all these instances repeated exposure and proximity seemed to have facilitated sustainable food choices.

Humans, especially children, are genetically predisposed to liking sweet, salty and energy-dense foods (Nestle et al. 1998). However, many vegetables considered essential for human nutrition lack these characteristics. Fortunately, studies show that children's initial rejection of foods such as vegetables can be overcome by non-coercive and repeated exposure to those food items. One study suggests that rejected foods may have to be offered as many as ten to sixteen times before they are accepted (Birch and

Sullivan 1990). Similar results concerning the positive effects of 'mere exposure' on food acceptance have been seen with adults (Pliner 1982). While simply looking at novel foods may help in making those foods familiar to people and increasing people's readiness to taste those food options, evidence shows that for significant changes in food preferences, direct experience of tasting the food may be necessary (Pliner and Stallberg-White 2000; Birch et al. 1987). Proximity to specific food items can also increase their intake. In a recent study, Privitera and Creary (2013) found that students invited to a naturalistic kitchen-like setting for a taste-test consumed more apple slices, and, to a lesser extent, carrot pieces, when these options were clearly visible and were placed in close proximity to the students. Similarly, Meiselman et al. (1994) observed in a study conducted at a student cafeteria that when desserts were made less easy to access, i.e. moved away from the checkout line to a separate line, their selection in the shopping basket dropped considerably. Moreover, quantitative surveys among children (French and Wechsler 2004; Rovner et al. 2011) and young adults (Nelson et al. 2009) indicate that consumption of fruit and vegetables can be influenced by the proximity and visibility of these food items to people.

Another contextual influence on food selection is what people perceive to be the default choices. Default choices are those that are automatically available to people if they do not want to exert the necessary cognitive and physical effort to steer away from the normal course and explicitly make another choice (Brown and Krishna 2004). Several explanations have been provided for why people often stick with default options. Confronting trade-offs to select one among many possible choices is difficult even in unchallenging circumstances (Lichtenstein, Gregory, and Irwin 2007; Shiv and Fedorikhin 1999). Hence, when a routine behaviour such as food consumption is undertaken under the competing demands on time to balance work, family and leisure, the default option often wins among others as it reduces the decision-making effort. This is referred to in behavioural science as the 'status quo bias' (Kahneman, Knetsch, and Thaler 1991). Johnson and Goldstein (2003) and Pichert and Katsikopoulos (2008) provide another explanation for why defaults work. They suggest that default choices may be seen by subjects as endorsements by those who present them. According to this view, children and adults in family and commensal settings are more likely to select fruit and vegetables when they are offered as one of the default choices by their parents, peers or partners. In school and workplace canteens and also in restaurants, default

options might represent the social norm or an endorsement by the chef. For example, in an experimental study involving students in campus dining halls, the probability of ordering a meat-free meal was increased significantly by offering the meat-free menu as the default option (Campbell-Arvai, Arvai and Kalof 2014).

Furthermore, the availability of sustainable food options in the local shopping environment was an important factor in shaping sustainable food consumption practice. Interviewees spoke of how proximity to a farmers' market, a health foods or whole foods store, a sustainable food co-operative, a village market full of local and fresh produce and even a supermarket that carried sustainable produce, made it easy for them to exercise their sustainability-guided choices. In a few instances, discovering a place to shop where sustainable food options were dominant triggered significant changes in diet and expanded the range of sustainable foods in one's diet. Rozin (2006: 19), in a multidisciplinary review of influences on food choice, observes: 'The plain fact is that the biggest determinant of what an individual eats is availability. One eats what is there, and more critically, one does not eat what is not there'. He remarks that considerations of availability take one into explorations beyond the 'moment of food choice' and, therefore, also beyond the domain of individual psychology. Also, Nestle et al. (1998), in their widely cited review on social and behavioural influences on food choice, underline the salience of availability in determining food choices. They draw attention to the multiple forces, such as consumer demand, presence of storage and refrigeration facilities, and potential profit margins, that can affect food availability within a community. They also found that in food discourse 'availability' may be conflated with aspects of convenience and affordability.

Affordability was brought up by some interviewees as a constraint on their purchasing a greater range of certified organic foods on a regular basis. However, cost of food was not seen by any interviewee as a deterrent to consuming fresh and local fruit and vegetables. Based on a review of food accessibility studies, Nestle et al. (1998) suggest that while high income in the household may not necessarily lead to healthy food consumption, cost does influence food choices. For example, relatively more expensive food, such as lean meats or good quality fruit and vegetables, may not be found in areas where average income is low. Lack of purchasing capacity in an area might also affect the local availability of some of the costlier sustainable food choices, such as sustainably

farmed fish and organic foods. In a survey-based study in the UK, income was reported to be a considerable limiting factor in gaining access to healthy food (Caraher et al. 1998). Moreover, poor people were found to prioritise cost and taste, whereas higher income groups prioritised taste, but also, to an extent, health. Perversely, many studies of the UK food market have consistently shown that it is cheaper for people on low incomes to survive on unhealthy and environmentally unsustainable food than on a diet rich in fruit, vegetables and whole grains (Jones et al. 2014; Capacci and Mazzocchi 2011; Lloyd et al. 2010; Morris et al. 2000; Cade et al. 1999; Mooney 1990). Besides, when economic means are tight, people tend to economise on food in order to afford other necessities (Hitchman et al. 2002; Kneafsey et al. 2013). Hence, particularly for low-income groups, affordability remains a major constraint in accessing food that is both nutrient-rich and has low environmental impact.

Many interviewees acknowledged that sustainable food choices were overall more expensive, especially when one included organic food products and those grown or produced by small local producers. In some cases, food co-operatives and community-supported agriculture projects had made sustainable food more affordable. However, these cases were exceptions rather than the norm. For most interviewees, price was a consideration, and to some extent a constraint, when making sustainable food purchases. However, other considerations prevailed over cost to varying degrees depending on personal circumstances.

Some contextual influences were not directly related to purchasing and consuming food, but were still considered relevant to sustainability-oriented food practice by interviewees. These contextual factors were mostly responsible for generating environmental and ethical concerns that appeared to pervade people's field of everyday practices, of which sustainable food consumption was but one aspect. Examples of these facilitating contexts were: the living environment where people were exposed to both positive and negative aspects of different farming practices; religious context within families encouraging avoidance of meat; the work environment which exposed some to issues such as social justice, environmental sustainability, and food wastage; places rich in wildlife and scenic beauty that people visited and that inspired in them an interest in nature conservation; and the political context of a growing environmental movement in the 1970s and 1980s which was covered by mass media. Appreciation of such

contextual influences on sustainable food consumption, however, is a neglected dimension in food studies applying a social practice theory approach. Typically, studies from this theoretical perspective have focused on the performance of practices such as buying, eating and managing food waste and analysed their negotiation in everyday life with respect to the meanings (images, shared understandings with reference to others), competences (skills, procedures), and material contexts (engagements, technologies, time, systems of provision) in which the practices are embedded (cf. Warde 2005; Halkier 2009; Evans 2012; Shove and Southerton 2000). Life history accounts of sustainable food practitioners suggest that attention to the emergence and evolution of meanings and values that consciously or tacitly guide environmentally-friendly practices can further enhance the understanding of their contextual antecedents and drivers.

9.4.2 Implications for community-based sustainable food co-ops

The discussion of facilitating contexts in terms of configuring sustainable food options in people's environment points to further opportunities for community-based food co-ops to promote pro-environmental consumption. For one, making a variety of sustainable food products available in communities which otherwise do not have access to such products can expose people to sustainable food choices, make these choices familiar and create potential for incremental dietary changes. Where food co-ops are run as shops, 'choice editing' techniques (Sobal and Wansink 2007; Just and Wansink 2009; Sunstein and Thaler 2008) can be used to configure the layout of products in the shop so as to make sustainable and healthy choices more visible and easier to access than alternatives.

Frequent exposure to sustainable meal options in group activities can also make members taste those options and begin to incorporate them more regularly in their own diet. Hence, the more sustainable food options are presented as default options in commensal settings at the co-ops, the greater the likelihood of members being willing to try out and choose those options. Both members' feedback from co-op case studies and evidence from life history interviews suggest that shopping for sustainable food at the co-op must be convenient for consumers. Consequently, opening hours, location, range of products (i.e. both fresh produce and easy to prepare ready-meal choices), and delivery options deserve attention at a level similar to that at any other retail business that aims to sustain itself commercially. Finally, since affordability is a concern for most

consumers, it is essential for co-ops to keep operational overheads low and use collective bargaining power to obtain the best possible prices for sustainable food products.

9.5 Personal agency

Most of my interviewees were not deterred by the relatively higher cost of some of their sustainable food choices primarily because they placed higher value on sustainability compared to other food selection criteria, such as cost and convenience. They were ready to accept the trade-offs associated with spending a higher proportion of their budget on what they viewed as more ethical food choices. In this sense, however, my interview participants were swimming against the current of society-wide norms (Owen, Seaman and Prince 2007). Their personal norms, either internalised through learning from direct experiences, knowledge acquisition and role models or derived from innate inclinations, were key determinants of the consumption choices they were making.

Schwartz (1977) defines a personal norm as a feeling of moral obligation based on internal standards that people hold for themselves. According to this definition, people comply with personal norms not due to expectations of social sanction or reward, but due to the intrinsic satisfaction they get from doing what they consider is right. A number of studies have shown personal norms to be strongly linked to environmentally responsible behaviour (Hopper and Nielsen 1991; Stern et al. 1999; Thøgersen 2006). For example, one Danish study investigated people's motivations for four different pro-environmental behaviours: purchasing organic milk; using public transport for shopping; purchasing energy-saving lightbulbs; and separating kitchen waste for recycling (Thøgersen 2006). Interestingly, buying organic milk was the behaviour most determined by an 'internalised and integrated' personal norm, and choosing the mode of transport, the least.

Personal values are also considered to be important in influencing whether or not one decides to engage in environmentally responsible behaviours (cf. de Groot and Steg 2008; Dietz, Fitzgerald and Shwom, 2005; Vining and Ebreo 1990). Hughner et al. (2007) found that many studies linked altruistic, biospheric and universalistic values to people who regularly purchased organic foods. However, in another study that explored the comparative salience between 'defaults', values, and information provision, in

motivating a meat-free meal selection in a student dining hall, the researchers found that envirocentric values were not directly associated with selection of a meat-free meal (Campbell-Arvai, Arvai and Kalof 2014). Nevertheless, participants in this study who were already vegetarians did have a high pro-environmental value score. To explain this finding, the researchers conducted another qualitative study among students from the same university, which suggested that many students did not see the connection between meat consumption and environmental degradation. Therefore, to activate personal norms in favour of specific pro-environmental practices people need to be made aware of the connection between those practices and their environmentally-relevant values (Schwartz 1977; Stern 2000). Moreover, since values are held at a general and abstract level, situational and other factors may overwhelm their influence at the time of decision-making (Stern 1999).

In general, the study of values and their effect on behaviour suggests that not only biospheric but also altruistic and universalistic values can, in certain contexts, motivate pro-environmental behaviour (Corner and Randall 2011; Crompton 2010). Deriving intrinsic satisfaction from acting to express solidarity with disadvantaged communities in other parts of the world, be of service to members of their community, and avoid animal suffering, were recurrent themes in narrative accounts. These motivations share with envirocentric values a self-transcending concern for others (i.e. universalism, benevolence) and can thus be complementary and mutually reinforcing (Crompton 2010; Karp 1996). In his review of studies correlating values and behaviours, Crompton found ‘that activating a particular value will: (i) motivate behaviour associated with that value; (ii) motivate behaviour associated with other values that are compatible with the value that is activated; and (iii) decrease motivation for behaviour associated with values that oppose the value that is activated’ (2010: 39). Consistent with my findings, Howell (2013) also reported concerns about social justice, community and human rights issues, among other factors, as key motivations compatible with environmentally responsible behaviour. This implies that there are multiple framings and entry points to adopting sustainable food consumption practices.

Given that many of the interviewees were involved in activism-oriented community-based sustainable food projects, it was not surprising to see in them a sense of belief in their own ability to make the desired changes in their behaviour. They demonstrated

what social psychologists conceptualise as 'self-efficacy' (Ajzen 1991; Bandura 1977b). For example, interview subjects reported cases where they were the only member of the family following a vegetarian diet and they learned to cook and provide meals for themselves when their diets differed from those of their family members. Some of them started a co-operative or farmers' market or community garden project when they found the market infrastructure for providing sustainable food choices lacking in their respective areas. Their actions reflected a certain level of individual agency. In the face of what some others would have seen as constraining factors, the subjects of this study sought and seized opportunities to make effective changes in their own behaviour. Several studies have confirmed the role of self-efficacy in predicting behaviour (for a review see Armitage and Connor 2001).

9.5.2 Implications for community-based sustainable food co-ops

Discussions on direct experience, knowledge, social learning and facilitating contexts have already suggested some ways of developing pro-environmental values, and confidence and skills in individuals to adopt a low-carbon diet. Members can be recruited to the co-op by also invoking other framings such as concern for fair trade, animal welfare practices, and community-orientation. However, if the primary goal is promoting environmental sustainability, its compatibility with other framed values needs to be made explicit, since simply attending, for example, to community orientation in isolation need not support environmental objectives.

In addition, self-efficacy and strong personal norms can be mobilised in favour of environmental action through making it easier to start and run food co-ops. Where sustainable food co-ops exist, personal agency can be exercised by purchasing and participating at the co-ops. However, where they do not exist, individuals and small groups could be enabled to start their own co-operative buying groups if co-operative wholesalers were available who could supply a range of food products in categories of both fresh and packaged goods to small buying groups. Whereas wholesale workers' co-operatives already exist to supply packaged and processed goods nationwide in the UK, regional consortiums of co-ops able to source local fresh produce for distribution to smaller buying groups can potentially add value to the co-op infrastructure.

To ease the operational overhead, efficient software tools could be utilised for collating orders, dividing bulk-packaged products, distributing orders, assigning tasks, sharing information and maintaining accounts. For instance, Stroudco is collaborating with other food co-ops in the UK and abroad to develop better software that could be shared with all community-based food co-ops (Open Food Network 2015). Food co-ops and buying groups that are starting up may also need mentoring from experienced practitioners at other co-ops on aspects of operations, such as managing a democratically run business, and negotiating access to low-cost or free community spaces to take deliveries and distribute products. In this way sustainable food co-ops can not only build self-efficacy among their own members, but also work as a network to provide an infrastructure that supports groups to exercise agency through starting food co-ops in their respective communities for promoting environmentally responsible food consumption practices.

9.6 Conclusion

Based on the evidence collected through life history interviews of sustainable food practitioners, I have suggested five mechanisms that mediate the influence of several other factors on environmentally responsible food consumption. These five mechanisms — direct experience, knowledge, social learning, facilitating contexts, and personal agency — help identify a number of actionable opportunities for community-based sustainable food co-operatives to systematically approach and target their environmental objectives, and overcome some of the challenges identified in the case study research. Discussion of these mechanisms has drawn on insights from both psychological and sociological perspectives.

Exploration of the formative processes that underpin attitudes, beliefs and values, and shape sustainable food consumption practices, shows that behaviour change is a dynamic and evolving process which is not just contingent on an alignment of favourable attitudes and other psychological characteristics of an individual with the corresponding behaviour. A host of other factors that include social, material and historical contexts pervading the field of action need to be taken into account. Additionally, evidence suggests that the attitude-behaviour relationship may be complex and bi-directional. The implications of this finding need to be more adequately explored in psychological models of behavioural action which often assume a unidirectional

causal relationship from attitudes to behaviour. For instance, efforts to change behaviour can start from creating opportunities for performance and direct experience of a set of practices that are related to the targeted behaviour instead of attempting to first manipulate attitudes through information provision.

Unlike most studies informed by social practice theory, the central unit of analysis for this study was practitioners instead of practices. However, consistent with intervention strategies proposed by social practice scholars (Spurling et al. 2013), this study puts forward a multi-pronged and integrated approach to systematically address transition towards sustainable consumption practices. This holistic approach takes into account the materials, meanings and competences that intersect with food consumption practices, though not at the micro-level of detail afforded by ethnographic approaches placing the practices themselves at the centre of analysis (see Shove and Southerton 2000; Evans 2012; Evans et al. 2013). On the other hand, using a life history methodology has brought to light historical and contextual factors that do not appear to be directly related to the practices being studied, but play a formative role in shaping those practices through their influence on the development and evolution of personal values that permeate many everyday practices. Such contextual influences are difficult to capture if the focus is on the performance of practices and their immediate macro-contexts, and hence not sufficiently explored in most social practice studies (see Hards 2012 for an exception).

Next, I summarise the findings and contributions of this research.

Chapter 10
CONCLUSION

We chose to be a community co-operative but it is a serious challenge. And it is certainly not insurmountable but it's bloody hard.
Mike, Co-founder of a community food co-op (Personal Interview)

In this chapter, I bring together key outputs and arguments of the research. First, I set out the motivations, the research questions and the methodologies that have guided this study. Second, I summarise the key findings. Third, I reflect on some limitations of this study that point to directions for future research. Finally, I highlight the key contributions of this research to the knowledge about food co-ops and approaches to influencing pro-environmental behavioural changes.

10.1 Research motivation

This research started from the premise that the impact of the agricultural and food sector on climate change is significant and that mitigating this impact requires changes in food consumption patterns, in addition to seeking technological and production-related improvements. While accepting that the responsibility for changing food consumption patterns must be distributed across policy institutions, infrastructures of provision, businesses and individuals, I argue that targeting and enabling individual action on climate change need not undermine the focus on institutional efforts, as some scholars suggest (Shove 2010; Maniates 2001). On the contrary, individual choices for sustainable food options can send demand-side signals to supply-side institutions to favourably alter the availability, accessibility and affordability of these options. By choosing to follow sustainability-oriented practices individuals can also communicate their concern towards addressing environmental issues to legislators. Demonstration of commitment to these issues by a significant number of individuals can apply pressure on politicians to put in place ambitious policy measures needed to support pro-environmental consumption practices with the confidence that their policy interventions will enjoy public support. Finally, environmentally-friendly food choices and practices by individuals, taken collectively, can make a direct contribution to reducing the carbon impact of the food system.

Historically, the approach frequently used to target individual-level behaviour change has been to provide appropriate information with an aim to change values and attitudes, expecting corresponding changes in behaviour. However, studies evaluating the effectiveness of this approach have repeatedly pointed out its shortcomings (UNEP and Futerra 2005; Blake 1999). In particular, it does not adequately take into account the wider range of factors, such as social norms, conventions, and habits, that influence behaviours. More importantly, it brushes aside the constraints on individual behavioural action inscribed in the socio-technical landscape that configures the field of action. Consequently, a growing body of literature suggests that instead of targeting individuals in isolation, community-based approaches may be more useful to promote pro-environmental behavioural changes (Peters and Jackson 2008; Defra 2007). Employing a more integrated approach, community-based efforts could bring people together to create awareness and develop a supportive environment of social norms, learning opportunities and, in cases such as food co-ops, even infrastructures of provision. However, there is a lack of evidence about the extent to which various forms of community initiatives may be suited to addressing specific realms of environmentally-friendly behavioural practices (ESRC 2010; Defra 2007). This study, therefore, responds to calls for more research to evaluate the potential of different forms of community-based approaches to foster environmentally sustainable practices.

Community-based consumer food co-operatives, especially in the UK, have not been the focus of attention in the literature concerning alternative food networks or community initiatives to encourage pro-environmental practices (Little et al. 2010). Many studies however show that co-operatives worldwide have championed commitment to ethical principles and social responsibility in the retail sector (Zitcer 2015; Knupfer 2013). Consumer co-operatives are member-owned economic organisations that are run by democratic participation to serve the needs of their members. Furthermore, the co-operative principles guiding these organisations put an emphasis on developing member skills and the organisation's commitment to community, among other aspects. Hence, community-based food co-ops may be expected to have the capacity to: develop a shared community of interest around sustainable food consumption; use collective bargaining power to make sustainable food choices more affordable and accessible; and, provide social opportunities to members to learn more about sustainable food practices from one another and collectively pursue environmental objectives.

In this study, I explored the potential of food co-ops to develop these capacities to encourage sustainable food consumption practices. Specifically, I attempted to answer the following research questions:

1. How do environmentally responsible food co-ops develop a shared purpose around sustainable food consumption among their members?
2. How do they make sustainable food affordable and accessible for their customers?
3. How do they motivate people to participate in the food co-op?
4. What are the key challenges that community-based food co-ops face in fulfilling their potential as agents of pro-environmental behavioural change?
5. What kind of influences on food behaviour can be leveraged by food co-ops at the community level to foster change towards sustainable dietary practices?

