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Barriers for Energy Changes among end consumers and households: UK National Report of Focus Group discussions for the EU Framework 7 BarEnergy Project

by

Shane Fudge

RESOLVE Working Paper 11-11

UNIVERSITY OF SURREY

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1. Introduction

BARENERGY is an EU funded research project which explores the barriers and opportunities related to the reduction of energy consumption in six different countries in the European Union (EU). The countries – the UK, Hungary, France, Switzerland, the Netherlands and Norway – have been chosen in order to characterize variations in political, economic and cultural systems within which domestic energy choices are made. The principal aim of the project therefore is to try to understand the comparative influence of structural, political, financial, psychological, social/cultural and knowledge barriers to pro-environmental energy choices across three areas:

- Domestic energy use;
- Household appliances;
- Fuel consumption of cars.

A central aspect of the programme is to ascertain how barriers to the adoption of more energy efficient choices can be overcome and, importantly, to try to identify what and/or who could be the most effective levers or opportunities for encouraging change.

The data comprising this report follows on from two previous empirical work packages which were part of the BarEnergy project and constitutes the final part of the novel 'empirical trilogy' which underpinned the core ambitions of the project itself. This report therefore details the findings from four focus groups which constituted the research framework of WP-6 – *focus groups among targeted consumer groups.* WP-6 itself can be contrasted to the other two empirical work-packages in several ways. WP-4 for instance was aimed towards clarifying the perspectives of different stakeholders and identifying the influence of their *institutional* role in encouraging more energy efficient behaviour. The quantitative surveys in WP-5 explored attitudes and values amongst European consumers in order to assess 'the strength and relevance of various barriers for change in consumer energy behaviour within different energy regimes in Europe' (BARENERGY, DoW, 2007:33). The aim of the focus groups interviews was to explore the experiences of a range of consumers who are potentially in a position to engage in what the research proposal identifies as 'windows of opportunity'. Thus, while it tries to elaborate on some of the quantitative findings of WP-5 regarding barriers to more sustainable energy use, one of the principal aims of WP-6 has been to explore the lived experience of 'strategic groups' or people from various social backgrounds who inhabit 'windows of opportunity' in relation to their everyday energy use. The focus groups themselves were carried out over a three month period from September to November 2009.

2. Methodology and the research process

This section sets the scene for the report by considering in brief some of the practicalities of the research process of WP-6, particularly the research design and how the samples were obtained, but also the philosophical issues which underpin focus group research and the issues which would be encountered in the data analysis itself.

One of the primary aims of WP-6 is to build upon some of the findings drawn from the stakeholder interviews and also to explore the results of the consumer survey in greater depth. Therefore, while WP-5 was designed to test the strength and relevance of some of the barriers to more sustainable energy behaviours among consumers (identified initially in the three position papers D14, D15 and D16), WP-6 is intended '*to increase our understanding* of the attitudes and values among various consumer groups' (DoW, 2007:34). The philosophical significance of utilizing a methodological approach that will encourage undirected data has been pointed out by Hall (1997:3) who reminds us that, ultimately 'only *people* can give meaning to objects, events and processes'. This theoretical tradition draws from theorists such as Berger and Luckmann (1966) and the more recent work of Hacking (1999) in stressing the contingent or open-ended nature of social and political processes especially those seen as 'fixed'. Focus groups can encourage a 'social dynamic' in order to explore 'why people do the things they do'

WP-6 was designed very much within this tradition therefore, where the main issues to be explored in this package i.e. 'windows of opportunity', the relationship between turn on/switch off, energy efficiency, and changes to renewable could be opened up to discussion amongst potential variables such as age, gender, income and household type.

2.1 Recruitment criteria

The four focus groups were recruited for WP-6 in the UK by the Surrey University Market Research Group during August/September 2009. In accord with the recommended sample size for focus group research (see Burnham *et al*, 2008), each group was recruited for 10 adult participants. It was also agreed that the samples themselves would be stratified according to the two main variables outlined in the specifications for WP-6 (see DoW, 2007:34) i.e. stable and transition consumer groups – 2 of each, then sub-stratified according to income[1], age and gender. The detail of this sampling is summarised in Table 1.

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[1] Income was used for recruitment as a proxy for 'social patterns and lifestyles' – key variables which was explored with the participants as part of the focus group protocol.

Table 1: Summary of focus group sampling frame

	Group 1	**Group 2**	**Group 3**	**Group 4**
Consumer type	Stable	Stable	Transition	Transition
Income	Low-mid	Mid-high	Low-mid	Mid-high
Gender	~ 5 men 5 women	~ 5 men 5 women	~ 5 men 5 women	~ 5 men 5 women
Age	Mixed range from 25 – 45	Mixed range from 46 – 65	Mixed range from 25 – 45	Mixed range from 46 – 65

Definitions for the purpose of recruitment:

'Stable' = Adults (including those in rented accommodation) who have

And/or
- not moved home in the last 10 years
- not made substantial alterations to their property (in terms of build/rebuild or repair) in the last 10 years

'Transition' = Adults who have

And/or
- moved home during the last 2 years
- are planning to move during the coming 2 years
- Have made substantial alterations to their property (in terms of build/rebuild or repair) in the last 10 years
- Are currently making substantial alterations to their property or plan to make substantial alterations to their property during the coming 2 years

While *representativeness* is not an essential aspect of focus group research, it was agreed with the Market Research Company that the UK samples would be drawn from four different local authority areas in order to offer a degree of spatial differentiation rather than risk samples all coming from the same area.

A pilot study was undertaken on 15/9/09, primarily to test out the design of the question schedule that had been developed over the previous four months. The research sample and timeline for the UK focus group research was then compiled as shown in Table2.

Table 2: UK focus groups research sample

	Group 1	**Group 2**	**Group 3**	**Group 4**
Location	Slough	Richmond	Brighton	Birmingham
Income	Low-mid	Mid-high	Low-mid	Mid-high
Consumer type	Stable	Stable	Transition	Transition
Age range	Mixed range from 25 – 45	Mixed range from 46 – 65	Mixed range from 25 – 45	Mixed range from 46 – 65

Four themes were chosen to structure the schedule of questions for each focus group. The first three themes were structured around the energy issues that are at the centre of the BARENERGY research project itself: domestic energy use, household

appliances, and fuel consumption of cars. An additional category which was focused on 'wider issues' was then added to more directly address areas such as 'governance' and 'trust' and 'responsibility'. Each of these areas was subdivided into a set of eight or nine questions alongside a series of 'prompts'. The prompts were introduced in order to stimulate discussion where necessary. It was also felt that the prompts would 'expand' the questions themselves in order to give the facilitator a natural way of exploring the issues which would be largely independent of the knowledge he or she would have in the area. This would also encourage a degree of repetition to the question schedule, enabling questions to be explored in a number of different ways, maximizing participants' responses to the same themes. The original interview schedule was expanded subsequent to the pilot study, where it was felt that there was a space for more questions, and also more guidance for the facilitator to probe the focus group participants.