To answer the first four questions, I employed a case study methodology involving multiple data collection methods. First, an in-depth ethnography of one food co-op was conducted to give a rich and contextually situated account of the opportunities and challenges it faces in balancing its pursuit of environmental goals against its commercial survival. Data collected through participant observation, a member survey report, document analysis and two interviews with management team members inform this narrative. Second, the ethnographic case study is compared and analysed with the case studies of four other community-based food co-ops with environmental objectives, but which differ from the ethnographically studied case across parameters such as membership size and nature of operations. The data from the other food co-ops is based on key informant interviews and analysis of documents. The cross-case analysis addresses the themes identified in the research questions and aims to develop a better and broader understanding of the conditions under which sustainable food co-ops can be effective in promoting environmentally-friendly consumption practices. Finally, to understand how more members could be engaged to participate in such co-ops and make pro-environmental dietary choices, I reached outside the domain of food co-ops to people who already made routine dietary choices with a concern for the environment. Employing a grounded theory approach, I conducted 18 in-depth life history interviews to identify key factors and mechanisms that, over the course of my interviewees' lives, steered them onto the path of pro-environmental food practices, and supported them in

maintaining these practices. I then drew implications of these findings for strategies that community-based food co-ops could use to encourage sustainable food practices in their membership community.

10.2 Key findings

In the first three sections that follow, I present key findings related to the first three research questions (see Chapters 4 and 5). In these sections, I also identify key challenges to developing specific capacities within food co-ops to encourage sustainable food consumption. This addresses the fourth research question. Finally, I summarise findings from the inquiry on behavioural influences on food consumption and its implications for sustainable food co-ops, which addresses the fifth research question (see Chapters 8 and 9).

10.2.1 Research Question One: Building a community of interest around the shared purpose of sustainable food consumption

The ethnographic case study of one co-op revealed a number of factors that distracted the co-op from prioritising its environmental goals. These included: the pressure to quickly expand customer base in order to survive commercially; variability of commitment to environmental objectives in the leadership team; diversity of concerns expressed by members; and lack of participation by a majority of members in trading at the co-op and in running its operations. Despite these constraints, the co-op offered a small range of products that were local or organic or had strong animal welfare credentials. Through its creative kitchen, which used produce nearing its use-by date as ingredients for ready-made meals, the co-op demonstrated an innovative way to reduce food waste at retail stores and generate revenues from it. It also took steps to reduce and reuse packaging and followed a strict recycling policy. The other four co-ops included maintained a clearer focus on offering sustainably sourced products, and this depended on: the commitment of their leadership team to prioritise environmental objectives over other concerns; recruiting members on the basis of their shared interest in environmental sustainability; and, making use of opportunities to reduce financial overheads by using low or free-of-cost institutional (eg. university), community (eg. school) or private (eg. a member's residence) spaces for their operations.

A food co-op's shared purpose may evolve as it adapts to the demands of its fluctuating membership as well as changing market conditions (Ronco 1974; Cox 1994). However, if financial constraints at a co-op are overbearing, for example, due to large operational overheads of paying rents and salaries, then the co-op may have to trade off some of its environmental sustainability goals to focus more on commercial viability. For instance, offering popular conventionally-produced food items in addition to sustainable options may help a co-op reach a wider customer base. As long as not all environmental goals are sacrificed for financial survival, a more inclusive approach might bring members not already initiated into pro-environmental practices into contact with those who are well versed in them, and create opportunities for social learning and behaviour change. However, this approach could reduce the ability of the co-op to concentrate its efforts on making environmentally sustainable options more affordable and accessible for concerned members. Also, disparate interests among members could be particularly difficult to manage in a democratic setup and some management decisions are likely to alienate certain sections of membership. On the other hand, when a co-op is started with a strict commitment to pro-environment principles, it might attract members seeking to fulfil their intention to practice sustainability and use the co-op's associative resources to bargain for better availability and price of sustainable food options. Such a co-op would be less likely to attract those without an environmental concern. Nevertheless, it can enhance the sustainability practice of those who had a favourable attitude towards sustainability but were constrained by their market environment in making sustainable food consumption a regular practice. Either way, every food co-op that wishes to promote pro-environmental consumption practices has to work out as a collective what its negotiable and non-negotiable set of principles are in order to direct its members' energies towards achieving goals that are aligned with those principles.

10.2.2 Research Question Two: Making sustainable food options more affordable and accessible

Two of the studied co-ops specifically made largely unsuccessful efforts to recruit members from low-income households. To varying degrees, the co-ops found that they could not satisfy this group's expectations on: price; range of products offered, especially, in the categories of processed and convenience foods; and in one case, convenience of shopping (concerning, among other things, limited options for collection and delivery). Within the range of products offered, co-ops found it easier to compete

on price with conventional shops in the category of fresh fruit and vegetables (including local, organic and non-organic) and some non-perishable wholefood items such as cereals, nuts and pulses that were bought in bulk by the co-op and sold as loose items to their customers. In one instance, fruit and vegetable boxes could be offered at very reasonable cost to a membership community that consisted largely of students and a few low-income households. In another instance, a small buying group chose to focus on sourcing sustainably produced non-perishable wholefoods and cupboard essentials as these options were not available in their community. Buying as a group directly from a co-operative wholesaler offered them more choice and savings, compared to purchasing individual items from independent retailers.

Co-ops with high overhead costs, and those operating in prime retail centres of cities, are unable to offer sustainable food at low cost. Instead, they may work towards making a greater variety of sustainable products easily available to their customers and usually cater to middle and higher income groups (Murtagh and Ward 2009; Zitcer 2015). Community-based co-ops, for the most part, lack the bargaining clout of large supermarkets to negotiate lower prices with suppliers. However, in some cases, co-ops have been successful in making fruit and vegetables available at reasonable prices to customers. Sourcing fresh produce from wholesalers and distributors appeared to be more efficient, both in terms of cost and administrative overhead, than sourcing from individual small producers. However, buying directly from farmers might have greater potential to reduce post-harvest food waste on farms (Stuart 2009). One of the co-ops included in this study demonstrated that below-market prices were achievable when farmers were able to directly sell produce that large supermarket buyers had rejected due to cosmetic blemishes. But systematic and consistent application of this strategy to both avoid food waste and make local fresh produce affordable required co-ordination between several co-ops. There was a need for some intermediate supply chain infrastructure that would enable co-ops and other independent retail stores to absorb the scale of edible produce that is diverted away from human consumption (Stuart 2009). Besides, consumer perceptions around the low-quality of unconventionally shaped produce would also need to be addressed. In the UK grocery sector there have been some positive efforts in this direction recently, such as the sale of 'wonky veg box' by the supermarket ASDA, and the promotion of this initiative on television by celebrity chef, Jamie Oliver (Smithers 2016).

10.2.3 Research Question Three: Engaging consistent participation from members

All the co-ops included in this study relied on member labour to keep operational costs down so as to offer products at reasonable prices. However, engaging a significant number of members to contribute time and labour remained a considerable challenge. Reported reasons for non-participation by members were primarily: lack of time and ability to fit volunteering into busy family and work schedules; not finding interesting avenues to participate; and, to a lesser extent, disenchantment with the management of the co-op. Additionally, in some cases, only up to one-fifth of the members consistently placed orders with their co-ops. Key reasons included: dissatisfaction with product range, quality and price; and, perceived inconvenience of buying food at the co-op compared to other retail options in the community. Moreover, reasons for not volunteering and not trading at the co-op were not mutually exclusive. Participation in purchasing and, especially volunteering, was also dependent upon how the co-ops met members' expectations regarding opportunities for social interaction and creating a sense of community, in addition to material incentives that participation would confer on members. Some evidence suggested that the size of membership and heterogeneity of concerns among members may also influence members' ability to build social ties with one another. Depending on the scale and nature of their operations, three co-ops, which were formally registered as businesses, used a mix of paid employees and volunteers to run their operations. Employing paid and skilled staff was considered important for improving the quality of service offered to members and customers. Only the university-based co-op as well as the small buying group relied exclusively on member volunteers, but even in these two cases the co-ops' operations were run by a tiny minority of its members.

Member participation is crucial to lowering costs and strengthening internal democracy for decision-making in community-based food co-ops (Ronco 1974; Zitcer 2015). In addition, opportunities for social exchange between members can be important for acquiring skills, developing shared understandings of co-op's values, and learning the translation of shared values into lifestyle practices (Lave and Wenger 1991). However, apart from offering an assortment of sustainable food choices, at most of the co-ops that were part of this study, I found little evidence of a systematic approach to organising events and activities, and devising learning and skill-building programmes to cultivate

and nurture in members the values and practices that were aligned with sustainable food consumption. To an extent, the absence of such an approach was itself a function of low member participation and volunteer support. Nevertheless, as Valentinov (2004) argues, since co-ops depend on social capital to achieve their objectives and maintain their distinct competitive advantage in the marketplace, it is imperative that they invest efforts in developing this capital. The nature of social capital available in the community and its suitability to the co-op's purposes cannot be taken for granted (Portes 1998). I was left wondering at the end of the ethnographic study about the possible strategies that sustainable food co-ops could adopt to engage members more effectively in pursuing environmentally friendly consumption practices. This motivated the desire to learn about factors and mechanisms that influence sustainable food choices among people who were already making those choices.

10.2.4 Research Question Five: Mechanisms of influence on sustainable food consumption practices

Life history accounts of 18 sustainable food practitioners (presented in Chapter 8) illuminated the specific ways in which factors such as the role of parents, friends and peers, positive and negative experiences related to the environment and natural habitat, information from books and other media, and participation in environmental groups, influenced interviewees' food choices over the course of their lives (see Figure 8.2 for an overview). Five mechanisms of influence were identified — direct experience, social learning, knowledge, facilitating contexts, and personal agency. To summarise:

1. A favourable attitude towards environmentally sustainable food consumption that is derived from direct experiences with aspects of the attitudinal object is a strong predictor of corresponding behaviour. Moreover, frequency of past behavioural action can be a good indicator of future behavioural action in similar contexts through the process of habit formation.
2. People model their behaviours after those with whom they form social relationships and who they respect and admire. Their behaviours are also likely to be influenced by what they perceive as socially acceptable behaviour in groups with which they identify.
3. Knowledge about the benefits of pro-environmental food consumption and ways to support this practice can enable the adoption of a sustainable diet. Furthermore, an

awareness and understanding of the positive linkages between sustainable diet and other issues one cares about can strengthen one's commitment to this diet.

4. Behavioural changes towards environmentally responsible food consumption become feasible when the contexts in which these changes happen facilitate the availability, affordability, and convenience to procure and prepare the desired food options. Both systems of provision and people with whom food practices are shared and co-ordinated can be important facilitators. Also, certain historical, political and geographical contexts over the course of lives may shape values that are supportive of sustainable food practices.
5. Finally, personal agency resulting from an enhanced sense of self-efficacy and a deep personal commitment to social and sustainability values can at times prevail over contextual constraints and confounding social norms to seize or create opportunities for environment-friendly food consumption practices.

Findings from life history interviews and analysis of the derived mechanisms of influence suggest a number of potential strategies for sustainable food co-ops to encourage pro-environmental food consumption practices (see Chapters 8 and 9). Some of those strategies are as follows:

- organising farm visits and fruit and vegetable picking;
- connecting and collaborating with local allotment groups and other food growing initiatives to enable food growing experiences;
- organising group excursions in nature such as hiking, camping, foraging, and picnics;
- sharing meals and recipes among members, and developing cooking skills, focused on using local and seasonal fresh produce;
- sharing responsibilities for waste management in the co-op;
- recruiting well-respected figures in the community as members;
- inviting subject matter experts who can create awareness about food and sustainability issues and connect them to other issues such as social justice, animal welfare and community concerns, which might hold greater salience for some members;
- developing skills in co-operative management;
- creating opportunities to involve children in learning-oriented activities;

- running book and video exchange clubs and film viewings on sustainable food and its attendant issues;
- designing store layout to make sustainable choices more visible and easy to access;
- improving convenience of trading with the co-op, in terms of product range, opening hours, location, and, ordering and delivery options;
- keeping overhead costs low by making use of community spaces, such as schools, libraries, places of worship, and community centres;
- co-ordinating with other co-ops to develop a consortium of regional-scale sustainable food co-ops that could leverage better buying power for their member co-ops to source local and seasonal fresh produce;
- co-ordinating with other co-ops to absorb produce rejected by supermarkets due to cosmetic blemishes to both reduce food waste and offer produce at below-market prices; and,
- working with other food co-ops to develop and share best practices for managing democratic participation and reducing overhead costs.

Many of these strategies can activate multiple mechanisms of influence. For example, when an individual has the opportunity to participate in a food growing activity with friends or role models, mechanisms of direct experience, social learning, and knowledge can all be activated. Furthermore, life history accounts of sustainable food practitioners suggest that multiple strategies will have to be pursued in tandem for best possible outcomes. Offering a variety of ways to engage with the co-op and its principles could attract and involve people with different interests. There is also potential to draw on complementary values of commitment to community, social justice and animal welfare, provided these values could be appropriately linked to environmental sustainability. As a counterexample, focusing only on community participation to obtain low prices or focusing on animal welfare to obtain free range meat without an attempt to reduce meat in the diet, could undermine the pursuit of environmental objectives.

In all, this study found that community-based food co-ops have the potential to empower groups of people to use their collective purchasing capacity to obtain sustainable food options, to the extent they were able to make use of the opportunities and overcome the challenges identified in this study, and with relevance to their specific contexts. Although a number of strategies can enable greater engagement and

participation of members and customers at these co-ops, participation is mostly limited to people who share the co-ops' values, who can afford the cost of products offered, and who have time at hand to participate in the co-ops' activities. The co-ops' success in encouraging sustainable food consumption thus depends on their ability to: foster a cohesive vision around sustainability and get members' buy-in for that vision; find the right mix of member and paid labour to keep fixed overhead costs down without reducing the standard of services; and at the same time, offer a convenient and affordable shopping experience. Moreover, community food co-ops can be spaces for experimentation and innovation in the field of sustainability practices, as exemplified by the conversion of potential food waste into revenue-generating ready meals at one of the co-ops included.

10.3 Limitations and future research directions

Reflecting on the research process, its findings and the methods used, I see some limitations of the current study that open up possible avenues for further research. First, four out of five co-ops selected for the case study were in an early phase (within the first three years) of their development. To an extent, this might explain the lack of a coherent approach at these co-ops to engage members more deeply with the co-ops' processes — not just operational processes but also social engagement processes that could be vital in developing commitment to the group and shared understandings of pro-environmental values and practices. Perhaps more time and experience would have enabled these co-ops to develop a more strategic approach to engaging participation from their members. Revisiting some of these co-ops could provide valuable insights about their development trajectories and learning around best practices for promoting sustainable food consumption in their communities. Second, in addition to evaluating the structural capacity and potential of food co-ops in promoting sustainable consumption, future research could measure actual diet-related behaviour change in the co-op's membership before and after joining the co-op. This research question would again be more relevant for co-ops that are at a more mature stage of their development and whose members have spent reasonable time participating in the co-ops. Third, community-based food co-ops can exist in various forms ranging from informal buying groups through community centre food hubs to registered businesses with a storefront. In this study, an in-depth exploration was only carried out for one of these forms. Further in-depth ethnographic studies on some of the other forms of community food

co-ops in practice could provide a better appreciation of their potential to encourage sustainable food practices. Finally, food co-ops are just one form of community-based initiative with potential to encourage sustainable food consumption. Their role as vehicles for changing food consumption patterns could be assessed further in comparison with other community initiatives such as community gardening, community agriculture and farmers markets.

To improve understanding of influences on sustainable food consumption, I have analysed life history accounts. This approach sacrifices sampling breadth for gains in depth. Future research might use factors of influence derived from this study in larger-scale quantitative surveys to assess the representativeness of findings. Such surveys might also explore associations between socio-demographic variables and various factors of influence. Also, since this research concentrated on residents in the UK, cultural variations in food preferences were not accounted for. It would be interesting to see whether similar findings are obtained across different cultures. Further, some research suggests that autobiographical accounts based on memory cannot be expected to capture all sources of influence. At times, people are not consciously aware of sources that influence their behaviour. For example, an experimental study examining the influence of social norms and other persuasion methods on energy conservation behaviour found that normative influence produced the greatest behaviour change, despite the fact that respondents rated normative messages as least motivating (Nolan et al. 2008). Hence, experimental research designs may be able to evaluate the comparative strength of specific factors of influence, both in individual food practice and in community settings such as sustainable food co-ops. Another limitation of this research was the lack of understanding it generated about barriers to sustainable food consumption. All interviewees had been engaged in sustainable food practices for some years. Therefore, the barriers they faced in meeting their own expectations of sustainable food consumption cannot be expected to represent the perceived range of barriers by people for whom sustainability is not yet a factor in making food choices. Policymakers and food co-op organisers would benefit from a more comprehensive understanding of the barriers to sustainable food consumption.

10.4 Key contributions and concluding thoughts

This study makes some important contributions to the knowledge on food co-ops and on factors that shape sustainable food consumption practices. First, it brings new evidence from the field of community-based consumer food co-ops in the UK to bear on discussions about community-based approaches to encourage pro-environmental behaviours. Given the dearth of attention to this form of community initiative in the academic literature on food co-ops (Calderwood and Davies 2014; Caraher et al. 2014) and alternative food networks (Zitcer 2015; Little et al. 2010), I explored the conditions under which community-based food co-ops can be effective in promoting environmentally responsible food consumption practices. The analysis of evidence centres mainly around the capacity of five co-ops to: develop a coherent vision; increase affordability; and engage participation. These themes are not new to co-op studies (cf. Ronco 1974; Hines 1976; Cox 1994; Freathy and Hare 2004). However, the unique contribution of this thesis is in analysing fresh evidence on community-based food co-ops and offering understandings of opportunities and challenges to developing capacities that are specifically relevant to promoting environmentally sustainable food consumption.

Additionally, this study identifies potential strategies to engage members and influence their pro-environmental food consumption behaviour at food co-ops by drawing on new evidence from the life histories of 18 environmentally-minded food practitioners. The life history approach to understanding influences on behaviour departs from previous studies on behavioural influences in important ways. Instead of mapping attitudes and values to food consumption behaviours, or analysing structural factors that constrain the performance of sustainable practices, this study uses life history accounts to turn the analytical focus on *formative processes* that contribute over the course of people's lives to the *sustained* performance of environmentally responsible food consumption practices. The identified mechanisms of influence (see Figure 9.1) shed new light on how attitudes, values, meanings and experiences supportive of sustainable food choices take root and then evolve over time. While previous studies using the life history approach have focused on discovering influences on general environmental concern (Hards 2012; Chawla 1998), this study's findings are specifically relevant to environmentally sustainable dietary practices.

Findings suggest that diet-related behavioural transformation needs to be conceptualised as a dynamic process rather than a moment of choice, where a host of factors, both cognitive and structural, combine to influence often over a long period of time. Importantly, this study challenges the simple and one-way causal relationship between attitudes and behaviours that is assumed by the dominant psychological models of behaviour (Fishbein and Ajzen 1975; Ajzen 1991; Stern et al. 1999). At times practices and experiences shape personal values. Besides, repeated performances may engender habits and routines that bypass cognitive deliberation altogether. Findings also suggest that using a life history approach can help uncover diverse contextual and historical influences on behavioural practices that may be missed in sociological studies that tend to place the current *performance* of practice at the centre of analysis (for examples, see Shove and Pantzar 2005; Evans 2012). While recognising the strength of social practice approaches in scrutinising the structural and material conditions of practices, I argue that attention to formative processes behind values that guide a diverse set of practices in individuals' lives can enhance our understanding of opportunities for behavioural transformation.

Finally, in analysing the evidence gathered in this research exercise, I have found it helpful to draw from studies across various disciplines to better understand mechanisms of influence that shape environmentally sustainable food consumption. There have been a few encouraging efforts recently to incorporate both cognitive and structural, individual and institutional, dimensions in making sense of environmentally significant behavioural practices (Darnton and Evans 2013; Southerton, McMeeking and Evans 2011; Whitmarsh, Seyfang, and O'Neill 2011). I believe there is room for greater dialogue between disciplines towards providing effective guidelines for policy and activist interventions in encouraging environmentally responsible behaviours. An important takeaway from this study is that single method intervention approaches to change dietary behaviour through policy mechanisms or community activism are unlikely to be effective. A number of factors can make a difference, and the approach from government and civil society has to be multifaceted and comprehensive. An impetus on a more joined-up approach in food policy that embraces the potential synergies between the environmental, health and social dimensions of food is required (Lang, Barling and Caraher 2009). Individuals' ability to act on pro-environmental intentions depends on the institutional frameworks and infrastructural networks that

make exercise of environmentally responsible choices feasible, i.e. accessible, convenient and affordable. Community-based approaches such as food co-ops can play a role, albeit a limited one, in encouraging behavioural changes through creating awareness, involving more participation in sustainability practices and experimenting with new and sustainable ways to organise the supply and demand elements of the food system.

Despite recent reductions in production-related carbon emissions in the UK, partly due to the economic recession and an offshoring of industrial production, increases in emissions from imported goods have more than negated these reductions. As a result, net GHG emissions have increased in the UK by nearly 10% since 1993 (Committee on Climate Change 2013). According to the latest IPCC report (2014a), global GHG emissions have also continued to increase in the period between 2000 and 2010, and are projected to increase further unless substantial mitigation measures are undertaken. Given the gravity of the challenges posed by climate change, it is imperative that we learn and apply effective and integrated solutions at technological, policy and individual levels. This research will, I hope, make a useful contribution to increasing understanding of viable approaches to encourage low-carbon food consumption practices.

Bibliography

Aarts, H., and Dijksterhuis, A. P. (2000). The automatic activation of goal-directed behaviour: The case of travel habit. *Journal of Environmental Psychology*, 20(1), 75-82.

Abrahamse, W., Steg, L., Vlek, C., and Rothengatter, T. (2005). A review of intervention studies aimed at household energy conservation. *Journal of Environmental Psychology*, 25(3), 273-291.

Adams, C. J. (1991). The sexual politics of meat. In: Jaggar, A. M. ed. *Living with contradictions. Controversies in feminist social ethics.* Boulder: Westview Press, pp. 548–557.

Aday, L. A. (1998). Designing and Conducting Health Surveys. *Journal for Healthcare Quality*, 20(3), 41-43.

AEA Technology. (2005). *The Validity of Food Miles as an Indicator of Sustainable Development*. London: Defra.

Aertsens, J., Mondelaers, K., Verbeke, W., Buysse, J., and Van Huylenbroeck, G. (2011). The influence of subjective and objective knowledge on attitude, motivations and consumption of organic food. *British Food Journal*, 113(11), 1353–1378.

Ajzen, I. (1985). From intentions to actions: A theory of planned behaviour. In: Kuhl, J., Beckman, J. eds. *Action-Control: From cognition to behaviour.* Heidelberg: Springer, pp. 11-39.

Ajzen, I. (2001). Nature and operation of attitudes. *Annual Review of Psychology*, 52(1), 27–58.

Ajzen, I., and Fishbein, M. (1980). *Understanding attitudes and predicting behavior*. Engelwood Cliffs: Prentice-Hall.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.

Ajzen, I., and Fishbein. M. (1977). Attitude-behavior relations: A theoretical analysis and review of empirical research. *Psychological Bulletin*, 84(5), 888-918.

Aldridge, S., Halpern, D. And Fitzpatrick, S. (2002). *Social Capital: A discussion paper.* London: Performance and Innovation Unit, Cabinet Office.

American Dietetic Association. (2009). Position of the American Dietetic Association and Dietitians of Canada: vegetarian diets. *Journal of the American Dietetic Association*, 109(7), 1262-1282.

Ampt, E. (2007). The Role of Behaviour Change in Reducing CO2 Emissions [Online]. *Proceedings of the 2nd International Conference on Sustainability Engineering and Science, Auckland, NZ, Feb 21-23, 2007*. Available from: http://www.nzsses.auckland.ac.nz/conference/2007/papers/AMPT-BehaviourChange.pdf [Accessed 10 October 2010].

Anable, J., and Gatersleben, B. (2005). All work and no play? The role of instrumental and affective factors in work and leisure journeys by different travel modes. *Transportation Research Part A: Policy and Practice,* 39(2), 163-181.

Anable, J., Lane, B. And Kelay, T. (2006). *An evidence base review of public attitudes to climate change and transport behaviour*. Final Report. London: Department for Transport.

Anderson, J. (2002). Researching Environmental Resistance: Working through Secondspace and Thirdspace Approaches. *Qualitative Research,* 2(3), 301-321.

Anderson, A., Wrieden, W., Tasker, S., and Gregor, A. (2008). Ready meals and nutrient standards: challenges and opportunities. *Proceedings of the Nutrition Society*, 67(OCE4), E223.

Armitage, C. J., and Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta–analytic review. *British Journal of Social Psychology*, 40(4), 471-499.

Armstrong, P. F. (1982). *The use of the life history method in social and educational research*. Newland Papers No. 7. University of Hull, Department of Adult Education.

Atkinson, P., and Hammersley, M. (1994). Ethnography and participant observation. In: Denzin, N. and Lincoln, Y. eds. *Handbook of qualitative research*. Thousand Oaks: Sage, pp. 248-261.

Audsley, E., Brander, M., Chatterton, J., Murphy-Bokern, D., Webster, C., Williams, A. (2009). *How low can we go? An assessment of greenhouse gas emissions from the UK food system and the scope to reduce them by 2050*. London: Food Climate Research Network and WWF UK.

Bacon, F. (1939). Novum organum. In: Burtt, E. A. .ed. *The English philosophers from Bacon to Mill*. New York: Random House, pp. 24-123. (Original work published in 1620).

Bagozzi, R., Gürnao-Canli, Z., and Priester, J. (2002). *The Social Psychology of Consumer Behaviour*. Buckingham: Open University Press.

Bamberg, S., and Schmidt, P. (2003). Incentives, morality, or habit? Predicting students' car use for university routes with the models of Ajzen, Schwartz, and Triandis. *Environment and Behavior*, 35(2), 264-285.

Bandura, A. (1973). Aggression: A Social Learning Analysis. Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1977a). *Social Learning Theory*. Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1977b). Self-efficacy: toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215.

Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, 44(9), 1175-1184.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52(1), 1-26.

Baumann, Z. (1998). *Work, consumerism and the new poor*. Maidenhead: Open University Press.

Baumeister, R. F., and Leary, M. R. (1995). The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497-529.

Baumeister, R. F., Dale, K. L., and Muraven, M. (2000). Volition and belongingness: Social movements, volition, self-esteem, and the need to belong. In: Stryker, S., Owens, T. J., and White, R. W. eds. *Self, identity, and social movements*. Minneapolis, MN: University of Minnesota Press, pp. 239-251.

Baumeister, R. F., Vohs, K. D., DeWall, C. N., and Zhang, L. (2007). How emotion shapes behavior: Feedback, anticipation, and reflection, rather than direct causation. *Personality and Social Psychology Review*, 11(2), 167-203.

Baur, A., and Haase, H. M. (2013). The influence of active participation and organisation in environmental protection activities on the environmental behaviour of pupils: study of a teaching technique. Environmental Education Research, 1-14. doi: 10.1080/13504622.2013.843645.

Bazalgette, L. (2012). *"Early childhood nutrition should be at the centre of public health policy…" For Starters*. London: DEMOS.

BBC News. (2012). Denmark to abolish tax on high-fat foods. *BBC* [Online], 10 November. Available from: http://www.bbc.co.uk/news/world-europe-20280863 [Accessed 12 August 2014].

BBC News. (2013). Saturated fat pledge 'a drop in the ocean'. *BBC* [Online]. 26 October. Available from: http://www.bbc.co.uk/news/health-24668937 [Accessed 4 September 2014].

Beardsworth, A., and Keil, T. (1997). *Sociology on the menu: An invitation to the study of food and society*. London: Routledge.

Beardsworth, A., Bryman, A., Keil, T., Goode, J., Haslam, C., and Lancashire, E. (2002). Women, men and food: the significance of gender for nutritional attitudes and choices. *British Food Journal*, 104(7), 470-491.

Beaulac, J., Kristjansson, E., and Cummins, S. (2009). A systematic review of food deserts, 1966-2007. *Preventing Chronic Disease*, 6(3), A105, 1-27.

Bechara, A., Damasio, H., Tranel, D., and Damasio, A. R. (1997). Deciding advantageously before knowing the advantageous strategy. *Science*, 275(5304), 1293-1295.

Becker, Gary S. (1976). *The Economic Approach to Human Behavior*. Chicago: University of Chicago Press.

Becker, H.S. (1967). Whose side are we on?. *Social Problems,* 14(3), pp. 239-247.

Benton, T. (2008). Environmental values and human purposes. *Environmental Values*, 17(2), 201-220.

Bernard, H. (2002). *Research methods in anthropology: Qualitative and quantitative approaches*. Lanham, MD: Altamira.

Bevington, D., and Dixon, C. (2005). Movement-Relevant Theory: Rethinking Social Movement Scholarship. *Social Movement Studies*, 4(3), 185–208.

Bickman, L. (1972). Environmental attitudes and actions. *Journal of Social Psychology*, 87(2), 323–324.

Birch, L. L. (1980). Effects of peer models' food choices and eating behaviors on preschoolers' food preferences. *Child Development*, 51(2), 489-496.

Birch, L. L. (1999). Development of food preferences. *Annual Review of Nutrition*, 19(1), 41-62.

Birch, L. L., McPhee, L., Shoba, B. C., Pirok, E., and Steinberg, L. (1987). What kind of exposure reduces children's food neophobia?: Looking vs. tasting. *Appetite*, 9(3), 171-178.

Birchall, J. (1997). *The International Cooperative Movement*. Manchester: Manchester University Press.

Birchall, J. (2003). *Rediscovering the cooperative advantage: poverty reduction through self- help*. Geneva: International Labor Organization.

Birchall, J. (2011). *People-Centred Businesses. Co-operatives, Mutuals and the Idea of Membership*. Basingstoke: Palgrave Macmillan.

Birchall, J., and Simmons, R. (2004a). What motivates members to participate in co-operative and mutual businesses? A theoretical model and some findings. *Annals of Public and Cooperative Economics*, 75(3), 465–495.

Birchall, J., and Simmons, R. (2004b). Creating and Supporting Co-operative Members in the West Midlands. *Journal of Co-operative Studies*, 37(1), 22-37.

Black, J. S., Stern, P. C., and Elworth, J. T. (1985). Personal and contextual influences on househould energy adaptations. *Journal of Applied Psychology*, 70(1), 3-21.

Blake, J. (1999). Overcoming the 'value-action gap' in environmental policy: tensions between national policy and local experience. *Local Environment*, 4(3), 257-278.

Blundell, T. (2004). *Turning the Tide: Addressing the Impact of Fisheries on the Marine Environment*. Twenty-fifth Report. Vol. 6392. London: The Stationery Office.

Boon, S. D., and Lomore, C. D. (2001). Admirer−celebrity relationships among young adults. *Human Communication Research*, 27(3), 432-465.

Bouma, G.D., Atkinson, G.B.J. and Dixon, B.R. (1995). *A handbook of social science research*. Oxford and New York: Oxford University Press.

Bourdieu, P. (1984). *Distinction: A social critique of the judgement of taste*. Cambridge, MA: Harvard University Press.

Bourdieu, P. (1986). The forms of capital. In: Richardson, J.G. ed. *Handbook of theory and research for the sociology of education.* New York: Greenwood, pp. 241–58.

Bradbury, S., and Middlemiss, L. (2014). The role of learning in sustainable communities of practice. *Local Environment*, 1-15. doi: 10.1080/13549839.2013.872091

Brand, K. (2010). Social Practices and Sustainable Consumption: Benefits and Limitations of a New Theoretical Approach. In: Gross, M., and Heinrichs, H. eds. *Environmental Sociology: European Perspectives and Interdisciplinary Challenges*. Heidelberg: Springer, pp. 217-236.

Branen, L., and Fletcher, J. (1999). Comparison of college students' current eating habits and recollections of their childhood food practices. *Journal of Nutrition Education*, 31(6), 304-310.

Brannen, J., Dodd, K., Oakley, A., and Storey, P. (1994). *Young People, Health and Family Life*. Buckingham: Open University Press.

Brown, B. J., and Hermann, J. R. (2005). Cooking classes increase fruit and vegetable intake and food safety behaviors in youth and adults. *Journal of Nutrition Education and Behavior*, 37(2), 104-105.

Brown, C. L., and Krishna, A. (2004). The skeptical shopper: A metacognitive account for the effects of default options on choice. *Journal of Consumer Research*, 31(3), 529-539.

Bryman, A. (2001). *Social Research Methods*. New York: Oxford University Press.

Buckingham, S. (2003). Allotments and community gardens: a DIY approach to environmental sustainability. In: Buckingham, S. and Theobald, K. eds. *Local Environmental Sustainability*. Cambridge: Woodhead Publishing Limited, pp. 195-212.

Bull, K. (@KateTPSfounder). (2013). 'Members meeting last night …'. *Twitter* [Online], 10 Jan 2013, 6:02 AM. Available from: https://twitter.com/KateTPSfounder/status/289371717774749696 [Accessed 12 March 2014].

Burgess, J., Harrison, C. M., and Limb, M. (1988). People, parks and the urban green: a study of popular meanings and values for open spaces in the city. *Urban Studies*, 25(6), 455-473.

Burgess, J., Harrison, C.M. and Filius, P. (1998). Environmental communication and the cultural politics of environmental citizenship. *Environment and Planning A*, 30(8), 1445-1460.

Burnard, P. (1994). The telephone interview as a data collection method. *Nurse Education Today*, 14(1), 67-72.

Cade, J., Upmeier, H., Calvert, C., and Greenwood, D. (1999). Costs of a healthy diet: analysis from the UK Women's Cohort Study. *Public Health Nutrition*, 2(04), 505-512.

Calderwood, E., and Davies, K. (2013a). Co-operatives in the Retail Sector: Can One Label Fit All?. *Journal of Co-operative Studies*, 46(1), 16–31.

Calderwood, E., and Davies, K. (2013b). Localism and the Community Shop. *Local Economy*, 28(3), 337-347.

Campbell-Arvai, V., Arvai, J., and Kalof, L. (2014). Motivating Sustainable Food Choices The Role of Nudges, Value Orientation, and Information Provision. *Environment and Behavior*, 46(4), 453-475.

Campbell, C. (1996). *The Myth of Social Action*. Cambridge: Cambridge University Press.

Campbell, D. T. (1975). Degrees of Freedom and the Case Study. *Comparative Political Studies*, 8(2), 178-193.

Campbell, D. T., and Stanley, J. C. (1966). *Experimental and Quasi-Experimental Designs for Research*. Chicago: Rand McNally.

Campbell, M. and Campbell, I. (2013). Allotment waiting lists in England 2013 [online]. Wirral and Corby: Transition Town West Kirby and The National Allotment Society. Available from: http://www.transitiontownwestkirby.org.uk/files/ttwk_nsalg_survey_2013.pdf [Accessed 10 August 2014]

Candel, M. J. (2001). Consumers' convenience orientation towards meal preparation: conceptualization and measurement. *Appetite*, 36(1), 15-28.

Caraher, M., Dixon, P., Lang, T., and Carr-Hill, R. (1998). Access to healthy foods: part I. Barriers to accessing healthy foods: differentials by gender, social class, income and mode of transport. *Health Education Journal*, 57(3), 191-201.

Caraher, M., Dixon, P., Felton, M., South, L., and Tull, A. (2002). *Making fruit and vegetables the easy choice: Report of a Five-a-day pilot project in Hastings and St Leonards, September 2000-August 2001*. London: Department of Health.

Caraher, M., Smith, J., and Machell, G. (2014). To Co-operate or not Co-operate: a Case Study of Food Co-ops in England. *Journal of Co-operative Studies*, 47(2), 6-19.

Carlsson-Kanyama, A. (1998). Climate change and dietary choices—how can emissions of greenhouse gases from food consumption be reduced?. *Food Policy*, 23(3), 277-293.

Carlsson-Kanyama, A., and González, A. D. (2009). Potential contributions of food consumption patterns to climate change. *The American Journal of Clinical Nutrition*, 89(5), 1704S-1709S.

Carolan, M. (2011). *The real cost of cheap food*. New York: Earthscan.

Carrigan, M., Szmigin, I., and Leek, S. (2006). Managing routine food choices in UK families: the role of convenience consumption. *Appetite*, 47(3), 372-383.

CASH (Consensus Action on Salt and Health). (2007). Salt in UK ready meals 45% lower than four years ago. *Consensus Action on Salt and Health* [Online], 23 November. Available from: See more at: http://www.actiononsalt.org.uk/news/surveys/2007/ready/index.html#sthash.ETxpr5Oo.dpuf [Accessed 16 May 2013].

CAT (Centre for Alternative Technology). (2010). *Zero Carbon Britain 2030: a new energy strategy*. The second report of the Zero Carbon Britain project. Machynlleth: Centre for Alternative Technology.

Caughey, J. L. (1984). *Imaginary social worlds*. Lincoln: University of Nebraska Press.

Caughey, J. L. (1994). Gina as Steven: The social and cultural dimensions of a media relationship. Visual Anthropology Review, 10(1), 126-135.

Celnik, D., Gillespie, L., and Lean, M. E. J. (2012). Time-scarcity, ready-meals, ill-health and the obesity epidemic. *Trends in Food Science and Technology*, 27(1), 4-11.

Chapple, A. (1999). The use of telephone interviewing for qualitiative research. *Nurse Researcher*, 6(3), 85-93.

Charles, N., and Kerr, M. (1988). *Women, Food and Families*. Manchester: Manchester University Press.

Charmaz, K. (2008). Grounded theory as an emergent Method. In: Hesse-Bilber, S. N. and Levy, P. eds. *Handbook of Emergent Methods*. New York: The Guilford Press, pp 155-172.

Chase, S.E. (2005). Narrative inquiry: multiple lenses, approaches, voices. In: Denzin, N.K., and Lincoln, Y.S. eds. *The Sage Handbook of Qualitative Research, third ed*. Thousand Oaks, CA: Sage, pp. 651–679.

Chatterton, P., and Pickerill, J. (2006). Notes Towards Autonomous Geographies: Creation, Resistance and Self-Management as Survival Tactics. *Progress in Human Geography*. 30(6), 730 - 746.

Chawla, L. (1998). Significant life experience revisited: a review of research on sources of environmental sensitivity. *Environmental Education Research*, 4(4), 369-382.

Chawla, L. (1999). Life paths into effective environmental action. *The Journal of Environmental Education*, 31(1), 15-26.

Cheung, S. F., Chan, D. K. S., and Wong, Z. S. Y. (1999). Reexamining the theory of planned behavior in understanding wastepaper recycling. *Environment and Behavior*, 31(5), 587-612.

Chiesura, A. (2004). The role of urban parks for the sustainable city. *Landscape and Urban Planning*, 68(1), 129-138.

Children's Food Trust. (2014). *Let's get cooking*. Available from: http://www.letsgetcooking.org.uk [Accessed 2 September 2014]

Cialdini, R. B. (1993). *Influence: Science and practice*. 3rd edition. New York: HarperCollins.

Cialdini, R. B., Kallgren, C. A., and Reno, R. R. (1991). A focus theory of normative conduct: A theoretical refinement and re-evaluation. In: Zanna, M. P. ed. *Advances in Experimental Social Psychology*. Vol. 24. London: Academic Press Limited, pp. 201–234.

Climate Change Act 2008 (UK) Chapter 27 [Online]. Available from: http://www.legislation.gov.uk/ukpga/2008/27 [Accessed 3 July 2013].

Cohen, A.P. (1982). *Belonging: identity and social organisation in British rural cultures*. Manchester: Manchester University Press.

Cohen, A.P. (1985). *The symbolic construction of community*. London: Tavistock.

Cole, G.D.H. (1944). *A Century of Co-operation*. London: G. Allen and Unwin for the Co-operative Union.

Coleman, J. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94(Supplement), S95-S120.

Coley, D., Howard, M. and Winter, M. (2009). Local food, food miles and carbon emissions: a comparison of farm shop and mass distribution approaches. *Food Policy*, 34(2), 150-155.

Collins, J., Thomas, G., Willis, R. and Wilsdon, J. (2003). *Carrots, sticks and sermons: influencing public behaviour for environmental goals*. London: DEMOS and Green Alliance.

Committee on Climate Change. (2013). *Reducing the UK's carbon footprint and managing competitiveness risks* [Online]. Available from: http://www.theccc.org.uk/publication/carbon-footprint-and-competitiveness/ [Accessed 5 October 2014].

Cooke, L. (2007). The importance of exposure for healthy eating in childhood: a review. *Journal of Human Nutrition and Dietetics*, 20(4), 294-301.

Co-operative Commission. (2001). *The Co-operative Advantage*. London: Co-operative Commission.

Co-operatives UK. (2015). *The UK co-operative economy 2015: an ownership agenda for Britain*. [Online]. Available from: http://www.uk.coop/economy2015/uk-co-operative-economy-2015-report [Accessed 12 January 2016].

Corner, A., and Randall, A. (2011). Selling climate change? The limitations of social marketing as a strategy for climate change public engagement. *Global Environmental Change*, 21(3), 1005-1014.

Costanzo, M., Archer, D., Aronson, E., and Pettigrew, T. (1986). Energy conservation behavior: The difficult path from information to action. *American Psychologist*, 41, 521–528.

Cote, S. and Healy, T. (2001). *The well being of nations. The role of human and social capital*. Paris: Organisation for economic Co-operation and Development.

Cotterill, R. (1983). Retail Food Cooperatives: Testing the 'Small Is Beautiful' Hypothesis. *American Journal of Agricultural Economics*, 65(1), 125– 130.

Cowley, S., Whittaker, K., Grigulis, A., Malone, M., Donetto, S., Wood, H., Morrow, E., and Maben, J. (2013). *Why Health Visiting? A review of the literature about key health visitor interventions, processes and outcomes for children and families* [Online]. London: National Nursing Research Unit, King's College London. Available from: http://www.kcl.ac.uk/nursing/research/nnru/publications/Reports/Why-Health-Visiting-NNRU-report-12-02-2013.pdf [Accessed 12 September 2014].

Cox, C. (1994). *Storefront Revolution: Food Co-Ops and the Counterculture*. New Brunswick: Rutgers University Press.

Craig, W. J. (2010). Nutrition concerns and health effects of vegetarian diets. *Nutrition in Clinical Practice*, 25(6), 613-620.