3. Brainstorming exercise

'Name one thing which could be done to encourage a more sustainable society'

Broader national surveys in the UK i.e. Ipsos MORI (2007) and Defra (2009) have indicated that there is a growing appreciation of environmental concerns amongst the general public, particularly the threat of climate change, alongside an increasing desire to act on this. However, as the surveys have also shown, there remains an apparent lack of knowledge amongst many individuals about what they can actually do to bring about the necessary changes. Consequently, there has been the recognition amongst environmental psychologists of a 'value-attitude-behaviour' discrepancy (Abrahamse *et al*, 2005, Stegg, 1999) which needs to be addressed in more detail if policy-makers are to bring about necessary shifts in individuals' everyday practices. Part of the rationale behind this early question therefore was to gage participants general awareness on 'sustainability' and their knowledge of what it means.

This was an appropriate starting point for the focus group research where, after the participants in each of the four groups were all encouraged to introduce themselves at the beginning of each session, a question on sustainability was introduced as a 'warm-up probing' device through which to initiate interaction between individuals who have been brought together for the first time. During this 'brainstorming' session, participants were asked to 'name one thing which could be done to encourage a more sustainable society'. Again, the aim here was to encourage interaction and a degree of exchange in all of the groups while also getting participants to think along the lines of some of the issues that they would be introduced to during the session. Some of the answers turned out to be a bit surprising where participants did not necessarily equate sustainability with environmental concerns but sometimes linked them to broader social and economic concerns. Participants in the Richmond group for example thought about sustainability in a more general sense when asked for their thoughts on the concept:

Something that will still be there in the future…we're sort of like investing in the future for it still to be there (female, mid-high income, stable, Richmond).

Something that is renewable and it don't use up all the resources (male, mid-high income, Richmond).

Not using something that you can't replace (male, low-mid income, transition, Richmond).

The issue of where responsibility might lay for encouraging a more sustainable society for the benefit of future generations to inhabit was considered by some participants:

Something that will still be there in the future…we're sort of like investing into the future for it still to be there (female, low-mid income, transition, Richmond).

It suggests responsibility…well for something to be sustainable it involves making choices that are responsible (female, low-mid income, transition, Brighton).

Others thought that the move to a more sustainable society would be one in which people were provided with more and better education around these issues. The question of familial education and moral socialization was raised, as well as the importance of the influence of more formal educational channels. The importance of education and providing information to people came through particularly strongly during the Birmingham focus group where some of the participants who took part in this session shared these views:

I was actually going to mention education because I am a school teacher anyway…and more morals at home as well I think, from what I can see…more family involvement (male, mid-high income, transition, Birmingham).

At the risk of repeating these two [previous views from other participants], I feel very strongly about education and parental involvement and responsibilities (female, mid-high income, transition, Birmingham).

Interestingly, for this next participant the green sustainability message was tied up with issues such as recycling and the need to encourage more widespread practices by providing individuals with incentives through which to change behaviour:

The first thing that did come into my head when you said 'sustainable' was recycling again so that's a bit boring but I live in Walsall, and Walsall are very good with recycling. Somebody mentioned 'reward' and I think that there should be more reward for recycling. I think that if you recycle, then

you should have something off of your council tax and that there should be a way of doing that (male, mid-high income, transition, Birmingham).

This individual from the same group agreed upon the importance of educating people in order to bring about a more sustainable society, but he also felt it important to emphasize that these messages needed to come from the media as well as more formal educational institutions:

I was going to say advertising, either press adverts or we should come back to educating people and pretty much that's it really I suppose…just education and advertisement (male, mid-high income, transition, Birmingham).

The significance of education, but also the importance of *where* these messages should come from, was picked up by some of the participants in the Slough group:

Advertising…well adverts being done on the radio or television or magazines, explaining about green issues, things like that. I think if they show you like if you recycled on can it would light a house or something, and they can actually show you the good that you were doing…that's encouraging (female, low-mid income, stable, Slough).

Just the television and things like that (female, low-mid income, stable, Slough).

Significantly, as the above quotes illustrate, the importance of educational messages on sustainability were also linked to the sources from which such messages came from. Putnam (2000) has emphasized the importance of encouraging 'bonding' as well as 'bridging' social capital in community educational programmes. He argues that both 'bonding' and 'bridging' must complement each other so that 'bonded' networks and groups of individuals are also integrated within the wider community and the overall political system itself. He suggests that this will encourage 'positive' social capital as a functional pre-requisite for a healthy civil society. Some of the participants showed an awareness of this dynamic, stressing the importance of family, colleagues and friends in inculcating the 'right' messages on sustainability in children from a young age:

Well, start at the bottom with children (male, low-mid, stable, Slough).

The first thing that sprung to my mind, although we've broached on it anyway, is possibly you know…mothers being at home for their children in the early years. I know it's difficult because we live in a materialistic society and people…you know…want things, but I think you can give children seven or eight years at home with them. Like the other guy said, you know, parental guidance along with education at school…I think that would give us a sustainable society (male, mid-high income, transition, Birmingham).

It was interesting that the environment was not always at the forefront of people's minds when discussing the issues of sustainability, and its recognition was often linked into what they felt were other related areas. However, a few of the individuals in the Slough focus group did address the importance of environmental sustainability as more direct responses:

> *Sustainable society…it would mean being green to me (female, low-mid income, stable, Slough).*

> *Yes, I would say green issues as well (female, low-mid income, stable, Slough).*

> *Carbon footprints…the whole green issues (female, low-mid income, stable, Slough).*

Some individuals gave what could be considered to be much more thoughtful answers regarding the *practicalities* of what moving to a more sustainable society would mean; particularly in terms of what they considered to be a more sustainable energy infrastructure:

> *Renewable energy (male, low-mid, stable, Slough).*

> *Getting money back when you put solar into your house, on the roof (male, mid-high, Birmingham).*

> *It's not always cheap to buy the best products and things…things that are best for the environment (female, low-mid, stable, Slough).*

As argued above, a few of the participants had some different ideas on what the concept of sustainability meant and were clearly prepared to think in wider terms of reference:

> *Stable taxes; well, if they fluctuate then they can't be sustainable because one minute you could be paying…you've got the pressure of your mortgages as well (male, low-mid, stable, Slough).*

> *I guess it's financially being sustainable as well isn't it? (female, low-mid income, transition, Brighton).*

There were noticeable levels of apathy and cynicism amongst a few of the responses to this question and a feeling that the responsibility for individual change needed to be balanced against the need for wider changes in business, culture and stronger government leadership than was being displayed at present:

> *You could encourage people to do more recycling because I think if they keep asking people to do it and then they say 'oh there's no point in doing it*

because the world's going to crash anyway'…that's what people are saying (female, low-mid, stable, Slough).

A bit more tolerant society I think. It's absolutely mad…everybody seems to be just sort of looking after themselves now. We're just all in our own little bubbles and we just don't seem to give consideration to anybody else (male, mid-high, transition, Birmingham).

It was clear that the focus group participants all had a fair degree of knowledge regarding the relevance of sustainability issues. It was noticeable that there were themes which tended to emerge within each group, which would usually become variations on what the first few comments were. This does not necessarily suggest that we can easily attribute particular views and perspectives to the demographics of the focus groups themselves, rather that focus group interaction is primarily about social dynamics and that analysis 'is the explicit use of group interaction as research data' (Kitzinger, 1994:103-21).