CRED (Center for Research on Environmental Decisions). (2009). *The Psychology of Climate Change Communication: A Guide for Scientists, Journalists, Educators, Political Aides, and the Interested Public*. New York: Columbia University, Center for Research on Environmental Decisions.

Crompton, T. (2010). *Common cause: The case for working with our cultural values*. Godalming: WWF-UK.

Cronbach, L. J. (1975). Beyond the two disciplines of scientific psychology. *American Psychologist*, 30(2), 116-127.

Crossley, N. (2003). From Reproduction to Transformation: Social Movement Fields and the Radical Habitus. *Theory, Culture and Society,* 20(6), 43-68.

Dake, K. (1991). Orienting dispositions in the perception of risk an analysis of contemporary worldviews and cultural biases. *Journal of Cross-cultural Psychology*, 22(1), 61-82.

Damasio, A. R. (1998). Emotion in the perspective of an integrated nervous system. *Brain Research Reviews*, 26(2), 83-86.

Damasio, A.R. (1994). *Descartes' Error: emotion, reason, and the human brain*. New York: Grosset/Putnam.

Darnton, A. (2004). *Driving Public Behaviours for Sustainable Lifestyles Report 2 of Desk Research commissioned by COI on behalf of Defra*. London: Defra.

Darnton, A., Brooks, M., Lucas, K. and Jones, J.E. (2006). *Promoting Pro-Environmental Behaviour: Existing Evidence to Inform Better Policy Making.* Summary Report. London: Defra.

Darnton, A., and Evans, D. (2013). *Influencing behaviours: A technical guide to the ISM tool*. Edinburgh: The Scottish Government.

Dasgupta, P. and Serageldin, I. (2001). *Social capital: a multifaceted perspective*. Washington DC: World Bank Publications.

Dave, J.M., An, L.C., Jeffery, R.W., and Ahluwalia, J.S. (2009). Relationship of attitudes toward fast food and frequency of fast-food intake in adults. *Behaviour and Psychology*, 16(6), 1164-1170.

Dawnay, E., and Shah, H. (2005). *Behavioural economics: seven principles for policy-makers*. London: New Economics Foundation.

de Bakker, E., and Dagevos, H. (2012). Reducing meat consumption in today's consumer society: questioning the citizen-consumer gap. *Journal of Agricultural and Environmental Ethics*, 25(6), 877-894.

de Boer, J., Schösler, H., and Boersema, J. J. (2013). Climate change and meat eating: An inconvenient couple?. *Journal of Environmental Psychology*, 33(Complete), 1-8.

de Groot, J. I., and Steg, L. (2008). Value Orientations to Explain Beliefs Related to Environmental Significant Behavior How to Measure Egoistic, Altruistic, and Biospheric Value Orientations. *Environment and Behavior*, 40(3), 330-354.

de Young, R. (1993). Changing behavior and making it stick: the conceptualization and management of conservation behavior. *Environment and Behavior*, 25(4), pp. 485-505.

de Young, R. (2000). Expanding and evaluating motives for environmentally responsible behavior. *Journal of Social Issues*, 56(3), pp. 509-526.

Defra [Letcher, M., Redgrove, Z., Roberts, S., Longstaff, B. and Inverarity, A.]. (2007). *Mobilising individual behavioural change through community initiatives: Lessons for climate change*. Final Report of study for Defra, CLG, HM Treasury, DTI and DfT. London: Defra.

Defra. (2008). *A framework for pro-environmental behaviours.* London: Defra

Defra. (2014). *A Plan for Public Procurement* [Online]. Available from: https://www.gov.uk/government/publications/a-plan-for-public-procurement-food-and-catering [Accessed 12 September 2014]

Defra. (2014). *Food Statistics Pocketbook - in year update*. London: The Stationery Office.

DeVault, M. (1991). *Feeding the Family: The Social Organization of Caring as Gendered Work*. Chicago, IL: Chicago University Press.

Dhar, R. (1996). The effect of decision strategy on deciding to defer choice. *Journal of Behavioral Decision Making*, 9(4), 265-281.

Diamantopoulos, A., Schlegelmilch, B., Sinkovics, R., and Bohlen, G. M. (2003). Can socio-demographics still play a role in profiling green consumers? A review of the evidence and an empirical investigation. *Journal of Business Research*, 56(6), 465–480.

Diamond, J. (1996). The Roots of Radicalism. *The New York Review of Books*, 14 November, 4-6.

Dibsdall, L. A., Lambert, N., Bobbin, R. F., and Frewer, L. J. (2003). Low-income consumers' attitudes and behaviour towards access, availability and motivation to eat fruit and vegetables. *Public Health Nutrition*, 6(02), 159-168.

Dietz, T., Fitzgerald, A., and Shwom, R. (2005). Environmental values. *Annual Review of Environment and Resources*, 30(Complete), 335-372.

Dietz, T., Stern, P. C., and Guagnano, G. A. (1998). Social structural and social psychological bases of environmental concern. *Environment and Behavior,* 30(4), 450-471.

Dimbleby, H. and Vincent, J. (2013). *The School Food Plan*. Independent report for the UK Department of Education. Available from: http://www.schoolfoodplan.com [Accessed 3 August 2014].

Dobson, B., Beardsworth, A., Keil, T., and Walker, R. (1994). *Diet, choice, and poverty: Social, cultural, and nutritional aspects of food consumption among low-income families*. London: Family Policy Studies Centre.

Douglas, M. And Isherwood, B. (1979). *The World of Goods: Towards an Anthropology of Consumption.* New York: W. W. Norton.

Douglas, M., and Wildavsky, A. (1982). *Risk and culture: an essay on the selection of technical and environmental danger*. Berkeley: University of California Press.

Dowler, E. (2008). Food and Health Inequalities: The Challenge for Sustaining Just Consumption. *Local Environment*,13(8), 759–72.

Dowler, E. (2002). Food and poverty in Britain: rights and responsibilities. *Social Policy and Administration*, 36(6), 698-717.

Downs, J. S., Loewenstein, G., and Wisdom, J. (2009). Strategies for promoting healthier food choices. *American Economic Review*, 99(2), 159-164.

Drewnowski, A. (2004). Obesity and the food environment: dietary energy density and diet costs. *American Journal of Preventive Medicine*, 27(3), 154-162.

Drewnowski, A., and Darmon, N. (2005). Food choices and diet costs: an economic analysis. *The Journal of Nutrition*, 135(4), 900-904.

Dreyfus, S. E. (2004). The five-stage model of adult skill acquisition. *Bulletin of Science, Technology and Society*, 24(3), 177-181.

Druckman, A. and Jackson, T., 2009. The carbon footprint of UK households 1990-2004: A socio-economically disaggregated, quasi-multi-regional input-output model. *Ecological Economics*, 68(7), 2066-2077.

DTI (Department of Trade and Industry). (2006). *The Energy Challenge. Energy Review Report*. London: The Stationery Office.

Dunlap, R. E., and Van Liere, K. D. (1978). The "new environmental paradigm". *The Journal of Environmental Education*, 9(4), 10-19.

Durlauf, S.N. (2002). On the empirics of social capital. *The Economic Journal*, 112(483), F459-F479.

Dwyer, W. O., Leeming, F. C., Cobern, M. K., Porter, B. E., and Jackson, J. M. (1993). Critical review of behavioral interventions to preserve the environment research since 1980. *Environment and Behavior*, 25(5), 275-321.

Eckstein, H. (2000). The case study and theory in political science. In: R. Gomm .ed. Case study method (pp.119-164). London: Sage.

EcoTeams. (2011). About us [Online]. Available from: http://www.ecoteams.org.uk/about-us [Accessed 4 May 2011].

Eden, S.E. (1993). Individual environmental responsibility and its role in public environmentalism. *Environment and Planning A*, 25, 1743-1758.

Edwards-Jones, G., Milà i Canals, L., Hounsome, N., Truninger, M., Koerber, G., Hounsome, B., Cross, P., York, E.H., Hospido, A., Plassmann, K., Harris, I.M., Edwards, R.T., Day, G.A.S., Tomos, A.D., Cowell, S.J., Jones, D.L. (2008). Testing the assertion that 'local food is best': the challenges of an evidence-based approach. *Trends in Food Science and Technology*, 19(5), 265-274.

Elliott, E., Parry, O., and Ashdown-Lambert, J. (2006). *Evaluation of Community Food Co-Ops Pilot in Wales* [Online]. Working Paper 85. Cardiff: Cardiff School of Social

Sciences, Cardiff University. Available from: http://www.cardiff.ac.uk/socsi/resources/wrkgpaper-85.pdf [Accessed 12 February 2012].

Engell, D., Kramer, M., Malafi, T., Salomon, M., and Lesher, L. (1996). Effects of effort and social modelling on drinking in humans. *Appetite*, 26(2), 129-138.

Epstein, L. H., Wing, R. R., Koeske, R., and Valoski, A. (1987). Long-term effects of family-based treatment of childhood obesity. *Journal of Consulting and Clinical Psychology*, 55(1), 91.

Erdogan, B. Z. (1999). Celebrity endorsement: a literature review. *Journal of Marketing Management*, 15(4), 291-314.

ESRC. (2010). *RCUK Energy Research Programme 'Energy and Communities' Call for Proposals* [Online]. Available from: http://www.eminnovation.org.uk/SchemeList.aspx [Accessed 15 March 2010].

Essential Trading. (2015). *Ethos - What* [Online]. Available from: http://www.essential-trading.co.uk/what.aspx [Accessed 1 November 2015].

European Commission. (2006). *Environmental Impact of Products (EIPRO): Analysis of the Life Cycle Environmental Impacts Related to the Total Final Consumption of the EU 25*. European Commission Technical Report EUR 22284 EN. Brussels: EC.

Evans, C. E. L., Greenwood, D. C., Thomas, J. D., and Cade, J. E. (2010). A cross-sectional survey of children's packed lunches in the UK: food-and nutrient-based results. *Journal of Epidemiology and Community Health*, 64(11), 977-983.

Evans, D. (2011). Blaming the consumer – once again: the social and material contexts of everyday food waste practices in some English households. *Critical Public Health*, 21(4), 429-440.

Evans, D. (2012). Beyond the throwaway society: Ordinary domestic practice and a sociological approach to household food waste. *Sociology*, 46(1), 41–58.

Evans, D., Campbell, H., and Murcott, A. (2013). *Waste matters: new perspectives of food and society*. Oxford: Wiley-Blackwell.

Evans, J. St. B. T. (1989). *Bias in human reasoning: causes and consequences*. Hillsdale, NJ: Erlbaum.

Fairbairn, B. (2006). *Cohesion, Adhesion, and Identities in Co-operatives*. Saskatchewan: Centre for the Study of Co-operatives.

Fairlie, S. (2010). *Meat: A Benign Extravagance*. White River Junction: Chelsea Green Publishing.

Fairtrade Foundation. (2015). *What is fairtrade?* [Online]. Available from: http://www.fairtrade.org.uk/en/what-is-fairtrade [Accessed 1 November 2015].

FAO. (2006). *Livestock's Long Shadow*. Rome: Food and Agriculture Organization

FAO. (2009). *The state of world fisheries and aquaculture 2008*. Rome: Food and Agriculture Organization.

FAO and Bioversity International. (2010). *Final Document: International Scientific Symposium: Biodiversity and Sustainable Diets - United against Hunger. 3-5 November 2010* [Online]. Available from: http://www.fao.org/ag/humannutrition/23781-0e8d8dc364ee46865d5841c48976e9980.pdf [Accessed 10 September 2015].

FAO [Gerber, P.J., Steinfeld, H., Henderson, B., Mottet, A., Opio, C., Dijkman, J., Falcucci, A. and Tempio, G]. (2013). *Tackling climate change through livestock – A global assessment of emissions and mitigation opportunities*. Rome: Food and Agriculture Organization.

Fazio, R. H. (1989). On the power and functionality of attitudes: The role of attitude accessibility. In: Pratkanis, A. R., Breckler, S. J., and Greenwald, A. G. eds. *Attitude structure and function*. Hillsdale, NJ: Erlbaum, pp. 153–179.

Fazio, R. H., and Williams, C. J. (1986). Attitude accessibility as a moderator of the attitude–perception and attitude–behavior relations: An investigation of the 1984 presidential election. *Journal of Personality and Social Psychology*, 51(3), 505–514.

Fazio, R. H., and Zanna, M. P. (1978). Attitudinal qualities relating to the strength of the attitude-behavior relationship. *Journal of Experimental Social Psychology*, 14(4), 398-408.

Fazio, R. H., and Zanna, M. P. (1978). On the predictive validity of attitudes: The roles of direct experience and confidence. *Journal of Personality*, 46(2), 228-243.

Fazio, R. H., and Zanna, M. P. (1981). Direct experience and attitude-behavior consistency. In: Berkowitz, L. ed. *Advances in Experimental Social Psychology*. Vol. 14. New York: Academic Press, pp. 161-202.

Feenstra, G. (2002). Creating space for sustainable food systems: Lessons from the field. *Agriculture and Human Values*, 19(2), 99-106.

Ferris, J., Norman, C., and Sempik, J. (2001). People, land and sustainability: Community gardens and the social dimension of sustainable development. *Social Policy and Administration*, 35(5), 559-568.

Festinger, L. ed. (1964). *Conflict, decision, and dissonance*. Vol. 3. Palo Alto: Stanford University Press.

Fiddes, N. (1991). *Meat: a natural symbol*. New York, NY: Routledge.

Fieldhouse, J. (2003). The impact of an allotment group on mental health clients' health, wellbeing and social networking. *The British Journal of Occupational Therapy*, 66(7), 286-296.

Finger, M. (1994). From knowledge to action? Exploring the relationships between environmental experiences, learning, and behavior. *Journal of Social Issues*, 50(3), 141–160.

Firth, C., Maye, D., and Pearson, D. (2011). Developing "community" in community gardens. *Local Environment*, 16(6), 555-568.

Fishbein, M. and Ajzen, I. (1975). *Belief, attitude, intention and behavior*. Reading, Mass.: Addison-Wesley.

Flacks, R. (2004). Knowledge For What? Thoughts on the State of Social Movements. In: Goodwin, J., and Jasper, J. eds. *Rethinking Social Movements: Structure, Culture, and Emotion*. Landham, USA: Rowman and Littlefield, pp. 135-153.

Flyvbjerg, B. (2001). *Making social science matter: Why social inquiry fails and how it can succeed again*. Cambridge: Cambridge University Press.

Flyvbjerg, B. (2006). Five misunderstandings about case-study research. *Qualitative Inquiry*, 12(2), 219-245.

Folke, C., Jansson, A., Larsson, J., and Costanza, R. (1997). Ecosystem Appropriation by Cities. *Ambio*, 26(3), 167–172.

Food Standards Agency. (2007). Low Income Diet and Nutrition Survey. Executive Summary. London: The Stationery Office.

Fox, N., and Ward, K. (2008). Health, ethics and environment: a qualitative study of vegetarian motivations. *Appetite*, 50(2), 422-429.

Francis, P. (2004). *The impact of UK households on the environment through direct and indirect generation of greenhouse gases*. London: Office for National Statistics.

Freathy, P. (2003). The role of voluntary food co-operatives in the retail marketplace: some theoretical considerations. *The International Review of Retail, Distribution and Consumer Research*, 13(4), 423-434.

Freathy, P., and Hare, C. (2004). Retailing in the Voluntary Sector: the Role of the Scottish Food Co-operatives. *European Journal of Marketing*, 38(11/12), 1562-1576.

Fredericks Foundation. (2012). *The People's Supermarket Update* [Online]. Available from: http://www.fredericksfoundation.org/news/the-peoples-supermarket-update [Accessed 1 June 2013].

French, S. A., and Wechsler, H. (2004). School-based research and initiatives: fruit and vegetable environment, policy, and pricing workshop. *Preventive Medicine*, 39(Supplement 2), 101-107.

Friel, S., Dangour, A.D., Garnett, T., Lock, K., Chalabi, Z., Roberts, I., Butler, A., Butler, C.D., Waage, J. And McMichael, A.J. (2009). Public health benefits of strategies to reduce greenhouse-gas emissions: food and agriculture. *The Lancet*, 374(9706), 2016-2025.

Fung, T. T., Schulze, M., Manson, J. E., Willett, W. C., and Hu, F. B. (2004). Dietary patterns, meat intake, and the risk of type 2 diabetes in women. *Archives of Internal Medicine*, 164(20), 2235-2240.

Gable, S., and Lutz, S. (2001). Nutrition socialization experiences of children in the Head Start program. *Journal of the American Dietetic Association*, 101(5), 572-577.

Gabriel, Y. and Lang, T. (1995). *The unmanageable consumer: Contemporary consumption and its fragmentations*. London: Sage.

Garbett, R., and Mccormack, B. (2001). The experience of practice development: an exploratory telephone interview study. *Journal of Clinical Nursing*, 10(1), 94-102.

Gardner, G.T. and Stern, P.C. (1996). *Environmental problems and human behavior*. Needham Heights, MA: Allyn and Bacon.

Gardner, M. (1957). *Fads and fallacies in the name of science*. New York, NY: Dover.

Garnett, T. (2003). *Wise Moves: Exploring the relationship between food, transport and CO2*. London: Transport 2000 Trust.

Garnett, T. (2011). Where are the best opportunities for reducing greenhouse gas emissions in the food system (including the food chain)?. *Food Policy*, 36(Supplement 1), S23-S32.

Garnett, T., (2008). *Cooking up a storm: food, greenhouse gas emissions and our changing climate*. Guildford: Food Climate Research Network, Centre for Environmental Strategy, University of Surrey.

Garnett, T., (2009). Livestock-related greenhouse gas emissions: impacts and options for policy makers. *Environmental Science and Policy*, 12 (4), 491–503.

Garvill, J., Marell, A., and Nordlund, A. (2003). Effects of increased awareness on choice of travel mode. *Transportation*, 30(1), 63-79.

Gatersleben, B., Steg, L., Vlek, C. (2002). Measurement and determinants of environmentally significant consumer behaviour. *Environment and Behaviour*, 34(3), 335–362.

Geller, E. S. (1981). Evaluating energy conservation programs: Is verbal report enough? *Journal of Consumer Research*, 8(3), 331–335.

Gerbens-Leenes, W., and Nonhebel, S. (2005). Food and land use. The influence of consumption patterns on the use of agricultural resources. *Appetite*, 45(1), 24-31.

Gere, J., and MacDonald, G. (2010). An update of the empirical case for the need to belong. *Journal of Individual Psychology*, 66(1), 93-115.

Gerrish, C. J., and Mennella, J. A. (2001). Flavor variety enhances food acceptance in formula-fed infants. *The American Journal of Clinical Nutrition*, 73(6), 1080-1085.

Gertner, J. (2009). Why isn't the brain green?. *New York Times* [Online]. 19 April. Available from: http://www.nytimes.com/2009/04/19/ magazine/19Science-t.html [Accessed 12 November 2013].

Giddens, A. (1984). *The Constitution of Society - outline of the theory of structuration*. Berkeley and Los Angeles: University of California Press.

Giddens, A. (1991). *Modernity and self-identity*. Cambridge: Polity Press.

Gille, Z. (2013). From risk to waste: global food waste regimes. In: Evans, D., Campbell, H., and Murcott, A. eds. *Waste matters: new perspectives of food and society*. Oxford: Wiley-Blackwell, pp. 27-46.

Gillham, B. (2005). *Research interviewing: The range of techniques*. Berkshire: Open University Press.

Gintis, H. (2007). A Framework for the Integration of the Behavioral Sciences. *Behavioral and Brain Sciences*, 30(1), pp. 1-16.

Glaser, B., and Strauss, A. (1967). *The Discovery of Grounded Theory*. Chicago: Aldine.

Glaser, B. (1978). *Theoretical Sensitivity*. Mill Valley, CA: Sociology Press.

Glaser, B. (1992). *Emergence v Forcing Basics of Grounded Theory Analysis*. Mill Valley, CA: Sociology Press.

Glaser, B. (1998). Doing Grounded Theory: Issues and Discussion. Mill Valley, CA: Sociology Press.

Glasman, L. R., and Albarracín, D. (2006). Forming attitudes that predict future behavior: a meta-analysis of the attitude-behavior relation. *Psychological Bulletin*, 132(5), 778-822.

Gonzales, V. A. (2010). A different kind of social enterprise: social cooperatives and the development of civic capital in Italy. *Community Development*, 41(1), 50–75.

Gotschi, E., Vogel, S., Lindenthal, T., & Larcher, M. (2009). The role of knowledge, social norms, and attitudes toward organic products and shopping behavior: Survey results from high school students in Vienna. *The Journal of Environmental Education*, 41(2), 88-100.

Government Office for Science. (2007). *Foresight. Tackling obesities: future choices – summary of key messages*. London: Department for Innovation, Universities and Skills.

Granovetter, M. S. (1973). The strength of weak ties. *The American Journal of Sociology*, 78(6), 1360-1380.

Gronow, J., and A. Warde. (2001). *Ordinary consumption*. London: Routledge.

Grusec, J.E. (1992). Social learning theory and developmental psychology: The legacies of Robert Sears and Albert Bandura. *Developmental Psychology*, 28(5), 776-786.

Guagnano, G. A., Stern, P. C., and Dietz, T. (1995). Influences on attitude-behavior relationships: a natural experiment with curbside recycling. *Environment and Behavior*, 27(5), 699-718.

Gura, S. (2010). Industrial livestock production and biodiversity. In: D'Silva, J., and Webster, J. eds. *The Meat Crisis: Developing More Sustainable Production and Consumption*. London: Earthscan, pp. 57-79.

Guthrie, J., Guthrie, A., Lawson, R., and Cameron, A. (2006). Farmers' markets: the small business counter-revolution in food production and retailing. *British Food Journal*, 108(7), 560-573.

Eysenck, H. J. (1976). Introduction. In: Eysenck, H. J. ed. *Case Studies in Behaviour Therapy.* London: Routledge and Kegan Paul, pp. 1-17.

Haan, G. D. (2007). Bildung für nachhaltige Entwicklung als Handlungsfeld [Education for Sustainable Development as Action Field]. *Praxis Geographie*, 37(9), 4–9.

Halkier, B. (2009). Suitable cooking? Performances and positions in cooking practices among Danish women. *Food, Culture and Society*, 12(3), 357–377.

Halpern, D., Bates, C., Beales, G., Heathfield, A. (2004). *Personal responsibility and changing behaviour: the state of knowledge and its implications for public policy*. London: Cabinet Office, Prime Minister's Strategy Unit.

Haluza-Delay, R. (2008). A Theory of Practice for Social Movements: Environmentalism and Ecological Habitus. *Mobilization: An International Quarterly*, 13(2), 205-218.

Hanks, A. S., Just, D. R., Smith, L. E., and Wansink, B. (2012). Healthy convenience: nudging students toward healthier choices in the lunchroom. *Journal of Public Health*, 34(3), 370-376.

Hannon, P. A., Bowen, D. J., Moinpour, C. M., and McLerran, D. F. (2003). Correlations in perceived food use between the family food preparer and their spouses and children. *Appetite*, 40(1), 77-83.

Hansen, J. W., Marx, S. M., and Weber, E. U. (2004). *The Role of Climate Perceptions, Expectations, and Forecasts in Farmer Decision Making: The Argentine Pampas and South Florida*. Technical Report 04–01. Palisades, NY: International Research Institute for Climate Prediction (IRI).

Hards, S. (2012). Tales of transformation: The potential of a narrative approach to pro-environmental practices. *Geoforum*, 43(4), 760-771.

Hardisty, D. J., and Weber, E. U. (2009). Discounting future green: money versus the environment. *Journal of Experimental Psychology: General*, 138(3), 329-340.

Hargreaves, T., Nye, M. and Burgess, J. (2008). Social experiments in sustainable consumption: an evidence-based approach with potential for engaging low-income communities. *Local Environment*, 13(8), 743-758.

Hayes, B.C. and Marangudakis, M. (2001). Religion and attitudes towards nature in Britain. *British Journal of Sociology*, 52 (1), 139–155.

Hawkins, G. (2013). The performativity of food packaging: market devides, waste crisis and recycling. In: Evans, D., Campbell, H., and Murcott, A. eds. *Waste matters: new perspectives of food and society*. Oxford: Wiley-Blackwell, pp. 66-83.

Heath, H., and Cowley, S. (2004). Developing a grounded theory approach: a comparison of Glaser and Strauss. *International Journal of Nursing Studies*, 41(2), 141-150.

Hedenus, F., Wirsenius, S., and Johansson, D. J. (2014). The importance of reduced meat and dairy consumption for meeting stringent climate change targets. Climatic Change, 124(1-2), 79-91.

Hendy, H. M. (1999). Comparison of five teacher actions to encourage children's new food acceptance. *Annals of Behavioral Medicine*, 21(1), 20-26.

Hendy, H. M., and Raudenbush, B. (2000). Effectiveness of teacher modeling to encourage food acceptance in preschool children. *Appetite*, 34(1), 61-76.

Henrich, J., Boyd, R., Bowles, S., Camerer, C., Fehr, E., Gintis, H., ... and Tracer, D. (2005). “Economic man” in cross-cultural perspective: Behavioral experiments in 15 small-scale societies. *Behavioral and Brain Sciences*, 28(06), 795-815.

Hinchliffe, S. (1996). Helping the earth begins at home: The social construction of socio-environmental responsibilities. *Global Environmental Change*, 6(1), 53-62.

Hines, C. (1976). *Food co-ops: How to Save Money by Getting Together and Buying in Bulk*. London: Friends of the Earth.

Hines, J.M., Hungerford, H.R. and Tomera, A.N. (1986-87). Analysis and synthesis of research on responsible pro-environmental behavior: a meta-analysis, *The Journal of Environmental Education*, 18(2), 1–8.

Hitchman, C., Christie, I., Harrison, M., and Lang, T. (2002). *Inconvenience food*. London: DEMOS.

Hitlin, S., and Long, C. (2009). Agency as a sociological variable: A preliminary model of individuals, situations, and the life course. *Sociology Compass*, 3(1), 137-160.

HM Government. (2005). *Securing the Future. The UK Government Sustainable Development Strategy*. London: The Stationery Office.

Hobson, K. (2004). Sustainable Consumption in the United Kingdom: The "Responsible" Consumer at "Arm's Length". *Journal of Environment and Development*, 13(2), 121-139.

Hodgson, G. M. (2012). On the limits of rational choice theory. *Economic Thought*, 1(1), 94-108.

Hodgson, J. A., Kunin, W. E., Thomas, C. D., Benton, T. G., and Gabriel, D. (2010). Comparing organic farming and land sparing: optimizing yield and butterfly populations at a landscape scale. *Ecology Letters*, 13(11), 1358-1367.

Hohenadel, K. (2015). Groceries Often Reject Ugly Carrots and Grotesque Apples. This Campaign Celebrates Them. *Slate*, 18 May 2015. Available from: http://www.slate.com/blogs/the_eye/2015/05/18/inglorious_fruits_and_vegetables_is_a_clever_campaign_to_reduce_food_waste.html [Accessed 21 September 2015].

Hollway, W., and Jefferson, T. (2000). *Doing Qualitative Research Differently: Free Association, Narrative and the Interview Method*. London: Sage.

Holyoake, G.J. (1908). *The History of Co-operation*. London: T. Fisher Unwin.

Hopkins, R. (2008). *The Transition Handbook: From Oil Dependency to Local Resilience*. Totnes: Green Books.

Hopper, J. R., and Nielsen, J. M. (1991). Recycling as altruistic behavior: normative and behavioral strategies to expand participation in a community recycling program. *Environment and Behavior*, 23(2), 195-220.

Howell, R. A. (2013). It's not (just) "the environment, stupid!" Values, motivations, and routes to engagement of people adopting lower-carbon lifestyles. *Global Environmental Change*, 23(1), 281-290.

Howes, M. (2005). *Politics and the Environment: Risk and the Role of Government and Industry*. London: Earthscan.

Hsu, S. J. (2009). Significant life experiences affect environmental action: A confirmation study in eastern Taiwan. *Environmental Education Research,* 15(4), 497-517.

Hughner, R. S., McDonagh, P., Prothero, A., Shultz, C. J., and Stanton, J. (2007). Who are organic food consumers? A compilation and review of why people purchase organic food. *Journal of Consumer Behaviour*, 6(2–3), 94-110.

Hunt, J. R. (2002). Moving Toward a Plant–based Diet: Are Iron and Zinc at Risk?. *Nutrition Reviews*, 60(5), 127-134.

Hyland, A., Wakefield, M., Higbee, C., Szczypka, G., and Cummings, K. M. (2006). Anti-tobacco television advertising and indicators of smoking cessation in adults: a cohort study. *Health Education Research*, 21(3), 348-354.

International Cooperative Alliance (ICA). (2008). *Declaration. 86th ICA International Co-operative Day. 14th UN International Day of Cooperatives (5 July 2008)*. [Online]. Available from: http://ica.coop/en/media/library/declaration/international-day-co-operatives-2008 [Accessed 5 October 2015].

ICA. (2013a). *Blueprint for a Co-Operative Decade [Online]. Geneva: International Co-operative Alliance*. Available from: http://ica.coop/en/publications/blueprint-co-operative-decade [Accessed 15 August 2014].

ICA. (2013b). *Co-Operatives And Sustainability: An Investigation Into The Relationship. Geneva: International Co-operative Alliance*. [Online]. Available from: http://ica.coop/sites/default/files/attachments/Sustainability%20Scan%202013-12-17%20EN_0.pdf [Accessed 15 August 2014].

ICA. (2015a). *Co-operative identity, values & principles*. [Online]. Available from: http://ica.coop/en/whats-co-op/co-operative-identity-values-principles [Accessed 14 September 2015].

ICA. (2015b). *Co-operative Facts & Figures*. [Online]. Available from: http://ica.coop/en/whats-co-op/co-operative-facts-figures [Accessed 14 September 2015].

ICA. (2015c). *Co-operatives: a solid lever to take on climate challenge*. [Online]. Available from: http://ica.coop/en/media/news/co-operatives-solid-lever-take-climate-challenge [Accessed 15 January 2015].

ICA. (2015d). *Guidance Notes to the Co-operative Principles*. [Online]. Available from: http://ica.coop/en/blueprint-themes/identity/guidancenotes [Accessed 15 December 2015].

Ife, J. (1995). *Community development: Creating community alternatives-vision, analysis and practice*. Melbourne: Longman.

Ilea, R. C. (2009). Intensive livestock farming: Global trends, increased environmental concerns, and ethical solutions. *Journal of Agricultural and Environmental Ethics,* 22(2), 153-167.

Infinity Foods Co-operative Ltd. (2015). *Our Beliefs?* [Online]. Available from: http://www.infinityfoodswholesale.co.uk/about/our_beliefs/ [Accessed 2 November 2015].

Inglehart, R. (1977). *The silent revolution.* Vol. 8. Princeton: Princeton University Press.

Inglehart, R. (1990). *Culture shift in advanced industrial society*. Princeton: Princeton University Press.

ILO (International Labour Organization). (2002). *R193 - Promotion of Cooperatives Recommendation* [Online]. Geneva: International Labour Organization. Available from: http://www.ilo.org/ilolex/cgi-lex/convde.pl?R193 [Accessed 15 August 2014].

IPCC (Intergovernmental Panel on Climate Change). (2014a). Summary for Policymakers. In: Edenhofer, O., Pichs-Madruga, R., Sokona, Y., Farahani, E., Kadner, S., Seyboth, K., Adler, A., Baum, I., Brunner, S., Eickemeier, P., Kriemann, B., Savolainen, J., Schlömer, S., von Stechow, C., Zwickel, T., and Minx, J.C. eds. *Climate Change 2014, Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge and New York: Cambridge University Press.

IPCC (Intergovernmental Panel on Climate Change). (2014b). Chapter 11: Agriculture, Forestry and Other Land Use (AFOLU). In: Smith, P., and Bustamante, M. eds. *Climate Change 2014, Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge and New York: Cambridge University Press.

IPCC (Intergovernmental Panel on Climate Change). (2007). Climate change 2007: the physical science basis, summary for policy makers. Geneva: IPCC Secretariat.

IPPR (Institute for Public Policy Research) and London Borough of Camden. (2006). *Sticking Together: Social capital and local government*. London: Institute for Public Policy Research.

IPPR (Institute for Public Policy Research). (2009). *Consumer Power: how the public thinks lower-carbon behaviour could be made mainstream*. London: Institute for Public Policy Research.

Irvine, A. (2011). Duration, dominance and depth in telephone and face-to-face interviews: A comparative exploration. *International Journal of Qualitative Methods*, 10(3), 202-220.

Irwin, J. R., and Baron, J. (2001). Response mode effects and moral values. *Organizational Behavior and Human Decision Processes*, 84(2), 177-197.

Jabs, J., and Devine, C. M. (2006). Time scarcity and food choices: an overview. *Appetite*, 47(2), 196-204.

Jackson, T. (2005). *Motivating Sustainable Consumption: a report to the Sustainable Development Research Network*. Guildford: Centre for Environmental Strategy, University of Surrey.

Jensen, B. B. (2002). Knowledge, action and pro-environmental behaviour. *Environmental Education Research*, 8(3), 325-334.

Johnson, A.G. (2000). *The Blackwell dictionary of sociology: a user's guide to sociological language*. Oxford: Wiley-Blackwell.

Johnson, E. J., and Goldstein, D. (2003). Do defaults save lives? *Science*, 302(5649), 1338-1339.

Just, D. R., and Payne, C. R. (2009). Obesity: can behavioral economics help?. *Annals of Behavioral Medicine*, 38(Supplement 1), 47-55.

Just, D. R., and Wansink, B. (2009). Smarter lunchrooms: using behavioral economics to improve meal selection. *Choices*, 24(3), 1-7.

Kagel, J. H. and Roth, A. E. eds. (1995). *Handbook of experimental economics*. Princeton: Princeton University Press.

Kahan, D. M., Braman, D., Slovic, P., Gastil, J., and Cohen, G. L. (2007). *The second national risk and culture study: Making sense of — and making progress in — the American culture war of fact* [Online]. GWU Legal Studies Research Paper No. 370; Yale Law School, Public Law Working Paper No. 154; GWU Law School Public Law Research Paper No. 370; Harvard Law School Program on Risk Regulation Research Paper No. 08-26. Available at: http://dx.doi.org/10.2139/ssrn.1017189 [Accessed 23 July 2014].

Kahneman, D., and Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47(2), 363-391.

Kahneman, D., Knetsch, J., and Thaler, R. H. (1991). Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias. *Journal of Economic Perspectives*, 5(1), 193-206.

Kaimowitz, D., Mertens, B., Wunder, S., and Pacheco, P. (2004). *Hamburger connection fuels Amazon destruction*. Technical Report [Online]. Bogor: Center for International Forest Research (CIFOR). Available from: http://www.cifor.cgiar.org/publications/pdf_files/media/Amazon.pdf [Accessed 20 November 2013].

Kaiser, F. G., and Keller, C. (2001). Disclosing situational constraints to ecological behavior: A confirmatory application of the mixed Rasch model. *European Journal of Psychological Assessment*, 17(3), 212-221.

Kallgren, C. A., and Wood, W. (1986). Access to attitude-relevant information in memory as a determinant of attitude-behavior consistency. *Journal of Experimental Social Psychology*, 22(4), 328-338."

Kals, E., Schumacher, D., and Montada, L. (1999). Emotional affinity toward nature as a motivational basis to protect nature. *Environment and Behavior*, 31(2), 178-202.

Kaplan, S. (2000). Human nature and environmentally responsible behavior. *Journal of Social Issues*, 56(3), 491-508.

Karp, D. G. (1996). Values and their effect on pro-environmental behavior. *Environment and Behavior*, 28(1), 111-133.

Kavanaugh, K., and Ayres, L. (1998). "Not as bad as it could have been": Assessing and mitigating harm during research interviews on sensitive topics. *Research in Nursing & Health*, 21(1), 91-97.

Kawachi, I., Kennedy, B.P., Lochner, K. and Prothrow-Stith, D. (1997). Social capital, income inequality, and mortality. *American Journal of Public Health*, 87(9), 1491-1498.

King, M. M., and Multon, K. D. (1996). The effects of television role models on the career aspirations of African American junior high school students. *Journal of Career Development*, 23(2), 111-125.

Kneafsey, M., Holloway, L., Cox, R., Dowler, E., Venn, L., and Tuomainen, H. (2008). *Reconnecting consumers, producers and food: Exploring alternatives*. Oxford: Berg.

Knupfer, A. M. (2013). *Food Co-Ops in America: Communities, Consumption, and Economic Democracy*. Ithaca: Cornell University Press.

Knutsen, S. F., and Knutsen, R. (1991). The Tromsø Survey: the Family Intervention study — the effect of intervention on some coronary risk factors and dietary habits, a 6-year follow-up. *Preventive Medicine*, 20(2), 197-212.

Kollmuss, A. and Agyeman, J. (2002). Mind the Gap: Why do people act environmentally and what are the barriers to pro-environmental behavior? *Environmental Education Research*, 8(3), 239–260.

Kramer, K. J., Moll, H. C., Nonhebel, S., and Wilting, H. C. (1999). Greenhouse gas emissions related to Dutch food consumption. *Energy Policy*, 27(4), 203-216.

Kraus, S. J. (1995). Attitudes and the prediction of behavior: A meta-analysis of the empirical literature. *Personality and Social Psychology Bulletin*, 21(1), 58-75.

Kumm, K. I. (2002). Sustainability of organic meat production under Swedish conditions. *Agriculture, Ecosystems and Environment*, 88(1), 95-101.

Laitinen, S., Högström, P., and Räsänen, L. (1997). Similarity of food choices among young Finnish couples. *Journal of Human Nutrition and Dietetics*, 10(6), 353-360.

Lang, R., and Roessl, D. (2011). The role of social capital in the development of community-based co-operatives. In: Tuunanen, M., Windsperger, J., Cliquet, G., and Hendrikse, G. eds. *New Developments in the Theory of Networks: Franchising, Alliances and Co-operatives*. Heidelberg: Physica-Verlag, pp. 353-370.

Lang, T. (1999a). The complexities of globalisation: The UK as a case study of tensions within the food system and the challenge to food policy. *Agriculture and Human Values*, 16(2), 169-185.

Lang, T. (1999b) Food policy for the 21st century: can it be both radical and reasonable?. In: Koc, M., MacRae, R., Mougeot, L. J. A. and Welsh, J. eds. *For Hunger Proof Cities: Sustainable Urban Food Systems*. Ottawa: International Development Research Centre, pp. 216–224.

Lang, T. (2004). Food Industrialisation and Food Power: Implications for Food Governance. *Gatekeeper series no 114: International Institute for Environment and Development*. London: IIED.

Lang, T. (2010). From "value-for-money" to "values-for-money"? Ethical food and policy in Europe. *Environment and Planning A*, 42(8), 1814–1832.

Lang, T., Dibb, S., and Reddy, S. (2011). *Looking Back, Looking Forward: Sustainability and UK Food Policy 2000–2011*. London: Sustainable Development Commission.

Lang, T. (2014). Sustainable Diets: Hairshirts or a better food future?. *Development*, 57(2), 240-256.

Lang, T., Barling, D., and Caraher, M. (2009). *Food Policy: integrating health, environment and society*. Oxford: Oxford University Press.

Larsson, S. C., and Orsini, N. (2014). Red meat and processed meat consumption and all-cause mortality: a meta-analysis. *American Journal of Epidemiology*, 179(3), 282-289.

Lave, J. and Wenger, E. (1991). *Situated learning: legitimate peripheral participation*. Cambridge: Cambridge University Press.

Laycock, D. (1990). Democracy and co-operative practice. In: Fulton, M. ed. *Cooperative organizations and Canadian society: Popular institutions and the dilemmas of change*. Toronto: University of Toronto Press, pp. 77–92.

LeDoux, J. E. (1995). Emotion: Clues from the brain. *Annual Review of Psychology*, 46(1), 209-235.

Leicester, A., and Windmeijer, F. (2004). *The 'Fat Tax' Economic Incentives to Reduce Obesity*. London: Institute for Fiscal Studies.

Lewicka, M. (1998). Confirmation bias: Cognitive error or adaptive strategy of action control? In: Kofta, M., Weary, G., and Sedek, G. eds. *Personal control in action: cognitive and motivational mechanisms*. New York, NY: Plenum Press, pp. 233-258.

Lewin, K. (1947). Group decision and social change. In: Newcomb, T. M., and Hartley, E. L. eds. *Readings in social psychology*. New York: Holt, pp. 330-344.

Lichtenstein, S., Gregory, R., and Irwin, J. (2007). What's bad is easy: Taboo values, affect, and cognition. *Judgment and Decision Making*, 2(3), 169-188.

Limb, M. (2012). Food firms' pledge on saturated fat is "thinnest of thin interventions". *British Medical Journal*, 347(f6523). doi: http://dx.doi.org/10.1136/bmj.f6523.

Lincoln, J., and A. Kalleberg 1990 Culture, Control, and Commit- ment: A Study of Work Orga- nization and Work Attitudes in the United States and Japan. Cambridge: Cambridge Uni- versity Press.

Lipset, S. M., Trow, M., and Coleman, J. (1956). *Union Democracy*. Garden City, NJ: Doubleday.

Little, R., Maye, D., and Ilbery, B. (2010). Collective purchase: Moving local and organic foods beyond the niche market. *Environment and Planning A*, 42(8), 1797–1813.

Lloyd-Williams, F., O'Flaherty, M., Mwatsama, M., Birt, C., Ireland, R., Capewell, A. (2008). Estimating the cardiovascular mortality burden attributable to the European Common Agricultural Policy on dietary saturated fats. *Bulletin of the World Health Organisation*, 86(7), 497-576.

Lockie, S., Lyons, K., Lawrence, G., and Mummery, K. (2002). Eating 'green': motivations behind organic food consumption in Australia. *Sociologia Ruralis*, 42(1), 23-40.

Lockwood, P., and Kunda, Z. (1997). Superstars and me: Predicting the impact of role models on the self. *Journal of Personality and Social Psychology*, 73(1), 91-103.