4. Theme A: Domestic Energy Use

4.1 Summary

The major themes which emerged during the four focus group discussion on domestic energy use related to:

- Comfort;
- Cost;
- Household negotiations;
- Reliability;
- Practicality

The main part of the focus group sessions began with a discussion on 'domestic energy use': mirroring the headline behavioural domains outlined in the project proposal (DoW, 2007). The priority issue for most of the participants concerned **cost.** For instance, individuals were more likely to engage in energy efficiency measures such as 'turn-down/switch off, insulating or double glazing, if they were able to discern what the benefits would be for them in financial terms. Awareness of cost also related to decisions over the possibilities for investing in renewable energy or whether to purchase more energy efficient heating appliances. A few participants were aware of the environmental benefits of such activities but these were clearly not the main motivating factors.

Comfort was hugely important to almost all individuals' use of energy and some participants made the point that comfort was so important to them that it would override the finances involved in heating their home even if energy prices were to increase in a significant way.

One interesting area to emerge throughout the four focus group discussions – and also subsequently when the discussions moved on to the other issues – was the issue

of **negotiations within households** over issues of comfort and convenience related to domestic energy use. It was noticeable for instance that in some homes that generational issues involved, for instance, teenagers engaging in electricity or heating use that parents perceived to be wasteful. Again, this was invariably articulated through consideration of detrimental financial consequences. Some individuals pointed out that there were also issues which regularly occurred between domestic partners regarding disagreements over standards of 'comfort' often meant that heating and electricity 'compromises' would be the result of domestic negotiations.

Convenience was also an issue which occurred quite frequently within the focus groups. Many individuals within the four groups used their heating and electricity according to convenience. Timers for instance would be set around the needs of different lifestyles; rooms would be heated according to daily practices and routines.

Discussions in the section on 'home energy use' also considered issues regarding the **practicalities** of getting people to change to more sustainable ways of living and the wider, structural changes in energy delivery mechanisms which would be involved in such a shift. For instance, some individuals questioned the reliability of solar heating or wind as being able to supply household energy demand. Others suggested that current barriers included the aesthetic issues attached to the construction of wind farms and also the practicalities of location.

4.2 Domestic energy use in the UK: a wider overview
The practices and behaviours associated with domestic energy use in the UK have come under increased political scrutiny during the last two decades. A ratcheting up of environmental targets – synthesized in 2008's Climate Change Bill and the long-term goal of an 80 per cent reduction in the UK's carbon emissions – has joined concerns over the price and availability of gas. The practices, behaviours and technologies associated with residential energy use have therefore been targeted by a variety of political initiatives to address primary energy use in households which has been estimated at 28 per cent of total energy use in the UK. It has been estimated that approximately 30-40 per cent of the UK's CO_2 emissions emanate from this sector – a figure that will continue to increase with rising demand, which has been estimated at approximately 3 per cent per annum (Druckman and Jackson, 2008).

This poses a particular dilemma for the UK Government as it strives to meet rising housing demand with increasingly stringent environmental targets and also 'peak oil' concerns. Policy since the early 1990s has been broadly based on the assumption that a market for household energy efficiency investments, i.e. products such as loft insulation, cavity wall insulation and double glazing and renewable energy take-up, can be reconciled with encouraging changes in practices and behaviours – particularly in relation to social norms and cultural ideals that have developed around temperature regulation in buildings and households. Working with the assumption that a potential market may not have appeared due to asymmetric or unclear price signals – clearly a problem in pricing pollution – UK Government policies have been based primarily around providing more information to both

producers and consumers regarding the costs and benefits of greater energy efficiency. *The Home Energy Efficiency Scheme*, *The Home Energy Conservation Act* and the *Warm Fronts Grant* have all been examples of the kinds of policy which the UK Government have hoped will provide an effective regulatory framework through which to address this energy use in this domain.

4.3 Comfort

One of the main issues for the focus group participants related to the importance of 'warmth' and cultural ideas of **comfort.** This came through fairly strongly in all of the focus groups. Shove (2004) has written extensively on the role of social norms relating to 'comfort' and also 'convenience' in influencing individual energy practices and a few of the focus group participants made the point that they would be quite prepared to trade higher bills if their own ideas related to how warm they should be were to come into tangency with cost. Interestingly, these viewpoints did not seem to be related to the income levels that were specified for each group – participants across all of the groups argued that they would be quite prepared to pay higher costs for warmth if they were forced into such a position. Some of these observations included:

> *I would say that comfort comes before bill (male, mid-high, stable, Richmond).*

> *You don't want to sit in the dark and cold do you? (male, mid-high, stable, Richmond).*

> *Comfort's important isn't it? (male, mid-high income, transition, Birmingham).*

The environment was not factored into many of the decisions which individuals engaged regarding comfort. This participant argued for instance that their personal habits around comfort in relation to room temperature and particular energy use had little relation to a consideration of environmental issues:

> *I've got double glazing but I tend to leave the windows open more with the central heating on. I just like one side of the room being quite fresh and the other side of the room being quite warm. I know that's against what everyone is saying but I'm not convinced that any sort of things that I do will make any difference (female, mid-high, stable, Richmond).*

There was a mixed reaction amongst participants in relation to engaging in alternative ways of staying warm to simply turning their heating up, such as putting on extra layers of clothing, as these following quotes illustrate.

> *I would rather put a jumper on before the heating I think (female, low-mid, stable, Slough).*

> *To be fair, probably a couple of years ago it would have been to turn the heating on but now that gas is so expensive I put a jumper on (male, low-mid income, transition, Slough).*

Participants used different ways to justify whether they would or would not do this, but some made the point that simply putting on an extra layer of clothing for instance, would not be applicable to all situations and living circumstances – particularly for those regarding the very young and the elderly when things got really cold. For some though, they readily acknowledged that turning the temperature up on their heating system would be the first thought:

> *I'll have the heating on because I just can't be cold and uncomfortable at home (male, low-mid income, stable, Slough).*

4.4 Cost

The first structured discussion in the four focus groups therefore centred upon issues involved with energy use in the home. Ten questions featured in this part of the focus group sessions; all pitched at exploring the participant's home energy use and practices. As argued above, the most popular responses amongst the participants in all the groups related to issues regarding **cost and economic factors.** For example, these were among the responses to be drawn out from the first question 'what are some of the key issues that determine your energy use in the home with regard to both heating and more general energy use?'