Lofland, J. (2004). Field Notes. In: Seale, C. ed. *Social Research Methods: A Reader.* London: Routledge, pp. 232-235.

Loureiro, M. L., and Lotade, J. (2005). Do fair trade and eco-labels in coffee wake up the consumer conscience?. *Ecological Economics*, 53(1), 129-138.

Lucas, K., Brooks, M., Darnton, A. and Jones, J. E. (2008). Promoting pro-environmental behaviour: existing evidence and policy implications. *Environmental Science and Policy*, 11(5), 456-466.

Macario, E., and Sorensen, G. (1998). Spousal similarities in fruit and vegetable consumption. *American Journal of Health Promotion*, 12(6), 369-377.

Macias, T. (2008). Working Toward a Just, Equitable, and Local Food System: The Social Impact of Community–Based Agriculture. *Social Science Quarterly*, 89(5), 1086-1101.

Macnaghten, P. and Urry, J. (1998). *Contested natures*. London: Sage.

Mäder, P., Fliessbach, A., Dubois, D., Gunst, L., Fried, P., and Niggli, U. (2002). Soil fertility and biodiversity in organic farming. *Science*, 296(5573), 1694-1697.

Mahon, D., Cowan, C., and McCarthy, M. (2006). The role of attitudes, subjective norm, perceived control and habit in the consumption of ready meals and takeaways in Great Britain. *Food Quality and Preference*, 17(6), 474-481.

Maio, G., Verplanken, B., Manstead, T., Stroebe, W., Abraham, C., Sheeran, P., Conner, M. (2007). Social psychological factors in lifestyle change and the relevance to policy. *Social Issues and Policy Review,* 1(1), 99–137.

Majee, W., and Hoyt, A. (2009). Building community trust through cooperatives: A case study of a worker-owned homecare cooperative. *Journal of Community Practice*, 17(4), 444-463.

Majee, W., and Hoyt, A. (2010). Are worker-owned cooperatives the brewing pots for social capital?. *Community Development*, 41(4), 417-430.

Maniates, M.F. (2001). Individualization: Plant a tree, buy a bike, save the world? *Global Environmental Politics*, 1(3), pp. 31-52.

Marsh, K., Zeuschner, C., and Saunders, A. (2012). Health Implications of a Vegetarian Diet: A Review. *American Journal of Lifestyle Medicine*, 6(3), 250-267.

Mason, G. (2002). *The Spectacle of Violence: Homophobia, Gender and Knowledge*. New York: Routledge.

Martin, C. A., and Bush, A. J. (2000). Do role models influence teenagers' purchase intentions and behavior?. *Journal of Consumer Marketing*, 17(5), 441-453.

Martínez-González, M. A., Sánchez-Tainta, A., Corella, D., Salas-Salvadó, J., Ros, E., Arós, F., Gómez-Gracia, E., Fiol, M., Lamuela-Raventós, R. M., Schröder, H., Lapetra, J., Serra-Majem, L., Pinto, X., Ruiz-Gutierrez, V., and for the PREDIMED Group, R. E. (2014). A provegetarian food pattern and reduction in total mortality in the prevención con dieta mediterránea (PREDIMED) study. *The American Journal of Clinical Nutrition*, 100(Supplement 1), 320S-328S.

Masset, G., Vieux, F., Verger, E. O., Soler, L. G., Touazi, D., and Darmon, N. (2014). Reducing energy intake and energy density for a sustainable diet: a study based on self-selected diets in French adults. *The American Journal of Clinical Nutrition*, 99(6), 1460-1469.

McAfee, A. J., McSorley, E. M., Cuskelly, G. J., Moss, B. W., Wallace, J. M., Bonham, M. P., and Fearon, A. M. (2010). Red meat consumption: An overview of the risks and benefits. *Meat Science*, 84(1), 1-13.

McCoyd, J. L., and Kerson, T. S. (2006). Conducting intensive interviews using email a serendipitous comparative opportunity. *Qualitative Social Work*, 5(3), 389-406.

McEvoy, C. T., Temple, N., and Woodside, J. V. (2012). Vegetarian diets, low-meat diets and health: a review. *Public Health Nutrition*, 15(12), 2287-2294.

McGrath, M. (2004). "That's Capitalism, Not a Co-op": Countercultural idealism and Business realism in 1970s US Food Co-ops. *Business and Economic History On-Line,* 2, 1-14. [Online]. Available from: http://www.thebhc.org/publications/BEHonline/2004/McGrath.pdf [Accessed 14 September 2015].

McIntosh,W. A. (1996). *Sociologies of Food and Nutrition*. New York: Plenum Press.

McKenzie–Mohr, D. (2000). Promoting sustainable behavior: An introduction to community–based social marketing. *Journal of Social Issues*, 56(3), 543-554.

McKenzie–Mohr, D., Nemiroff, L. S., Beers, L., and Desmarais, S. (1995). Determinants of responsible environmental behavior. *Journal of Social Issues*, 51(4), 139-156.

McMichael, A. J., Powles, J. W., Butler, C. D., & Uauy, R. (2007). Food, livestock production, energy, climate change, and health. *The Lancet*, 370(9594), 1253-1263.

McNeill, S., and Van Elswyk, M. E. (2012). Red meat in global nutrition. *Meat Science*, 92(3), 166-173.

Mead, G.H. (1934). *Society: From the standpoint of a social behaviorist*. Chicago, IL: University of Chicago Press.

Meehan, M., Yeh, M. C., and Spark, A. (2008). Impact of exposure to local food sources and food preparation skills on nutritional attitudes and food choices among urban minority youth. *Journal of Hunger and Environmental Nutrition*, 3(4), 456-471.

Meier, T., and Christen, O. (2012). Environmental impacts of dietary recommendations and dietary styles: Germany as an example. *Environmental Science and Technology,* 47(2), 877-888.

Meiselman, H. L. (2006). Context in Food Choice, Acceptance and Consumption. In: Shepherd, R., and Raats, M. eds. *The Psychology of Food Choice*. Cambridge: CABI Publishing, pp. 179-199.

Meiselman, H. L., Hedderley, D., Staddon, S. L., Pierson, B. J., and Symonds, C. R. (1994). Effect of effort on meal selection and meal acceptability in a student cafeteria. *Appetite*, 23(1), 43-55.

Meisterling, K., Samaras, C., and Schweizer, V. (2009). Decisions to reduce greenhouse gases from agriculture and product transport: LCA case study of organic and conventional wheat. *Journal of Cleaner Production*, 17(2), 222-230.

Mennell, S. (1985). *All manners of food: eating and taste in England and France from the Middle Ages to the present*. New York: Blackwell.

Mercer, T. W. (1947). *Co-operations' Prophet: The Life and Letters of Dr. William King of Brighton, with a Reprint of The Co-Operator, 1828-1830*. Manchester: Co-operative Union.

Metcalfe, A., Riley, M., Barr, S., Tudor, T., Robinson, G., and Guilbert, S. (2013). Food waste bins: bridging infrastructures and practices. In: Evans, D., Campbell, H., and Murcott, A. eds. *Waste matters: new perspectives of food and society*. Oxford: Wiley-Blackwell, pp. 135-155.

Michels, R. (1962). *Political Parties: A Study of the Oligarchical Tendencies of Modern Democracy*. New York: Collier Books.

Milà i Canals, L., Cowell, S. J., Sim, S., and Basson, L. (2007). Comparing domestic versus imported apples: A focus on energy use. *Environmental Science and Pollution Research — International*, 14(5), 338-344.

Miller, D. (1998). *A Theory of Shopping*. Cambridge: Polity.

Milne, R. (2013). Arbiters of waste: date labels, the consumer and knowing good, safe food. In: Evans, D., Campbell, H., and Murcott, A. eds. *Waste matters: new perspectives of food and society*. Oxford: Wiley-Blackwell, pp. 84-101.

Mitchell, J. (1999). The British Main Meal in the 1990s: Has it Changed its Identity. *British Food Journal*, 101(11), 871-883.

Mobley, C., Vagias, W. M., and DeWard, S. L. (2010). Exploring additional determinants of environmentally responsible behavior: the influence of environmental literature and environmental attitudes. *Environment and Behavior*, 42 (4), 420–447.

Monk, H. (2008). What Effect Will Organic Food Have on Your Wallet. *The Independent* [Online], 15 March. Available from: http://www.independent.co.uk/money/spend-save/what-effect-will-organic-food-have-on-your-wallet-796117.html [Accessed 28 March 2011].

Mooney, C. (1990). Cost and availability of healthy food choices in a London health district. *Journal of Human Nutrition and Dietetics*, 3(2), 111-120.

Morris, J. N., Donkin, A. J. M., Wonderling, D., Wilkinson, P., and Dowler, E. A. (2000). A minimum income for healthy living. *Journal of Epidemiology and Community Health*, 54(12), 885-889.

Moser, S. C., and Dilling, L. (2011). Communicating climate change: Closing the science-action gap. In: Dryzek, J., Norgaard, R. B., Schlosberg, D. eds. *The Oxford handbook of climate change and society*. Oxford: Oxford University Press, pp 161–176.

Muldoon, A. (2006). Where the Green Is: Examining the Paradox of Environmentally Conscious Consumption [Online]. *Electronic Green Journal*, 1(23). Available from: http://www.escholarship.org/uc/item/00t326gx [Accessed on 18 March 2011].

Murcott, A. (1982). On the social significance of the "cooked dinner" in South Wales. *Social Science Information*, 21(4/5), 677–695.

Murcott, A. (1983). *The Sociology of Food and Eating.* Gower: Aldershot.

Murcott, A. (1995). Psycho-social influences on food choice: implications for dietary change. *Proceedings of the Nutrition Society*, 54, 729-735.

Murcott, A., (2002). Nutrition and inequalities: a note on sociological approaches. *European Journal of Public Health*, 12 (3), 203–207.

Murtagh, A., and Ward, M. (2009). Food Democracy in Practice: a case study of the Dublin Food Co-op. *Journal of Co-operative Studies*, 42(1), 13-22.

Mytton, O. T., Clarke, D., and Rayner, M. (2012). Taxing unhealthy food and drinks to improve health. *British Medical Journal (Clinical Research Edition)*, 344(e2931). doi: 10.1136/bmj.e2931

National Heart Forum. (2012). *What is the role of health-related food duties?* [Online]. London: National Heart Forum. Available from: http://www.ukhealthforum.org.uk/prevention/pie/ukhf-publications/ [Accessed 12 August 2014].

Neisser, U. (1988). Time present and time past. In: Gruneberg, M. M., Morris, P. E., and SYKES, R. N. eds. *Practical Aspects of Memory*. Vol. 2. New York: Wiley, pp. 545-560.

Nelson, M. C., Larson, N. I., Barr-Anderson, D., Neumark-Sztainer, D., and Story, M. (2009). Disparities in dietary intake, meal patterning, and home food environments among young adult non-students and 2-and 4-year college students. *American Journal of Public Health*, 99(7), 1216-1219.

NESTA. (2010). *The Big Green Challenge Final Evaluation Report* [Online]. London: NESTA. Available from: http://www.nesta.org.uk/areas_of_work/public_services_lab/big_green_challenge [Accessed 12 March 2011].

NESTA. (2012). *Secret Sauce* [Online]. London: NESTA. Available from: http://www.nesta.org.uk/publications/secret-sauce [Accessed 21 August 2013].

Nestle, M. (2013). *Food politics: How the food industry influences nutrition and health*. Vol. 3. Berkeley: University of California Press.

Nestle, M., Wing, R., Birch, L., DiSogra, L., Drewnowski, A., Middleton, S., Sigman-Grant, M., Sobal, J., Winston, M., and Economos, C. (1998). Behavioral and social influences on food choice. *Nutrition Reviews*, 56(5), 50-64.

Newhouse, N. (1990). Implications of attitude and behavior research for environmental conservation. *The Journal of Environmental Education*, 22(1), 26-32.

Newton, J. and Franklin, A. (2011). *Transcript and report of a focus group meeting about Stroudco with non-member participants from the local community*. ESRC Centre for Business Relationships, Accountability, Sustainability and Society (BRASS), Cardiff University. Unpublished.

Nickerson, R. S. (1998). Confirmation bias: A ubiquitous phenomenon in many guises. *Review of General Psychology*, 2(2), 175.

Nicklas, T. A., Baranowski, T., Baranowski, J. C., Cullen, K., Rittenberry, L., and Olvera, N. (2001). Family and child–care provider influences on preschool children's fruit, juice, and vegetable consumption. *Nutrition Reviews*, 59(7), 224-235.

Niggli, U., Fließbach, A., Hepperly, P. and Scialabba, N. (2009). Low Greenhouse Gas Agriculture: Mitigation and Adaptation Potential of Sustainable Farming Systems

[Online]. Rome: Food and Agricultural Organization. Available from: ftp://ftp.fao.org/docrep/fao/010/ai781e/ai781e00.pdf [Accessed 30 March 2014].

Nolan, J. M., Schultz, P. W., Cialdini, R. B., Goldstein, N. J., and Griskevicius, V. (2008). Normative social influence is underdetected. *Personality and Social Psychology Bulletin*, 34(7), 913-923.

Norat, T., Bingham, S., Ferrari, P., Slimani, N., Jenab, M., Mazuir, M., ... and Riboli, E. (2005). Meat, fish, and colorectal cancer risk: the European Prospective Investigation into cancer and nutrition. *Journal of the National Cancer Institute*, 97(12), 906-916.

Nordgren, A. (2012). Ethical issues in mitigation of climate change: The option of reduced meat production and consumption. *Journal of Agricultural and Environmental Ethics*, 25(4), 563-584.

Nordlund, A. M., and Garvill, J. (2002). Value structures behind proenvironmental behavior. *Environment and Behavior*, 34(6), 740-756.

Novick, G. (2008). Is there a bias against telephone interviews in qualitative research?. *Research in Nursing & Health*, 31(4), 391-398.

Novkovic, S. (2006). *Co-operative Business: the role of co-operative principles and values*, 39(1), 5–15.

Novkovic, S. (2008). Defining the co-operative difference. *The Journal of Socio-Economics*, 37(6), 2168-2177.

Nye, M. and Burgess, J. (2008). *Promoting durable change in household waste and energy use behaviour* [Online]. Report for Defra. Norwich: University of East Anglia. Available from: http://www.uea.ac.uk/env/cserge/pub/ext/evaluating_ecoteams.pdf [Accessed 13 March 2011].

Ochs, E. and Shohet, M. (2006). The cultural structuring of mealtime socialization. *New Directions for Child and Adolescent Development*, 2006(111), 35–49.

OECD. (2008a). *Environmental Outlook to 2030*. Organisation for Economic Co-operation and Development Report. Paris: OECD.

OECD. (2008b). *Household Behaviour and the Environment Reviewing the Evidence*. Organisation for Economic Co-operation and Development Report. Paris: OECD.

Olson, M. (1965). *The Logic of Collective Action*. Cambridge, Mass.: Harvard University Press.

ONS (Office for National Statistics). (2001). *Social Capital: a review of the literature*. Social Analysis and Reporting Division, Office for National Statistics. London: The Stationery Office.

Opdenakker, R. (2006). Advantages and disadvantages of four interview techniques in qualitative research. *Forum: Qualitative Social Research*, 7(4). [Online]. Available from: http://www.qualitative-research.net/fqs-texte/4-06/06-4-11-e.htm [Accessed 23 August 2015].

Open Food Network. (2015). *Our organisation and history* [Online]. Available from: https://openfoodnetwork.org/about/organisation/ [Accessed 2 December 2015].

Ostrom, E. and Kauder, N. (1999). Social Capital: A Fad or a Fundamental Concept. In: Dasgupta, P. and Serageldin, I. eds. *Social Capital, A Multifaceted Perspective*. Washington DC: World Bank, pp. 172-214.

Ouellette, J. A., and Wood, W. (1998). Habit and intention in everyday life: the multiple processes by which past behavior predicts future behavior. *Psychological Bulletin*, 124(1), 54-74.

Owen, L., Seaman, H, and Prince, S. (2007). *Public Understanding of Sustainable Consumption of Food*. A report by Opinion Leader to the Department for Environment, Food and Rural Affairs. London: Defra.

Owens, S. (2000). 'Engaging the public': information and deliberation in environmental policy. *Environment and Planning A*, 32(7), 1141-1148.

Pairotti, M. B., Cerutti, A. K., Martini, F., Vesce, E., Padovan, D., and Beltramo, R. (2014). Energy consumption and GHG emission of the Mediterranean diet: a systemic assessment using a hybrid LCA-IO method. *Journal of Cleaner Production*. doi: 10.1016/j.jclepro.2013.12.082

Palmer, J. (1993). Development of concern for the environment and formative experiences of educators. *Journal of Environmental Education*, 24(3), 26-30.

Palmer, J. A., Suggate, J., Bajd, B., and Tsaliki, E. (1998). Significant influences on the development of adults' environmental awareness in the UK, Slovenia and Greece. *Environmental Education Research*, 4(4), 429-444.

Palmer, J. A., Suggate, J., Bajd, B., Ho, R. K., Ofwono–Orecho, J. K. W., Peries, M., ... and Staden, C. V. (1998). An overview of significant influences and formative experiences on the development of adults' environmental awareness in nine countries. *Environmental Education Research*, 4(4), 445-464.

Pan, A., Sun, Q., Bernstein, A. M., Schulze, M. B., Manson, J. E., Stampfer, M. J., ... and Hu, F. B. (2012). Red meat consumption and mortality: results from 2 prospective cohort studies. *Archives of Internal Medicine*, 172(7), 555-563.

Parkin, D. M., Olsen, A. H., and Sasieni, P. (2009). The potential for prevention of colorectal cancer in the UK. *European Journal of Cancer Prevention*, 18(3), 179-190.

Pascucci, S., Cicatiello, C., Franco, S., Pancino, B., and Marino, D. (2011). Back to the future? Understanding change in food habits of farmers' market customers. *International Food and Agribusiness Management Review*, 14(4), 105-126.

Pellegrini, G., and Farinello, F. (2009). Organic consumers and new lifestyles: An Italian country survey on consumption patterns. *British Food Journal*, 111(9), 948–974.

Pelling, M., and High, C. (2005). Understanding adaptation: what can social capital offer assessments of adaptive capacity?. *Global Environmental Change*, 15(4), 308-319.

Permaculture Association. (2013). *Knowledge Base - the basics* [Online]. Available from: https://www.permaculture.org.uk/knowledge-base/basics [Accessed 21 May 2013].

Perry, M., and Alcock, J. (2010). Community Owned Village Shops – A Better Form of Business. *Journal of Co-operative Studies*. 43(2), 37-45.

Peters, E., and Slovic, P. (1996). The role of affect and worldviews as orienting dispositions in the perception and acceptance of nuclear power. *Journal of Applied Social Psychology*, 26(16), 1427-1453.

Peters, M., and Jackson, T. 2008. *Community action: a force for social change? some conceptual observations* [Online]. RESOLVE Working Paper 01-08. Guildford: University of Surrey. Available from: http://www.surrey.ac.uk/resolve/Docs/WorkingPapers/RESOLVE_WP_01-08.pdf [Accessed 19 October 2010].

Petty, R. E., and Cacioppo, J. T. (1986). The elaboration likelihood model of persuasion. In: Berkowitz, L. ed. *Advances in experimental social psychology*. Vol. 19. New York: Academic Press, pp. 123–205.

Petty, R. E., Haugtvedt, C. P., and Smith, S. M. (1995). Elaboration as a determinant of attitude strength: Creating attitudes that are persistent, resistant, and predictive of behavior. In: Petty, R. E., and Krosnick, J. A. eds. *Attitude strength: Antecedents and consequences*. Mahwah, NJ: Erlbaum, pp. 93–130.

Pew Commission. (2008). *Putting Meat on the Table: Industrial Farm Animal Production in America*. Washington, DC: Pew Charitable Trusts and Johns Hopkins Bloomberg School of Public Health.

Pew Oceans Commission. (2003). *America's living oceans: Charting a course for sea change*. Washington, DC: Pew Charitable Trusts.

Pew Research Center. (2009). *Modest support for "cap and trade" policy. Fewer Americans see solid evidence of global warming*. Washington, DC: Pew Research Center.

Pichert, D., and Katsikopoulos, K. V. (2008). Green defaults: Information presentation and pro-environmental behaviour. *Journal of Environmental Psychology*, 28(1), 63-73.

Platt, J. (1992). "Case Study" in American Methodological Thought. *Current Sociology*, 40(1), 17-48.

Pliner, P. (1982). The effects of mere exposure on liking for edible substances. *Appetite*, 3(3), 283-290.

Pliner, P., and Stallberg-White, C. (2000). "Pass the ketchup, please": familiar flavors increase children's willingness to taste novel foods. *Appetite*, 34(1), 95-103.

Plows, A. (2008). Social movements and ethnographic methodologies: an analysis using case study examples. *Sociology Compass*, 2(5), 1523-1538.

Pollan, M. (2009). *The omnivore's dilemma: the search for a perfect meal in a fast-food world*. New York: Penguin.

Pollard, C., Miller, M., Woodman, R. J., Meng, R., and Binns, C. (2009). Changes in knowledge, beliefs, and behaviors related to fruit and vegetable consumption among Western Australian adults from 1995 to 2004. *American Journal of Public Health*, 99(2), 355-361.