> *The bill (male, mid-high income, stable, Richmond)*

> *It's got to be the bill hasn't it, yes? (male, mid-high income, stable, Richmond)*

> *Well, it's down to cost isn't it? (male, low-mid, transition, Brighton)*

There tended to be significant convergence across *all* of the groups regarding the prevalence of cost and financial factors, where many participants tended to see this in terms of being an overarching issue in relation to many of their heating practices and electricity use. This is not unusual in itself and reflects the findings of a variety of studies on encouraging environmental behaviour which suggest that the cost-benefits of energy use are often framed in financial terms. Platt and Retallack (2009:19) have made this case in their recent research document *Consumer Power: How the Public Thinks Lower-Carbon Behaviour could be made Mainstream* where they observe that 'cost is invariably a more important consideration than environmental impact'. Platt and Retallack see the issue of cost as being both a 'barrier' and a 'motivator'. The following quote illustrates the way in which this can be a 'motivator' to change with environmental benefits, even if the intention behind energy saving measures are undertaken on a purely financial basis:

> *Well, I tend to switch things off properly but the last thing on my mind is the effect it may or may not have on the planet…it's a cost thing (male, low-mid, stable, Slough).*

The views of the participants in the following section however, show that perceived costs on the part of the consumer play a very real part in incentivising the adoption of certain behaviours. On the issue of whether people had or would be willing to install solar panels on their properties for instance. It turned out that no-one in the groups currently had any kind of solar heating in their homes.   With the perception being that there was a lack of economic incentive to invest in solar technology:

> *I've looked into it [solar panels] but it's too expensive (male, mid-high income, stable, Richmond).*

> *I don't think you are encouraged to do it either…there's no incentive to do it and it doesn't increase the value of your house if you sell it either so you'd never get your money back (male, mid-high income, stable, Richmond).*

Some participants argued that they would definitely consider some form of solar energy if the price was made more amenable, both by energy companies and through more widespread government incentives:

> *If more people did it then they [energy companies] would have to bring the cost down (female, low-mid, transition, Brighton).*

> *If there was no massive outlay and the company was just going to come in and install everything that you needed then that would be fine, but with two young girls it's just impossible to think of spending something like five grand on whatever…solar panels or different systems maybe. It's just out of the question. You can never afford to do anything like that can you? (female, low-mid income, stable, Slough).*

Financial cost was also agreed upon by many of the participants in the four groups in consideration of other actions which they could take in conserving or reducing energy use. Many had insulated their homes to varying degrees – both in the 'stable' groups and in the 'transition' groups – and this remained the deciding factor for many, but there were other interesting responses. These participants for instance, discussed the cost savings rationale behind the motivation to insulate:

> *With regard to insulating the roof and all the rest of it, I know it's going to save me money at the end of the day. I've just installed a new office at the end of the garden and that has insulation all round and you know I made darned sure that was as efficient as possible. I'm lucky, my house is only twelve years old so it's built to a reasonably good standard as far as that's concerned" (male, mid-high, stable, Richmond).*

> *We are insulating massively over and above to see if we can bring down our heating costs (female, low-mid, transition, Brighton).*

> *"I got a grant because I am a single parent…Warm Front that's it. They came round and gave me the cavity wall insulation, insulated my loft and put a new jacket on the hot water tank. I wouldn't have done it all in one go obviously if I'd had to pay for it but like the fact was I didn't"…(male, low-mid, transition, Brighton).*

Another participant from the same group had also had her house insulated recently and she explained that environmental reasoning had been one of the deciding factors in the decision-making equation. However, she argued the case that green issues are often compatible with cost-saving considerations:

> *Mine was for greener reasons as well as a specific problem. But yes, an attempt to be greener. It's kind of an obvious thing as well…I mean it is an attempt to be greener but for us it's like, if you can get to the point where the whole world is benefiting from it, but you are also benefiting, it's just so obvious. It's a win-win (female, low-mid, transition, Brighton).*

Other participants had gone for more energy efficiency at source. These individuals for instance had had combination boilers fitted in their homes:

> *We actually put a combination boiler in and we put it up in the loft so that it was out of the way, got rid of the tank so it gave us loads more room up there for storage as well and yes, we've found it cheaper to run it. You were lucky to get one bath out of it so if anyone had a bath then no-one could have a shower so that was the main reason. It's been about five years so it's probably paid for itself by now (male, low-mid, stable, Slough).*

> *A combination boiler is brilliant because then you can just use the water you want (female, mid-high income, transition, Birmingham).*

A number of participants from the Birmingham 'transition' group were not so sure about the benefits of installing a combination boiler. Again, many of these concerns were related to various costs, real or imagined regarding these kinds of changes:

> *We have just moved house where we had an old fashioned boiler. We've just moved to a combi-boiler but, to be honest, I would prefer my older boiler. It costs…it costs you because you've got to have that drainage haven't you? (female, mid-high income, transition, Birmingham).*

> *It's almost twelve hundred pounds for a good boiler (male, mid-high income, transition, Birmingham)*

It's all extra cost isn't it really? If your boiler's working you are not going to change. I'm not going to go and spend all that money because it's going to save the environment! (female, mid-high income, transition, Birmingham).

4.5 Household negotiations

Tied in with some of the above observations, some participants argued that practices and routines over things such as household temperature and electricity use came about as a result of **negotiations between household inhabitants.** For these participants, the construction of household social norms on heating arrangements and domestic electricity use were intrinsically tied to things such as family living arrangements and the kind of lifestyles into which individuals were engaged. Some participants also had tenants renting rooms in their properties that they had to take account of when considering energy use, particularly heating. Interestingly, it was apparent that individuals living in the same dwellings often had quite different ideas on things such as room temperature, time schedules for heating to come on, and which rooms should be heated. Participants argued that these individual requirements often created domestic tensions. These participants for example, argued that having children in the house meant that a particular routine on heating was adopted in order to take account of this:

> *We all shower rather than bath…purely need. I mean I have got three girls and if they all decide they want a bath, it's like three tanks of water whereas three or four can get like a shower and wash their hair on one tank (female, low-mid, transition, Brighton).*

> *If you've got young children living at home…you know, you've got to think of them…and then you look at say an elderly person living alone. You know, people advise them to, for example, stay in bed or wrap up in a duvet…there are ways and means [of staying warm] (female, mid-high income, stable, Richmond).*

> *I'm forever going round turning things off…you know? I'll walk upstairs and my daughter's on her computer and the TV's on, but she's not watching the TV. It's cost (male, low-mid, stable, Slough).*

Domestic partnerships were also seen as being problematic for some of the participants with regard to negotiating agreed temperatures and times for indoor heating. For some in the sample, individual preferences and needs around room temperature meant that norms were negotiated locally within the household, rather than following a broader social or cultural norm around comfortable temperatures.

> *Well I would have it [heating] on longer than my girlfriend, but even in the winter she will open all the windows and say that if you are cold you should put something else on. The windows are open every day and as soon as you come in the house and you haven't opened the windows you are in trouble, even in the winter (female, low-mid income, transition, Brighton).*

I try to tweak it [the heating] down, but the wife just tweaks it back up again! (male, mid-high income, transition, Birmingham).

"It's a running battle with my partner because I am forever trying to say 'its too cold, we don't need it on as high' and he's forever saying 'I'm cold', so I say 'well, put a jumper on you know…it's 'put on a jumper' (female, mid-high income, stable, Richmond).

4.6 Reliability

Related in many ways to the issues already discussed, the issue of the **reliability** of energy infrastructure and trust that there would be a continued flow of energy into the home was felt by many of the focus group participants to be fundamental to the ways in which they lived their lives. Perceptions of reliability were primarily related to levels of trust in different energy systems to be able to deliver on both cost savings and habitual levels of comfort. Many participants asked the question 'What's the most cost efficient way of actually installing any system?' This participant argued that most people are primarily concerned with having the most *reliable* system in place through which to ensure continuation of comfort habits and practices:

You don't want your central heating packing up in the middle of January but you are going to look at the cost element. Perhaps you might pay a bit more because something in the long run is probably going to last longer and be more reliable and also efficient…but I suspect that most people don't look at the green aspect of it right away. It really is a case of 'will this boiler keep going or will this system keep going and heat my home and not let me down' (male, low-mid income, transition, Brighton).

In relation to this point, several participants argued that they were currently reluctant to place faith in the purchase of solar power to deliver on reliability of energy supply:

I don't have confidence in that [solar energy] to be honest. I know friends that have done it and it…it's not really been that successful to be honest because you can't totally rely on the sun power. Apparently, when there's not enough there it switches into your normal heating system and so it's fifty-fifty but then…I don't know…I mean I just don't seem to have much confidence in it (female, low-mid income, transition, Brighton).

I've had friends that I know have actually had it installed and have said the same thing. The problem is, you can't rely on it and you do end up having to back it up with a boiler. When they've worked out what they've saved in energy bills over the last five years, it's going to take twenty-eight years for them to get their money back (male, low-mid income, transition, Brighton).

Some participants confirmed that they had little understanding of what choices were available and what these would actually mean to them in everyday terms. As with solar energy, there also seemed to be a general uncertainty and a lack of trust regarding delivery on both the scale and reliability of conventional fossil fuel sources. This translated into a general reluctance to consider the possible advantages of green energy:

> *So can anybody switch to it? I mean, we don't have a lot of wind power in this neck of the woods (male, mid-high income, stable, Richmond).*

> *How do you identify a green energy supplier? What do they do that the other guys don't. If they are still giving you electricity, what are they doing? (male, low-mid income, transition, Brighton).*

> *Wind power is expensive to produce the same as wave technology isn't it? I don't see that as being sustainable for the future (male, mid-low income, transition, Brighton).*

4.7 Practicalities

In relation to the above and issues of trust and reliability, it was argued that the **practicalities** of home energy use and the energy systems to which people were currently engaged, would constitute barriers to change – whether this was in terms of cost, environment *or* efficiency factors. As this participant argued:

> *I'm happy with the way it is [heating system] at the moment. I mean, when you change your boiler, you've got to change your pipes and everything else. It's a bit of an upheaval and we've got wooden floors downstairs…the whole wooden floors would have to come up to change the pipe-work (male, low-mid income, stable, Slough).*

> *For me it's an inconvenience to have any work done, you know? It's a day out of my life. I'd have to organize it and get different quotes. I'd rather change certain practices than go through all the rigmarole of getting new stuff put in (male, low-mid income, stable, Slough).*

No one in any of the four focus groups expressed an interest in changing their home heating systems purely on the grounds of environmental concerns. Some suggested that this would be a side benefit but most of the participants considered that a 'window of opportunity' would be exploited principally on the grounds of a) running costs became too high and b) the system in use was in need of repair or replacement. As these participants pointed out:

> *I think costs…running costs would ultimately make me really focus on to a new boiler or more insulation if the bills started to become unmanageable. But I think I would have to be much more convinced that it was going to*

work if I was going to go to the expenditure of doing something like that (male, low-mid income, transition, Brighton).

For me it's going to be when my boiler breaks. I mean, I would like to be able to do it now but obviously I haven't got the funds, so it's a case just going to be a case of like…when it's necessary rather than beforehand (female, low-mid income, stable, Slough).

In general, participants suggested that the call for the shift towards more widespread use of renewable energy and greater energy conservation and 'their efforts to induce appropriate behavioural responses amongst the UK public' (DEFRA, 2006; DETR, 2000), whilst clearly signposting a growing necessity in terms of environmental consequences, did not currently take account of the everyday practicalities of people's lives and situations. As this participant concluded:

It's all very well being green, but if it doesn't work it's not going to work (male, mid-low income, Brighton).

4.8 Section conclusion
In conclusion, the main themes to emerge in this section of the focus group discussions revolved principally around a complex hierarchy involving cost; comfort; the way in which negotiations between household members 'mediate' home heating and electricity practices; convenience; and practicality.

In general, it was **economic issues** which were the most important factors to come out of the discussions around home heating and electricity use. Focus group participants in all four groups were clearly more likely engage in energy efficiency measures such as 'turn-down/switch off, insulating or double glazing, *if* they could discern what the benefits would be for them in financial terms. These findings also related to decisions that individuals were likely to make over whether to invest in renewable energy or whether to purchase more energy efficient heating appliances. A few participants were aware of the environmental benefits of such activities but, from the discussions within these four groups, these were clearly not the primary motivating factors.

The issue of comfort was felt to be hugely important to almost all individuals' use of energy in the home – particularly in relation to domestic heating arrangements. In this instance, there were clearly a number of **cultural and social barriers** in and around ideas related to 'warmth' and 'comfort'. Some of the participants argued for instance that they would be prepared to put on extra clothing rather than put the heating on or to turn it up. Some of the focus group participants argued the point that comfort was so important to them that it would invariably override the finances involved in heating a home even if energy prices were to increase. These findings could also relate to Stern's (2000) observations regarding **individual-psychological barriers** around the perceived behavioural costs of adjusting energy use in respect of environmental considerations for instance.

One interesting area to crop up throughout the four focus group discussions was the issue of 'negotiations within households' over issues of comfort and convenience related to domestic energy use. These could be construed as being primarily **cultural and social barriers** where social norms emerge from group negotiations. Interestingly, these norms were again related to issues of cost. It was noticeable for instance that in some homes there were often *generational issues* such as teenagers engaging in electricity or heating use that parents saw as wasteful. These issues were often linked to financial consequences. In some of the groups, there were issues between domestic partners and disagreements over standards of 'comfort', which meant that heating and electricity use would result from 'domestic negotiations'.

Convenience was also an issue which occurred quite frequently within the focus groups. Many individuals within the four groups used their heating and electricity according to ideas of convenience. This has been another issue explored by Stern (2000), although the findings from this section of the focus group discussions could arguably be seen as a complex synergy between **individual psychological barriers** and **cultural and social barriers.** Timers for instance would be set around the needs of different lifestyles; rooms would be heated according to daily practices and routines.

Discussions in the first section of the focus groups also considered the issue of practicality. For instance, some individuals questioned the reliability of solar heating or wind as being able to supply household energy demand. For these participants, this was perceived as a **structural barrier** where individuals argued that their own decision-making efficacy was positioned within a number of wider constraints**.** Suggestions around aesthetical issues attached to wind farms and also the practicalities of location would be located within **cultural and social barriers**. In the UK, their have been a number of planned wind farms that have been rejected on these grounds.