Pollard, J., Kirk, S. F., and Cade, J. E. (2002). Factors affecting food choice in relation to fruit and vegetable intake: a review. *Nutrition Research Reviews*, 15(02), 373-387.

Portelli, A. (1997). *The Battle of Valle Giulia: Oral history and the art of dialogue*. Madison: University of Wisconsin Press.

Portes, A. (1998). Social capital: Its origins and applications in modern sociology. *Annual Review of Sociology*, 24(1), 1-24.

POST (The Parliamentary Office of Science and Technology). (2010). Climate Change: Engagement and Behaviour [Online]. Number 347. Available from: http://www.parliament.uk/parliamentary_offices/post/pubs2010.cfm [Accessed 23 June 2012].

Potter, B. (1891). *The Co-operative Movement in Great Britain*. London: S. Sonnenschein.

Pridgeon, A., and Whitehead, K. (2013). A qualitative study to investigate the drivers and barriers to healthy eating in two public sector workplaces. *Journal of Human Nutrition and Dietetics*, 26(1), 85-95.

Privitera, G. J., and Creary, H. E. (2013). Proximity and visibility of fruits and vegetables influence intake in a kitchen setting among college students. *Environment and Behavior*, 45(7), 876-886.

Public Accounts Committee. (2009). *Programmes to reduce household energy consumption*. Fifth Report of Session 2008–09. HC228. London: The Stationery Office.

Public Health England and Food Standards Agency. (2014). *National Diet and Nutrition Survey: Results from Years 1-4 (combined) of the Rolling Programme (2008/2009 – 2011/12)*. Executive summary. London: The Stationery Office.

Public Health England. (2014). *Your guide to eatwell plate: helping you eat a healthier diet*. London: The Stationery Office.

Putnam, R. D. (1993). *Making Democracy Work: civic traditions in modern Italy*. Princeton: Princeton University Press.

Putnam, R. D. (1995). Bowling alone: America's declining social capital. *Journal of Democracy*, 6(1), 65-78.

Quarter, J. and Midha, H. (1999). Informal learning processes in a worker co-operative. *Journal of Co-operative Studies*, 32(1), 29-49.

Quested, T. E., Parry, A. D., Easteal, S., and Swannell, R. (2011). Food and drink waste from households in the UK. *Nutrition Bulletin*, 36(4), 460-467.

Ragin, C. C. (1992). “Casing” and the Process of Social Inquiry. In: Ragin, C. C., and Becker, H. S. eds. *What is a Case? Exploring the Foundations of Social Inquiry*. Cambridge: Cambridge University Press, pp. 217-226.

Ragin, C. C. and Becker, H. S. eds. (1992). *What is a Case? Exploring the Foundations of Social Inquiry*. Cambridge: Cambridge University Press.

Ramirez-Valles, J. (1999). Changing women: the narrative construction of personal change through community health work among women in Mexico. *Health Education and Behavior*, 26 (1), 25–42.

Ratner, R. K., Soman, D., Zauberman, G., Ariely, D., Carmon, Z., Keller, P. A., and Wertenbroch, K. (2008). How behavioral decision research can enhance consumer welfare: From freedom of choice to paternalistic intervention. *Marketing Letters*, 19(3-4), 383-397.

Ray, K., Savage, M., Tampubolon, G., Warde, A., Longhurst, B., and Tomlinson, M. (2003). The Exclusiveness of the Political Field: networks and political mobilization. *Social Movement Studies*, 2(1), 37-60.

Refsgaard, K., Halberg, N., and Kristensen, E. S. (1998). Energy utilization in crop and dairy production in organic and conventional livestock production systems. *Agricultural Systems*, 57(4), 599-630.

Regan, D. T., and Fazio, R. (1977). On the consistency between attitudes and behavior: Look to the method of attitude formation. *Journal of Experimental Social Psychology*, 13(1), 28-45.

Renton, A. (2010). *Carnivores rejoice! Eating meat is good for the planet (and that's according to a militant vegan)*. *MailOnline* [Online], 30 September 2010. Available from: http://www.dailymail.co.uk/femail/food/article-1316382/Carnivores-rejoice-Eating-meat-good-planet.html [Accessed 2 June 2013].

Revell, A. and Blackburn, R. (2004). *SMEs and their response to environmental issues in the UK* [Online]. Kingston Hill: Small Business Research Centre, Kingston University. Available from: http://www.psi.org.uk/ehb/docs/BlackburnAug2004.pdf [Accessed 25 February 2011].

Roff, R.J. (2007). Shopping for change? Neoliberalizing activism and the limits to eating non-GMO. *Agriculture and Human Values*, 24(4), 511-522.

Rohrmann, S., Overvad, K., Bueno-de-Mesquita, H. B., Jakobsen, M. U., Egeberg, R., Tjønneland, A., ... and Linseisen, J. (2013). Meat consumption and mortality-results from the European Prospective Investigation into Cancer and Nutrition. *BMC Medicine*, 11(63). doi:10.1186/1741-7015-11-63.

Ronco, W. (1974). *Food Co-Op: An Alternative to Shopping in Supermarkets*. Boston: Beacon.

Rovner, A. J., Nansel, T. R., Wang, J., and Iannotti, R. J. (2011). Food sold in school vending machines is associated with overall student dietary intake. *Journal of Adolescent Health*, 48(1), 13-19.

Rozin, P. (2006). The integration of biological, social, cultural, and psychological influences on food choice. In: Shepherd, R., and Raats, M. eds. *The Psychology of Food Choice*. Cambridge: CABI Publishing, pp. 19-39.

Rozin, P., and Tuorila, H. (1993). Simultaneous and temporal contextual influences on food acceptance. *Food Quality and Preference,* 4(1), 11-20.

Rozin, P., Kabnick, K., Pete, E., Fischler, C., and Shields, C. (2003). The Ecology of Eating Smaller Portion Sizes in France Than in the United States Help Explain the French Paradox. *Psychological Science,* 14(5), 450-454.

Rubin, H.J., and Rubin, I.. S. (2005). *Qualitative interviewing: The art of hearing data (2nd ed.)*. Thousand Oaks: Sage Publications.

Ruby, M. B., Heine, S. J., Kamble, S., Cheng, T. K., and Waddar, M. (2013). Compassion and contamination. Cultural differences in vegetarianism. *Appetite*, 71(complete), 340-348.

Rucht, D. (1999). The Impact of Environmental Movements in Western Societies. In: Giugni, M., McAdam, D., and Tilly, C. eds. *How Social Movements Matter*. Minneapolis: University of Minnesota Press, pp. 204-224.

Samuelson, W., and Zeckhauser, R. (1988). Status quo bias in decision making. *Journal of Risk and Uncertainty*, 1(1), 7-59.

Savage, J. S., Fisher, J. O., and Birch, L. L. (2007). Parental influence on eating behavior: conception to adolescence. *The Journal of Law, Medicine and Ethics*, 35(1), 22-34.

Saxe, H. (2014). The New Nordic Diet is an effective tool in environmental protection: it reduces the associated socioeconomic cost of diets. *The American Journal of Clinical Nutrition*, 99(5), 1117-1125.

Scarborough, P., Allender, S., Clarke, D., Wickramasinghe, K., and Rayner, M. (2012). Modelling the health impact of environmentally sustainable dietary scenarios in the UK. *European Journal of Clinical Nutrition*, 66(6), 710-715.

Scarborough, P., Bhatnagar, P., Wickramasinghe, K. K., Allender, S., Foster, C., and Rayner, M. (2011). The economic burden of ill health due to diet, physical inactivity, smoking, alcohol and obesity in the UK: an update to 2006–07 NHS costs. *Journal of Public Health*, 33(4), 527-535.

Scholliers, P. (2001). *Food, Drink and Identity: Cooking, Eating and Drinking in Europe since the Middle Ages*. Oxford: Berg.

Schultz, P. W., and Zelezny, L. (1999). Values as predictors of environmental attitudes: Evidence for consistency across 14 countries. *Journal of Environmental Psychology*, 19(3), 255-265.

Schultz, P. W., Zelezny, L. C., and Dalrymple, N. J. (2000). A multinational perspective on the relation between Judeo-Christian religious beliefs and attitudes of environmental concern. *Environment and Behavior*, 32(4), 576–591.

Schultz, P., Oskamp, S., and Mainieri, T. (1995). Who recycles and when? A review of personal and situational factors. *Journal of Environmental Psychology*, 15(2), 105-121.

Schwartz, S. H. (1977). Normative influences on altruism. *Advances in Experimental Social Psychology*, 10(Complete), 221-279.

Schwartz, S. H., and Howard, J. A. (1981). A normative decision-making model of altruism. In: Rushton, J. P., and Sorrentino, R. M. eds. *Altruism and helping behavior: Social, personality, and developmental perspectives*. Hillsdale: Erlbaum, pp. 189–211.

Schwarz, N., and Bohner, G. (2001). The construction of attitudes. In: Tesser, A., and Schwarz, N. eds. *Blackwell handbook of social psychology: Intrapersonal processes*. Vol. 1. Oxford: Blackwell, pp. 436–457.

Schwarz, N., and Clore, G. L. (1983). Mood, misattribution, and judgments of well-being: Informative and directive functions of affective states. *Journal of Personality and Social Psychology*, 45(3), 513-523.

SCR (Sustainable Consumption Roundtable). (2006). *I Will If You Will: Towards Sustainable Consumption*. Oxford: Seacourt.

Seagren, J. S., and Terry, R. D. (1991). WIC female parents' behavior and attitudes toward their children's food intake — Relationship to children's relative weight. *Journal of Nutrition Education*, 23(5), 223-230.

Seale, C. (1999). Quality in qualitative research. *Qualitative Inquiry*, 5(4), 465-478.

Sen, A. K. (1977). Rational Fools: A Critique of the Behavioral Foundations of Economic Theory. *Philosophy and Public Affairs*, 6(4), 317-344.

Sengupta, J., and Johar, G. V. (2002). Effects of inconsistent attribute information on the predictive value of product attitudes: Toward a resolution of opposing perspectives. *Journal of Consumer Research*, 29(1), 39-56.

Settersten, R. A., Jr., and Mayer, K. U. (1997). The measurement of age, age structuring, and the life course. *Annual Review of Sociology*, 23, 233–261.

Seyfang, G. (2005). Shopping for sustainability: can sustainable consumption promote ecological citizenship?. *Environmental Politics*, 14(2), 290-306.

Shanahan, M. J., and Hood, K. E. (1998). Adolescents in Changing Social Structures: Bounded Agency in Life Course Perspective. In: Silbereisen, R. and Crockett, E. *Negotiating Adolescence in Times of Social Change: Cross-National Perspectives on Developmental Processes and Social Intervention*. Cambridge: Cambridge University Press, pp. 123–134.

Shapiro, I. (2005). *The flight from reality in the human sciences*. Princeton: Princeton University Press.

Shaw, G., and Alexander, A. (2008). British Co-operative Societies as Retail Innovators: Interpreting the Early Stages of the Self-Service Revolution. *Business History*, 50(1), 62-78.

Shields, R. ed. (1992). *Lifestyle Shopping: the Subject of Consumption*. London: Routledge.

Shiv, B., and Fedorikhin, A. (1999). Heart and mind in conflict: The interplay of affect and cognition in consumer decision making. *Journal of Consumer Research*, 26(3), 278-292.

Shove, E., and Warde, A. (2002). Inconspicuous Consumption: The Sociology of Consumption, Lifestyles, and the Environment. In: Dunlap, R. E., Buttel, F. H., Dickens, P., and Gijswijt, A. eds. *Sociological Theory and the Environment. Classical Foundations, Contemporary Insights*. Oxford: Rowman and Littlefield, pp. 230-250.

Shove, E. (2003). *Comfort, cleanliness and convenience: the social organization of normality*. Oxford: Berg.

Shove, E. (2010). Beyond the ABC: climate change policy and theories of social change. *Environment and Planning A*, 42(6), 1273-1285.

Shove, E. A., and Pantzar, M. (2005). Consumers, Producers and Practices Understanding the invention and reinvention of Nordic walking. *Journal of Consumer Culture*, 5(1), 43-64.

Shove, E., and Southerton, D. (2000). Defrosting the freezer: from novelty to convenience. A story of normalization. *Journal of Material Culture*, 5(3), 301–320.

Shove, E., Pantzar, M., and Watson, M. (2012). *The Dynamics of Social Practice. Everyday Life and How It Changes.* London: Sage Publications.

Shuy, R. W. (2003). In-person versus Telephone Interviewing. In: Holstein, J. A., and Gubrium, J. F. eds. *Inside Interviewing: New Lenses, New Concerns.* Thousand Oaks: Sage Publications, pp. 537-555.

Siegfried, W. D., Tedeschi, R. G., and Cann, A. (1982). The generalizability of attitudinal corre- lates of pro-environmental behavior. *Journal of Social Psychology*, 118(2), 287-288.

Silverman, D. (2005). *Doing Qualitative Research*. Second edition. London: Sage.

Sim, S., Barry, M., Clift, R., and Cowell, S. J. (2007). The relative importance of transport in determining an appropriate sustainability strategy for food sourcing. *The International Journal of Life Cycle Assessment*, 12(6), 422-431.

Simon, H. (1957). *Models of Man*. New York: John Wiley.

Sinha, R., Cross, A. J., Graubard, B. I., Leitzmann, M. F., and Schatzkin, A. (2009). Meat intake and mortality: a prospective study of over half a million people. *Archives of Internal Medicine*, 169(6), 562-571.

Slovic, P., Finucane, M. L., Peters, E., and MacGregor, D. G. (2004). Risk as analysis and risk as feelings: Some thoughts about affect, reason, risk, and rationality. *Risk Analysis*, 24(2), 311-322.

Smith, E. M. (2005). Telephone interviewing in healthcare research: a summary of the evidence. *Nurse Researcher*, 12(3), 32-41.

Smith, J. R., and Terry, D. J. (2003). Attitude–behaviour consistency: the role of group norms, attitude accessibility, and mode of behavioural decision–making. *European Journal of Social Psychology*, 33(5), 591-608.

Smith, J., Machell, G., and Caraher, M. (2012). *MLFW Food Co-ops evaluation: final report* [Online]. London: Centre for Food Policy, City University London. Available from: https://www.city.ac.uk/__data/assets/pdf_file/0008/167138/MLFW-final-report-Food-Co-ops-Evaluation-2012-Feb-2013.pdf [Accessed 3 September 2013].

Smithers, R. (2016). Asda puts UK's first supermarket wonky veg box on sale. *The Guardian*, 5 February 2016. [Online]. Available from: http://www.theguardian.com/environment/2016/feb/05/asda-puts-uks-first-supermarket-wonky-veg-box-on-sale [Accessed 21 February 2016].

Snowdon, D. A., and Phillips, R. L. (1985). Does a vegetarian diet reduce the occurrence of diabetes?. *American Journal of Public Health*, 75(5), 507-512.

Sobal, J., and Nelson, M. K. (2003). Commensal eating patterns: a community study. *Appetite*, 41(2), 181-190.

Sobal, J., and Wansink, B. (2007). Kitchenscapes, tablescapes, platescapes, and foodscapes influences of microscale built environments on food intake. *Environment and Behavior*, 39(1), 124-142.

Sobel, J. (2002). Can we trust social capital?. *Journal of Economic Literature*, 40(1), 139-154.

Soil Association. (2009). *Organic market report 2009* [Online]. Available from: http://www.soilassociation.org [Accessed 24 March 2011].

Somerville, P. (2007). Co-operative Identity. *Journal of Co-operative Studies*, 40(1), 5-17.

Somerville, P., Frith, K., and McElwee, G. (2009). Building a 'Community Co-operative' at Hill Holt Wood. *Journal of Co-operative Studies*, 42(2), 38-47.

Soron, D. (2010). Sustainability, self–identity and the sociology of consumption. *Sustainable Development*, 18(3), 172-181.

Southerton, D. (2001). Consuming Kitchens: Taste, Context and Identity Formation. *Journal of Consumer Culture*, 1(2), 179–204.

Southerton, D., McMeeking, A., and Evans, D. (2011). *International Review of Behaviour Change Initiatives: Climate Change Behaviours Research Programme*. Edinburgh: Scottish Government Social Research.

Spaargaren, G., and Van Vliet, B. (2000). Lifestyles, consumption and the environment: The ecological modernization of domestic consumption. *Environmental Politics*, 9(1), 50-76.

Spaargaren, G. (2003). Sustainable consumption: a theoretical and environmental policy perspective. *Society and Natural Resources*, 16(8), 687–701.

Spaargaren, G. (2011). Theories of practices: Agency, technology and culture: Exploring the relevance of practice theories for the governance of sustainable consumption practices in the new world-order. *Global Environmental Change*, 21(3), 813–822.

Sparks, L. (1994). Consumer Co-operation in the United Kingdom, 1945-1993. *Journal of Co-operative Studies*, 79, 1-64.

Sparks, L. (2002). Being the Best? Co-operative Retailing and Corporate Competitors. *Journal of Co-operative Studies*, 35(1), 7-26.

Spear, R. (2000). Reasserting the co-operative advantage research project: an overview. *Journal of Co-operative Studies*, 33(2), 95–101.

Spurling, N., McMeekin, A., Shove, E., Southerton, D., and Welch, D. (2013). *Interventions in practice: re-framing policy approaches to consumer behaviour*. Manchester: Sustainable Practices Research Group.

SSG (Sustainability Solutions Group) and ICA (International Co-operative Alliance). (2014). *A co-operative solution to climate change* [Online]. Available from: http://www.ssg.coop/wp-content/uploads/2015/03/141205_Co-ops-and-climate-change_v4.pdf [Accesssed 13 September 2015].

Stake, R. E. (1995). *The Art of Case Study Research*. Thousand Oaks: Sage.

Stake, R. (2005). Qualitative case studies. In: Denzin, N. K. and Lincoln, Y. S. eds. *The Sage handbook of qualitative research (3rd ed.)*. Thousand Oaks, CA: Sage, pp. 433-466.

Steg, L. (2005). Car use: lust and must. Instrumental, symbolic and affective motives for car use. *Transportation Research Part A: Policy and Practice*, 39(2), 147-162.

Steg, L., Vlek, C., and Slotegraaf, G. (2001). Instrumental-reasoned and symbolic-affective motives for using a motor car. *Transportation Research Part F: Traffic Psychology and Behaviour*, 4(3), 151-169.

Stehfest, E., Bouwman, L., van Vuuren, D. P., den Elzen, M. G., Eickhout, B., and Kabat, P. (2009). Climate benefits of changing diet. *Climatic Change*, 95(1-2), 83-102.

Stephens, N. (2007). Collecting data from elites and ultra elites: telephone and face-to-face interviews with macroeconomists. *Qualitative Research*, 7(2), 203-216.

Stern, P. C. (1999). Information, incentives, and proenvironmental consumer behavior. *Journal of Consumer Policy*, 22(4), 461-478.

Stern, P. C. (2000). Toward a Coherent Theory of Environmentally Significant Behavior. *Journal of Social Issues*, 56(3), 407-424.

Stern, P. C. and Oskamp, S. (1987). Managing scarce environmental resources. In: Stokols, D., and Altman, I. eds. *Handbook of Environmental Psychology.* New York: Wiley, pp. 1043–1088.

Stern, P. C., and Dietz, T. (1994). The value basis of environmental concern. *Journal of Social Issues*, 50(3), 65-84.

Stern, P. C., Dietz, T., Abel, T., Guagnano, G. A., and Kalof, L. (1999). A value-belief-norm theory of support for social movements: The case of environmentalism. *Human Ecology Review*, 6(2), 81–97.

Stern, P. C., Dietz, T., Kalof, L., and Guagnano, G. A. (1995). Values, beliefs, and proenvironmental action: Attitudes formation toward emergent attitude objects. *Journal of Applied Social Psychology*, 25(18), 1611-1636.

Stolze, M. and Lampkin, N. (2009). Policy for organic farming: Rationale and concepts. *Food Policy*, 34(3), 237-244.

Strauss, A., and Corbin, J. (1990). *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. London: Sage.

Stroudco. (2011). *Stroudco website* [Online]. Available from: http://www.stroudco.org.uk/ [Accessed 1 February 2011].

Stroudco. (2012). *Stroudco Review* [Online]. Available from: http://www.stroudco.org.uk/how-it-works/ [Accessed 4 September 2013].

Stryker, S., Owens, T. J., and White, R. W. eds. (2000). *Self, identity, and social movements. Vol. 13*. Minneapolis: University of Minnesota Press.

Stuart, T. (2009). *Waste: uncovering the global food scandal*. London: Penguin.

Sturges, J. E., and Hanrahan, K. J. (2004). Comparing telephone and face-to-face qualitative interviewing: a research note. *Qualitative research*, 4(1), 107-118.

Sullivan, S. A., and Birch, L. L. (1990). Pass the sugar, pass the salt: Experience dictates preference. *Developmental Psychology*, 26(4), 546-551.

SUMA. (2015). *Who are Suma?* [Online]. Available from: http://www.sumawholesale.com/index.php/about-suma-store [Accessed 2 November 2015].