5. Theme B: Household Appliances
5.1 Summary
The major themes that emerged from the four focus group discussions on 'household appliances' related to:
- Utility;
- Cost;
- Energy efficiency (Purchase?);
- Energy efficiency (use);
- Household negotiations;
- Technology

As with the first section, while cost and financial factors remained high on the agenda for focus group participants in the 'household appliances' section, it was the **utility** or **use value** which was generally rated as the most important choice for people purchasing these products. Findings suggested that the first decision for

many people when purchasing household appliances, therefore, generally related to questions such as: 'do I need this product?'; 'What will I gain that I don't already have?', and 'how will this facilitate my current lifestyle?' Purchasing decisions were often linked to domestic situation and household composition where utility related strongly to issues of *convenience*. In these respects, the role and importance of washing machines and fridges/fridge freezers came across throughout the group discussions as almost *non-negotiable* accessories to everyday domestic living.   As with the findings in 'theme A', where the idea emerged that there was an almost 'non-negotiable' level of warmth and comfort that was expected by participants from their home heating, there were many similar perspectives on household appliances that individuals would not be prepared to go without. Convenience was high on the list of reasons that participants gave for the use and purchase of domestic energy appliances. This was particularly true of many of the female participants; many of whom provided their own reasons for the importance of washing machines – for some tumble dryers – on lifestyle arrangement associated with having children where there was a need to multi-task.

As with the first section, **cost** also came high on the agenda for many participants. It was not quite so easy to isolate this as a single issue however. Cost factors were also implicated with a number of other decisions, as this section will demonstrate. As argued above, whilst having a washing machine and a fridge freezer was almost viewed in terms of being non-negotiable, some participants argued that they would quite happy buy tumble dryers and dish washers *if* they had the financial means to do so.

Another recurring theme to come out of this section of the focus group discussions concerned the energy ratings of products. Participants displayed a surprising high level of knowledge regarding the significance of energy ratings – particularly in relation to the 'white' products mentioned above. This knowledge was used in different ways however. Some participants for instance, discussed how they often used energy ratings as a way in which to assess reliability and energy efficiency standards, but very rarely did they do so according to environmental terms. According to some of the participants, brand of product was not only identified with its name but, in the case of washing machines and fridge-freezers for instance, it's energy efficiency rating. Participants were often knowledgeable on the way in which these two characteristics went together and some participants argued that these purchase choices would enable longer-term savings.

As with the findings in Them A, focus group participants spoke of household negotiations as an important aspect of the use and purchase of household appliances. A common theme was generational use and perspectives on products. Some parents spoke of having to go around turning lights and other appliances off after children. Some complained that the younger generation were often negligent in their use of energy. Some of the parents in the groups also pointed out that their children often insisted on having products – Wii games were mentioned – that were used a couple

of times and then discarded. Other participants however, argued that it was the other way around!

5.2 Household appliances in the UK: an overview

Reducing carbon emissions from housing and building infrastructures is a policy priority for the UK Government. As well as heating uses and practices, it is thought that appropriate changes in purchasing decisions and household electricity use could reduce annual CO_2 emissions in UK homes by up to two tonnes. Domestic electricity use in the home rose by 1.7 per cent between 1995 and 2002 and much of this has been attributed to the proliferation of consumer electronics in the UK: a trend which will constitute the biggest single sector of domestic electricity consumption by 2010 (Owen, 2006:34).

As Goodall (2007:136) points out, 'the biggest users of electricity around the home are the tumble dryer, the refrigerator and the washing machine'. The next 'greediest' device, according to Goodall, is the television, followed by things such as digital, satellite and cable installations. Part of the reason for their prodigious energy use is that they invariably operate on 'stand bye', which means that turning installations off at the switch can be an 'inconvenience' to the user.

5.3 Utility

Theme B of the focus group discussion therefore explored issues involved with the use and purchase of household appliances. In this section, questions were all pitched at exploring participant's perceptions of their own and also their significant others' use and relationship with household appliances. The most popular responses amongst the participants in all the groups generally related to issues of **utility** where, as argued above, there was a general feeling that ownership of some of these products was almost 'non-negotiable. This was particularly true of washing machines and fridge-freezers but a few other interesting items were mentioned when participants were asked what kind of things they look for when buying a an energy using appliance for the home:

> *There isn't a replacement for some things that are so very convenient. For example, a tumble dryer…there is not an alternative unless you stick them [clothes] on the radiator and by definition you're having radiators on all day to get them dry' (male, low-mid income, transition, Brighton).*

> *I couldn't live without my tumble drier, my telly, my computer (female, mid-high income, transition, Birmingham).*

> *If your washing machine packs up you need one. You've got to go and get one. I mean the same with a dishwasher…if you use it constantly and I mean you get used to using the dishwasher don't you? Do you know what I mean? (male, low-mid income, stable, Slough).*

Other individuals were keen to stress the *purpose* of product purchases to their everyday lives:

> *I think the purpose and the cost really (female, mid-high income, transition, Birmingham).*
> *It's the purpose that you want it for and it's the features that it's got that you are looking at (female, mid-high income, transition, Birmingham).*

When considering the purpose of their choice of domestic products, other individuals emphasised the importance of some of the finer details they considered when making purchasing decisions. These details included *what* the appliance was capable of doing and also *whether* it would fit into the infrastructure of their home:

> *When I bought my washing machine, I bought one that offered the fastest spin speed on it because I figured that I don't have to tumble then…it's going to be spun drier than it would do on a normal, conventional wash. It was more expensive to buy the machine but I was quite happy to because you know…it spins faster, so in theory the washing should be drier (female, low-mid, stable, Slough).*

> *It had to be a certain type of fridge freezer and I didn't realize you can't just put a normal one in the garage (male, mid-high income, transition, Birmingham).*

For this participant, buying a fridge-freezer was based primarily on *aesthetic* considerations:

> *The first thing I looked at was what it was going to look like…what it is going to look like in my kitchen (female, low-mid income, transition).*

5.4 Cost
The issue of cost was considered to be an important part of decision-making regarding use and purchase of household appliances by most of the focus group participants. However, unlike the findings in Theme A, this was a noticeably more complex area, interlinked with other issues and priorities – often dependent upon the product in question. This is consistent with the findings of research conducted by Young *et al* (2009) who suggest that consumers calculate from a range of issues when making purchasing decisions. Focus group participants argued for instance that when purchasing a new washing machine, they often made their decision according to reasons relating to cost, purpose, and aesthetic reasons. Therefore, while many participants still pointed to financial outlay as an important issue, many of the responses during this part of the discussion suggest that it is not always easy to isolate cost as a specific issue but to consider it as an important part of a more complex decision-making process.

There was no suggestion that any of the participants were financially *limited* in participating in some level of consumption in the area of household appliances. While the focus groups were themselves stratified according to different income levels as argued earlier, possessing a washing machine and a fridge freezer was generally perceived in terms of being almost non-negotiable in all the groups. Some participants for instance, argued that they would quite happy purchase tumble dryers and dish washers if they had the financial means to do so.