Sunstein, C., and Thaler, R. (2008). *Nudge: improving decisions about health, wealth, and happiness.* New Haven and London: Yale University Press.

Sustain. (2010). *About Sustain* [Online]. Available from: http://www.sustainweb.org/ [Accessed 4 June 2010].

Sustain. (2012). *Food Co-ops Toolkit: a simple guide to setting up food co-ops* [Online]. Available from: http://www.sustainweb.org/foodcoopstoolkit/ [Accessed 6 November 2012].

Sward, L. L. (1999). Significant life experiences affecting the environmental sensitivity of El Salvadoran environmental professionals. *Environmental Education Research*, 5(2), 201-206.

Sweet, L. (2002). Telephone interviewing: is it compatible with interpretive phenomenological research?. *Contemporary Nurse*, 12(1), 58-63.

Tanner, C. (1999). Constraints on environmental behaviour. *Journal of Environmental Psychology*, 19(2), 145-157.

Tanner, C., Kaiser, F. G., and Kast, S. W. (2004). Contextual Conditions of Ecological Consumerism A Food-Purchasing Survey. *Environment and Behavior*, 36(1), 94-111.

Tanner, T. (1980). Significant life experiences: a new research area in environmental education. *Journal of Environmental Education*, 11(4), 20-24.

Tausig, J. E., and Freeman, E. W. (1988). The Next Best Thing to Being There: Conducting the Clinical Research Interview by Telephone. *American Journal of Orthopsychiatry*, 58(3), 418–427.

Teisl, M. F., Rubin, J., and Noblet, C. L. (2008). Non-dirty dancing? Interactions between eco-labels and consumers. *Journal of Economic Psychology*, 29(2), 140-159.

Terry, D. J., Hogg, M. A., and White, K. M. (1999). The theory of planned behaviour: self–identity, social identity and group norms. *British Journal of Social Psychology*, 38(3), 225-244.

Thaler, R. (1992). *The winner's curse: Paradoxes and anomalies of economic life*. Princeton: Princeton University Press.

The People's Supermarket. (2011). [Television broadcast]. UK: Channel 4. Episode 1 (6 February 2011). Episode 2 (13 February 2011), Episode 3 (20 February 2011), Episode 4 (27 February 2011).

The People's Supermarket (TPS). (2013). *Our Blog* [Online]. Available at: http://thepeoplessupermarket.org [Accessed November 2013].

Thøgersen, J. (1999). Spillover processes in the development of a sustainable consumption pattern. *Journal of Economic Psychology*, 20(1), 53-81.

Thøgersen, J. (2006). Norms for environmentally responsible behaviour: An extended taxonomy. *Journal of Environmental Psychology*, 26(4), 247-261.

Thomas, G. (2011). *How to do Your Case Study: A Guide for Students and Researchers (Kindle edition)*. London: Sage.

Timmins, C. (2010). *Consumer attitudes towards organic food*. Aberystwyth: Organic Centre Wales.

TPS. (2013). *The People's Supermarket website* [Online]. Available from: http://www.thepeoplessupermarket.org.uk [Accessed 23 September 2013].

Transition Pimlico Food Co-op. (2011). *Mailing list* [Online]. Available from: https://groups.google.com/forum/#!forum/transition-pimlico-food-coop [Accessed 7 February 2012].

Treiman, K., Freimuth, V., Damron, D., Lasswell, A., Anliker, J., Havas, S., ... and Feldman, R. (1996). Attitudes and behaviors related to fruits and vegetables among low-income women in the WIC program. *Journal of Nutrition Education*, 28(3), 149-156.

Triandis, H.C. (1980). Values, attitudes, and interpersonal behavior. In: Howe, H. E. Jr., and Page, M. M. eds. *Nebraska Symposium on Motivation: Beliefs, attitudes, and values, 1979.* Vol. 27. Lincoln: University of Nebraska Press, pp. 195- 259.

Triandis, H. C., 1977. *Interpersonal behavior*. Monterey: Brooks/Cole.

Trier, C., and Maiboroda, O. (2009). The Green Village project: a rural community's journey towards sustainability. *Local Environment*, 14(9), 819-831.

True Food. (2012). *True Food website* [Online]. Available from: https://www.truefood.coop [Accessed 21 March 2012].

True Food. (2014). *Products We Sell* [Online]. Available from: https://www.truefood.coop/WhatWeSell.cfm [Accessed 7 March 2014].

Tukker, A., Goldbohm, R. A., De Koning, A., Verheijden, M., Kleijn, R., Wolf, O., ... and Rueda-Cantuche, J. M. (2011). Environmental impacts of changes to healthier diets in Europe. *Ecological Economics*, 70(10), 1776-1788.

Turner, B. (2011). Embodied connections: sustainability, food systems and community gardens. *Local Environment*, 16(6), 509-522.

Tversky, A., and Kahneman, D. (1992). Advances in prospect theory: Cumulative representation of uncertainty. *Journal of Risk and Uncertainty*, 5(4), 297-323.

Twigg, J. (1979). Food for thought: purity and vegetarianism. *Religion*, 9(1), 13-35.

Twigg, J. (1983). Vegetarianism and the meanings of meat. In: Murcott, A. ed. *The Sociology of Food and Eating.* Gower: Aldershot, pp. 18-30.

Tykocinski, O. E., Pittman, T. S., and Tuttle, E. E. (1995). Inaction inertia: Foregoing future benefits as a result of an initial failure to act. *Journal of Personality and Social Psychology*, 68(5), 793-803.

UNEP (United Nations Environment Programme) and Futerra. (2005). *Communicating Sustainability: How to produce effective public campaigns*. Paris: United Nations Environment Programme.

University of Brighton Food Co-op. (2013). *Co-ops Guide for Brighton & Hove* [Online]. Available from: http://bhfood.org.uk/bhfp-resources/36-food-co-op-guide-final/file [Accessed 3 September 2013].

Uzzell, D. (1999). Education for environmental action in the community: new roles and relationships. *Cambridge Journal of Education*, 29(3), 397-413.

Valentinov, V. (2004). Toward a Social Capital Theory of Co-operative Organisation. *Journal of Co-operative Studies*, 37(3), 5–20.

Van der Horst, K., Brunner, T. A., and Siegrist, M. (2011). Ready-meal consumption: associations with weight status and cooking skills. *Public Health Nutrition*, 14(02), 239-245.

Van Dooren, C., Marinussen, M., Blonk, H., Aiking, H., and Vellinga, P. (2014). Exploring dietary guidelines based on ecological and nutritional values: A comparison of six dietary patterns. *Food Policy*, 44(C), 36-46.

Veblen, T. (1899). *The Theory of the Leisure Class*. 1925 Edition. London: Allen and Unwin.

Verhoef, P. C. (2005). Explaining purchases of organic meat by Dutch consumers. *European Review of Agricultural Economics*, 32(2), 245-267.

Vermeulen, S. J., Campbell, B. M., Ingram, J. S. I. (2012). Climate Change and Food Systems. *Annual Review of Environment and Resources*, 37(Complete), 195-222. doi: 10.1146/annurev-environ-020411-130608

Verplanken, B., and Faes, S. (1999). Good intentions, bad habits, and effects of forming implementation intentions on healthy eating. *European Journal of Social Psychology*, 29(5–6), 591-604.

Verplanken, B., and Wood, W. (2006). Interventions to break and create consumer habits. *Journal of Public Policy and Marketing*, 25(1), 90-103.

Vickers, G. (1965). *The art of judgment: a study of policy making*. London: Chapman & Hall.

Vining, J., and Ebreo, A. (1990). What makes a recycler? A comparison of recyclers and nonrecyclers. *Environment and Behavior*, 22(1), 55-73.

Visser, P. S., and Mirabile, R. R. (2004). Attitudes in the social context: The impact of social network composition on individual-level attitude strength. *Journal of Personality and Social Psychology*, 87(6), 779–795.

Warde, A. (1997). *Consumption, Food and Taste: Culinary Antinomies and Commodity Culture*. London: Sage.

Warde, A. (2005). Consumption and theories of practice. *Journal of Consumer Culture*, 5(2), 131–153.

Wardle, J., Cooke, L. J., Gibson, E. L., Sapochnik, M., Sheiham, A., and Lawson, M. (2003). Increasing children's acceptance of vegetables; a randomized trial of parent-led exposure. *Appetite*, 40(2), 155-162.

WCED (World Commission on Environment and Development). (1987). *Our Common Future*. Oxford: Oxford University Press.

Weber, C. L., and Matthews, H. S. (2008). Food-Miles and the Relative Climate Impacts of Food Choices in the United States. *Environmental Science and Technology*, 42(10), 3508–3513.

Weber, E. U. (1997). Perception and expectation of climate change: precondition for economic and technological adaptation. In: Bazerman, M., Messick, D., Tenbrunsel, A., Wade-Benzoni, K. eds. *Psychological perspectives to environmental and ethical issues in management*. San Francisco: Jossey-Bass, pp. 314–341.

Weber, E. U. (2006). Experience-based and description-based perceptions of long-term risk: Why global warming does not scare us (yet). *Climatic Change*, 77(1-2), 103-120.

Weber, E. U., Johnson, E. J., Milch, K. F., Chang, H., Brodscholl, J. C., and Goldstein, D. G. (2007). Asymmetric discounting in intertemporal choice a query-theory account. *Psychological Science*, 18(6), 516-523.

Webster, J. L., Dunford, E. K., and Neal, B. C. (2010). A systematic survey of the sodium contents of processed foods. *The American Journal of Clinical Nutrition*, 91(2), 413-420.

Weinreich, N. K. (2010). *Hands-on social marketing: A step-by-step guide to designing change for good*. Thousand Oaks: Sage.

Wells, N. M., and Lekies, K. S. (2006). Nature and the life course: Pathways from childhood nature experiences to adult environmentalism. *Children Youth and Environments*, 16(1), 1-24.

Welsch, H., and Kühling, J. (2009). Determinants of pro-environmental consumption: The role of reference groups and routine behavior. *Ecological Economics*, 69(1), 166-176.

Wenger, E. (1998). *Communities of Practice: Learning, Meaning and Identity*. Cambridge: Cambridge University Press.

Wenger, E. (2000). Communities of practice and social learning systems. *Organization*, 7(2), 225-246.

Wentworth, W. M. (1980). *Context and understanding: An inquiry into socialization theory*. New York: Elsevier.

Whelan, A., Wrigley, N., Warm, D., and Cannings, E. (2002). Life in a 'food desert'. *Urban Studies*, 39(11), 2083-2100.

White, K. M., Hogg, M. A., and Terry, D. J. (2002). Improving attitude-behavior correspondence through exposure to normative support from a salient ingroup. *Basic and Applied Social Psychology*, 24(2), 91-103.

White, M., Bunting, J., Williams, L., Raybould, S., Adamson, A., and Mathers, J. (2004). *Do food deserts exist? A multi-level, geographical analysis of the relationship between retail food access, socio-economic position and dietary intake*. London: Food Standards Agency.

Whitmarsh, L. (2011). Scepticism and uncertainty about climate change: dimensions, determinants and change over time. *Global Environmental Change*, 21(2), 690-700.

Whitmarsh, L., O'Neill, S., Seyfang, G., and Lorenzoni, I. (2009). *Carbon Capability: what does it mean, how prevalent is it, and how can we promote it* [Online]. Tyndall Working Paper 132. Norwich: Tyndall Centre for Climate Change Research. Available from: http://www.tyndall.ac.uk/Tyndall-Publications/Working-Paper/2009/Carbon-Capability-what-does-it-mean-how-prevalent-it-and-how [Accessed 6 September 2014].

Whitmarsh, L., O'Neill, S., and Lorenzoni, I. (2011). Commentary: Climate change or social change? Debate within, amongst, and beyond disciplines. *Environment and Planning A*, 43(2), 258-261.

Whitmarsh, L., Seyfang, G., & O'Neill, S. (2011). Public engagement with carbon and climate change: to what extent is the public 'carbon capable'?. *Global Environmental Change*, 21(1), 56-65.

Whittemore, R., Chase, S. K., and Mandle, C. L. (2001). Validity in qualitative research. *Qualitative Health Research*, 11(4), 522-537.

Wicker, A. W. (1969). Attitudes versus actions: The relationship of verbal and overt behavioral responses to attitude objects. Journal of Social issues, 25(4), 41-78.

Wier, N., Pilley, G., and Harrison, M. (2007). *The story of CSA in Stroud* [Online]. Available from: http://www.stroudcommunityagriculture.org/ [Accessed 1 Aug 2013]

Williams, R. C. (2005). *The Co-operative movement*. (1st ed.). Ashgate: Hampshire.

Williams, A. G., Audsley, E. and Sandars, D. L. (2006). *Determining the environmental burdens and resource use in the production of agricultural and horticultural commodities* [Online]. Final report to Defra on project IS0205. Bedford: Cranfield University and Defra. Available from: http://randd.Defra.gov.uk/Document.aspx?Document=IS0205_3958_EXE.doc [Accessed 5 June 2014].

Williams, A. G. and Audsley, E. (2008). *Comparative Life-Cycle Assessment of Food Commodities Procured for UK Consumption Through a Diversity of Supply Chains* [Online]. Defra Project Report FO0103. Available from: http://bit.ly/YBssEF [Accessed 17 August 2014].

Willig, C., (2001). *Introducing qualitative research in psychology*. Buckingham: Open University Press.

Willmott, P., (1989). *Community initiatives: patterns and prospects*. PSI Research Report, 698. London: Policy Studies Institute.

Wilson, T. D., and Hodges, S. D. (1992). Attitudes as temporary constructions. In: Martin, L. L., and Tesser, A. eds. *The construction of social judgments*. Hillsdale: Erlbaum, pp. 37–65.

Winston, J., Johnson, C., and Wilson, S. (2008). Barriers to healthy eating by National Health Service (NHS) hospital doctors in the hospital setting: results of a cross-sectional survey. *BMC Research Notes*, 1(69). doi:10.1186/1756-0500-1-69

Woolcock, M. And Narayan, D., (2000). Social capital: Implications for development theory, research, and policy. *The World Bank Research Observer*, 15(2), 225-249.

World Cancer Research Fund/American Institute for Cancer Research. (2007). *Food, nutrition, physical activity and the prevention of cancer: a global perspective*. Washington, DC: American Institute for Cancer Research.

Worsey, A. (2002). *Vegetarian Food School Report. A UK-wide survey of school meals provision for veggie children*. Tonbridge: Animal Aid.

Worsley, A., and Skrzypiec, G. (1998). Teenage vegetarianism: prevalence, social and cognitive contexts. *Appetite*, 30(2), 151-170.

WRAP [Chapagain, A., and James, K.]. (2011). *The water and carbon footprint of household food and drink waste in the UK*. Banbury: Waste and Resources Action Programme (WRAP). Banbury: WRAP.

WWF UK [Macdiarmid, J., Kyle, J., Horgan, G., Loe, J., Fyfe, C., Johnstone, A., and McNeill, G.]. (2011). Livewell: a balance of healthy and sustainable food choices. Godalming: WWF UK.

WWF UK [Thompson, S., Gower, R., Darmon, N., Vieux, F., Murphy-Bokern, D., and Maillot, M.]. (2013). A balance of healthy and sustainable food choices for France, Spain, and Sweden. Godalming: WWF-UK.

Yin, R.K., (2009). *Case Study Research: Design and* Methods. London: Sage.

Zitcer, A. (2015). Food Co-ops and the Paradox of Exclusivity. *Antipode*, 47(3), 812–828.

Appendix A
INTERVIEW CONSENT FORM

During this interview you will be asked questions about your experiences with sustainable food consumption, both at the personal and community level. If at any point you feel uncomfortable about answering a question, please feel free to indicate this and we will move on to the next question.

The interview will be recorded electronically. The recorded audio or video material will be kept confidential and will not be made publicly available in audio or visual form without your prior permission. The content of the interview, however, may be included in research outputs, such as, journal articles, books, thesis and working papers.

If you have questions about the research project or procedures, you can contact Pranav Bihari at the University of Kent, Canterbury, Kent CT2 7NF, phone number: +44 772 662 7983, or email: pb237@kent.ac.uk

Participant's Agreement

____ I agree to be interviewed for the purposes of the research.
____ The purpose and nature of the interview has been explained to me by the researcher.
____ I agree that the interview may be electronically recorded.
____ Any questions that I asked about the purpose and nature of the interview and research have been answered to my satisfaction.
____ I may stop the interview at any time without an explanation.

I grant permission to use one of the following:
____ My first name only
____ My full name
____ Just a pseudonym (Keep the interview anonymous)

______________________ ____________________
Participant's signature Date

____
Interviewer's signature

Appendix B
FOOD CO-OP: KEY INFORMANT INTERVIEW GUIDE

1. Could you please introduce me to your co-op? Ask about size of membership, product policy, member participation, mode of operation.
2. How did you first get involved with your co-op? What has been your role within the co-op?
3. What have been your experiences in trying to encourage or help other people to adopt sustainable food consumption behaviour? What strategies do you and your co-op use?
4. One could imagine that some people involved with your group may have made a shift towards sustainable food choices before joining your group. Do you know of people who have made a considerable shift in their food choices after participating in your group's activities?
5. What opportunities for member participation are available at your co-op?
6. How successful do you think your group has been in achieving its goals and what are its main challenges?
7. How do you see your group moving forward in achieving its goals? What can help you and your group be more effective in your work? What opportunities do you see going forward?

Appendix C
BEHAVIOURAL INFLUENCE: LIFE HISTORY INTERVIEW GUIDE

1. When you go out to shop for food what factors do you consider most important in making your choices?
2. How do you think you first became aware of issues around sustainable food?
3. Do you remember what was the first time you purchased food differently with a conscious effort to eat sustainably?
4. Was it difficult for you to make those choices in the beginning?
5. What factors influenced you in thinking more about sustainability?
6. When you were growing up were there any organisations or groups that played an important role in your life, such as religious, environmental or educational groups?
7. What helps you in maintaining your sustainable food habits?
8. Since you made the first changes in your food consumption, have other factors increased your awareness of and commitment to a sustainable lifestyle?

Appendix D
THE PEOPLE'S SURVEY

This survey should take no more than 5 minutes to complete. Your answers will help us understand your shopping preferences and enable us to improve our services to you. All answers will be processed and your responses will be anonymous and confidential.

1.) How many times did you shop at The People's Supermarket over the last month?

( ) Every day

( ) 4-5 times a week

( ) 2-3 times a week

( ) Once a week

( ) Less than once a week

2.) List up to 6 products that you buy regularly at another supermarket but cannot find in The People's Supermarket.

1: ___________________________

2: ___________________________

3: ___________________________

4: ___________________________

5: ___________________________

6: __________________________

3.) When you buy a product, how important are the following factors?
(Options: Very important, Important, Neutral, Not important)

Local

Organic

Animal welfare

Fair trade

Allergy concerns

Vegetarian/Vegan

Price

4.) Thinking about when you first joined The People's Supermarket, how would you rate these statements. (Options: Strongly disagree, Disagree, Neutral, Agree, Strongly agree)

I wanted the opportunity to work in a supermarket.

I wanted the opportunity to meet more people through getting involved.

I wanted the 10% discount.

I liked the member-owned and member-run concept of the business.

I wanted an alternative to the large supermarkets

I wanted to be involved in a business that practices sustainability

I wanted to be involved in a business that sources from local suppliers.

5.) How has your experience using The People's Supermarket differed from your original expectations?

( ) Well above my expectation

( ) Better than I expected

( ) Meets my expectation

( ) Somewhat below my expectation

( ) Well below my expectation

6.) How could The People's Supermarket interest you more?

7.) Are you satisfied with The People's Supermarket as an organisation that allows members to be involved in the day to day operation and decision-making?

( ) Very Satisfied

( ) Satisfied

( ) Neutral

( ) Dissatisfied

( ) Very Dissatisfied

8.) Are you?

[ ] Working full time

[ ] Working part time

[ ] Unemployed

[ ] Looking full time after home/family

[ ] Studying in a college or university

Thank you for taking our survey. Your response is very important to us.

Appendix E
CO-OPERATIVE PRINCIPLES FOR SUSTAINABLE FOOD CO-OPS

1. **Voluntary and open membership**: People join the co-op on the basis of their commitment to sustainable food consumption practices.

2. **Democratic member control**: Members jointly co-ordinate and devise plans to address environmental objectives.

3. **Member economic participation**: Members support their co-op financially, primarily through their purchase of sustainable food from the co-op, and to the extent possible, by volunteering time and labour.

4. **Autonomy and independence**: Decisions are taken at the community level to identify the specific ways in which sustainable food provision and waste management can be addressed.

5. **Education, training and information**: Co-op provides training on co-operative management and creates learning opportunities to increase practice-relevant knowledge about environmental issues, sustainable food practices, and its linkages with other social issues that members care about.

6. **Co-operation among co-ops**: Co-op co-ordinates with other co-ops to develop wholesale supply infrastructures that enable better price and choice of sustainable food for co-op members.

7. **Concern for community**: Co-op prioritises local and sustainable sourcing, fills gaps in provision of sustainable food to meet community needs, creates social interaction spaces to strengthen social capital, and supports developing communities around the word through commitment to FairTrade.