> *It depends on your income [purchase of domestic appliances] because if you've got…you know loads of money to spend then you'd pick the most energy efficient regardless of its price and the best looking one regardless of its price. But if you haven't got a lot of money to spend then the cost would be the one that determines your decision (male, low-mid income, transition, Brighton).*

These participants argued that it was the price attached to energy efficiency rated washing machines that for them constituted a barrier against this type of purchase:

> *If they are far more expensive then you wouldn't go for it (male, mid-high, stable, Richmond).*

> *You would think they would be trying to encourage you to be buying something that is [environmentally friendly] and they are not are they? (female, mid-high income, transition).*

This participant argued that he was willing to pay extra for an appliance in order to ensure greater longevity:

> *I'd rather pay a bit extra and buy appliances that I know are going to last me. So, for example, I really like Bosch appliances so when I kitted out my house with the washing machine, the tumble dryer, the dishwasher, fridge freezer, I went along with Bosch and it just so happened that it was 'A' efficiency as well, but I didn't take that into account at the time I was buying it. I just thought 'yes, this is going to look good'. I can guarantee that you know it's going to last me a long time and that [it's energy efficiency] was just an afterthought (female, low-mid income, transition, Brighton).*

5.5 Energy efficiency (purchase)

There was generally a good level of knowledge amongst all the groups related to the energy efficiency ratings on electrical appliances. However, as argued above, it was clear that quite a few purchases of domestic appliances were made according to a range of different criteria. As well as the work of Young *et al* (2008) and Jackson (2005) have also noted this complexity in consumer decision-making trends and the ways in which these often switch according to different contexts and circumstances. Some participants in the focus groups for instance, were aware of the longer-term savings that could be achieved by purchasing higher rated appliances. There was

also an awareness that higher rated products were more likely to be in the category of trusted 'brands' which would last for longer than lower rated appliances. Quite a number of the focus group participants had made purchasing decisions according to a product's energy rating – often subdividing and linking this decision to a number of other reasons. As these participants explained:

> *Well, we bought a new fridge…I think it was about two years ago. Ours is a Bosch and I think that was when I first came across the fact that new appliances are obviously run more efficiently and there is a difference between appliances, whereas years ago you just went out and bought it (female, mid-high income, transition).*

> *There is so much choice now and they do sort of subdivide down by price, model, and energy efficiency. So I sort of went through it [store brochure]…I knew the sort of brand I wanted and then I thought 'well, I'll go for the most energy efficient because in theory it's going to be saving me money by using it (female, mid-high, stable, Richmond).*

From the findings explored during Theme B, the environment was not generally considered to be a primarily consideration for individuals purchasing or considering buying an 'A' rated product. Again, however, a few people argued that it came as part of a 'bundle' of purchasing considerations:

> *It's a lot of different reasons all making sense…that obviously you want it to be the most efficient. Obviously you want to…you know…not hurt the climate any more…the environment any more than you have to. It's kind of…like a package of reasons (female, low-mid income, transition, Brighton). I think if you were to walk into Curry's to buy a new washing machine and there was a massive arrow saying 'this is the best one for the environment', I would want to have a look at it, but I wouldn't make a final choice just because it was (female, low-mid, stable, Slough).*

> *It would be somewhere in there if I was told that it was a better option for the environment…then I would perhaps (female, low-mid, stable, Slough).*

Quite a few of the focus group participants had actually purchased 'A' rated products. This preference was generally reserved for 'white' goods and these purchasing patterns mostly concurred with the general viewpoint that appliances such as washing machines and fridge-freezers were largely considered to be must-have items. A few participants also used the energy rating system to guide them on the best options on domestic products such as tumble dryers and dishwashers. While there was a good general awareness of the energy rating system, others remained unclear and pointed out that they were therefore less likely to buy products according to this criterion:

I mean, I'll be honest…I've never looked at a rating in the sense of saying 'how much is this going to cost me' because I'm not sure I could understand it anyway (male, low-mid, transition, Brighton).

I don't really understand [energy efficiency ratings] to be honest with you (male, mid-high, transition, Birmingham).

I think it's got better but I don't think…I don't know…I suppose if you had policies that sort of said 'all washing machines must be 'A' rated' and that's the end of it, then if we bought a washing machine we would just know it was 'A' rated (female, low-mid income, Brighton).

Interestingly, a few individuals were not convinced that the higher rated energy using goods were 'better', more reliable or more cost-effective purchases because of their high energy rating. Some participants who had purchased 'A' or 'AA' rated washing machines, argued that the product design often meant that it was incompatible with their lifestyle requirements. This short discussion took place between three participants in the Richmond focus group who had all invested in 'A' rated washing machines:

We've just bought an 'A' rated washing machine and I specifically bought and 'A' rated machine…and I want to tell you that it's rubbish. Yes it takes forever, it doesn't wash the soap out properly…it's ruined three of my sweaters (female, mid-high income, stable, Richmond).

Well, when I bought the machine, it said it was an 'A' rating and its only when you get home and you start using it that there's nowhere on the machine that says that a wash is going to take two and a half hours…perhaps its something that they should put on there for people to make a choice because I know the next time I go and look for a machine now, I will know and I will check how long the wash cycles are (female, mid-high, stable, Richmond).

If this is what decides the rating of the machine and yet it takes two-and-a-half times as long to do it…any rating on a machine is completely worthless and, worse than that, its misleading (female, mid-high income, stable, Richmond).

This participant argued that her 'A' rated dishwasher displayed some of the same limitations; particularly regarding time and 'convenience' factors:

I bought a dishwasher which was an 'A' rated and most of those programmes run for two-and-a-half hours just to wash a few dishes and that has completely put me off 'A' rating for everything (female, mid-high income, stable, Richmond).

5.6 Energy efficiency (use)

Quite a few of the participants across the four focus groups had engaged in some form of energy efficiency practice in relation to their domestic appliances. There were noticeably a variety of different ways in which people made sense of their own practices and their own reasons for trying to use energy in a more efficient way as these extracts reveal:

> *I just relinquished my tumble dryer because it's energy intensive (female, low-mid income, transition, Brighton).*

> *When I bought my washing machine I bought one that offered the fastest spin speed on it because I figured I don't have to tumble then…it's going to be spun drier then it would do on a normal, conventional machine (female, low-mid income, stable, Slough).*

> *The light bulbs really…I mean, I know they are phasing them out now but I mean…we've had the energy efficient ones for a while now to be honest (male, mid-high income, transition, Birmingham).*

One of the focus group participants spoke about getting rid of their hot-tub because it was uneconomic; others had either reduced their reliance on their tumble-dryer or had got rid of it.

5.7 Household negotiations

As with the previous discussion during Theme A, many of the participants felt that purchase, but particularly *use* of domestic appliances, was often the result of negotiations between various configurations of household inhabitants. In this part of the discussion, the debate moved away from 'white' energy using products towards a greater variety of 'brown' domestic energy using items, the practices and routines which accompany use, and some of the lifestyle choices linked to different energy using products. Individuals had this to say about some of the different products whose use was determined through 'negotiation':

> *The mobile phone chargers they definitely…they're forever on and they [children] just leave them plugged in (male, mid-high income, Richmond).*

> *Yes my son does that…he leaves his television on in his room (female, mid-high income, Richmond).*

> *I'm teaching my children to turn everything off…so the laptops, the Xbox, the TV…everything off (female, low-mid, transition, Brighton).*

Echoing some of the observations that were made during Theme A, some of the participants argued that this issue was often a generational conflict concerning different values that were being negotiated between different age groups.

Individuals in the two older age groups seemed more likely to suggest that there seemed to be a marked generation gap in values which were held by the younger generation but it this viewpoint was not exclusive to these two groups:

> *Perhaps it's something that our generation are more conscious about, turning things off than…you know, generations coming through. There's so much technology that they just expect it always to be on (female, mid-high, stable, Richmond).*

> *I suspect it's down to the schools and colleges. Every child has access to computers now at school and they are not required to turn them off and I think they just get used to that principle (male, mid-high, stable, Richmond).*

Some individuals suggested these behaviours could be curbed if there was a greater awareness of the financial consequences of this kind of generational trend in energy behaviour:

> *They're not switching off because they are not paying the bill are they? (male, mid-high income, transition, Birmingham).*

> *I'm pretty sure they won't make the link until its coming out of their own pocket (male, mid-high income, transition, Birmingham).*

A few participants suggested that the younger generation were less likely to be concerned about their energy use because they had been socialized into a society where there was now more obviously greater choice. A few individuals suggested that lifestyle aspirations were now much more heavily influenced by owning and using the latest products. As this participant argued:

> *Well, we never used to have them did we when we were youngsters…sort of DVD players and stuff like that, they weren't around…you had a record player. It's still the same sort of thing but there's more on the market than there ever was (male, low-mid income, stable, Slough).*

Some individuals noted the difficulties in trying to influence their own children to be more considerate of the consequences of energy using products in the face of pressure from media and peers:

> *No, it's really difficult not to [buy products]. My little girl's nine in a couple of weeks and she wants a Wii and I'm doing everything I can to put my foot down and not get her a Wii…but she doesn't stop going on about it. All her friends have got a Wii and, just in my mind, it's just something else that's going to get plugged in, probably played with for a couple of weeks and then disregarded (female, low-mid income, stable, Slough)*

The participant continued:

> *But when they're advertised on the telly and all the games and everything and you think you know…of course I'm going to get her one eventually because how can you not you know…it wouldn't be fair not to (female, low-mid income, stable, Slough)*

In accord with observations made by Kasser *et al* (2002), these observations accompanied by a general concern over the influence of media and subsequent peer pressure which emphasises materialism and particular values. Parents argued that they were often caught up in a no-win situation under pressure from children who were themselves under pressure from wider society.

5.8 Technology

Many participants in the four groups expressed arguments suggesting that the role of technology was a major enabler or disabler in respect of energy efficient practices and related purchasing decisions. The increasing role of standby modes in electrical appliances was seen as particularly significant for quite a few individuals in being a constraint that was built into the design of electrical appliances. For many participants, this worked to discourage more energy efficient behaviours. Some participants argued that it was advances in technology which often made it difficult to change individual practices and actually directed behaviour in an unsustainable way. Here are a few observations from the four groups regarding the role of the standby mode on domestic appliances:

> *Because if I turn it [digital top box] off, my whole digital goes wrong. It comes back on and it takes five minutes to re-boot so it just stays on standby (female, low-mid income, transition, Brighton).*

> *Also I think a lot of televisions now…what it says is if you leave them off, you leave them off…if you don't have them on standby overnight…some of them actually receive information overnight which upgrades all your systems and things and it won't actually get that unless its on standby apparently (male, low-mid income, transition, Brighton).*

> *If you unplug them then everything gets reset and you get everything…all the clocks are wrong and everything and that really annoys me and yet it annoys me that the technology's there to shut it down (male, low-mid income, stable, Slough).*

Echoing some of the thoughts given on the role of advertising in influencing the younger generation, some participants argued that there was a large measure of responsibility on both government and businesses to regulate consumer needs and wants:

> *They [companies] create the taste for these things, like the Wii, Nintendo you know…they encourage the kids to pester by targeted marketing" (male, low-mid income, stable, Slough).*

> *If the companies didn't produce it you wouldn't buy it, so if the market for it wasn't there, there wouldn't be the demand (male, low-mid income, stable, Slough).*

This individual suggested that, while there *was* a responsibility on business to regulate its behaviour, the fact that their motives were invariably driven by profit, made this difficult to square with aims of sustainability:

> *Well, I think in order to achieve the sustainable society you talk about, the government has to play the leading role…but the company is about making profit you know…they will do something if it was going to increase their profit and that's not necessarily going to be in the interests of a sustainable society (male, low-mid income, stable, Slough).*

5.9 Section conclusion

While cost and financial factors remained high on the agenda for focus group participants in Theme A, it was the 'utility' or 'use value' which was generally rated as the most important choice for people purchasing products. This could be considered in terms of being a **psychological issue** and also a **cultural and social issue.** The findings suggested that the first decision for many people when purchasing household appliances for instance generally related to questions such as: 'do I need this product?'; 'What will I gain that I don't already have?', and 'how will this facilitate my current lifestyle?' Purchasing decisions were often linked to domestic situation and household composition where utility related strongly to issues of *convenience*. In these respects, the role and importance of washing machines and fridges/fridge freezers came across throughout the groups as almost 'non-negotiable' accessories to everyday domestic living. As in 'theme A', where the idea emerged that there was an almost 'accepted' level of warmth and comfort that was expected by participants from their home heating, there were many similar perspectives on household appliances that individuals would not be prepared to go without. Convenience was also high on the list of reasons that participants gave for the use and purchase of domestic energy appliances. This was particularly true of the female participants; many of whom provided their own reasons for the importance of washing machines – for some tumble dryers – on lifestyle arrangement associated with having children where there was invariably a need to multi-task.

As with the first section, cost also came high on the agenda for many participants. As already pointed out, it was not quite so easy to isolate this as an issue however. **Economic barriers** were also implicated with other decisions in accord with the findings of Young *et al* (2008). As argued above, whilst having a washing machine and a fridge freezer was almost viewed in terms of being non-negotiable, some participants argued that they would quite happy buy tumble dryers and dish washers if they had the financial means to do so.

Another recurring issue to emerge from this section concerned the significance of a product's energy ratings. Individuals demonstrated a surprising high level of **knowledge** regarding the significance of energy ratings – particularly in relation to 'white' appliances. This knowledge was utilized in a variety of different ways. For instance, while some individuals used this system to assess *reliability* and the *cost saving* potential of energy efficiency improvements, rarely did they do so according to environmental criteria – one of the main aims of introducing the energy rating system. Also, some individuals argued that *brand* of product was not only identified with its name but, in the case of washing machines and fridge-freezers in particular, it's energy efficiency rating. Participants were often knowledgeable on the way in which these two characteristics were often aligned and some individuals pointed out that these purchase choices would enable longer-term savings.

As in some of the findings which emerged from Theme A, individuals spoke of the significance of household negotiations and associated **cultural and social issues** as an important aspect of the use and purchase of household appliances to their own lives. Many spoke of the significance generational viewpoints and some parents spoke of having to go around turning lights and other appliances off after children. Some suggested that the younger generation could be negligent in their use of energy and attitudes to energy use. Some individuals also pointed out that their children sometimes insisted on owning and buying products – computer games were mentioned – that were used a couple of times and then discarded. Parents in other groups however, suggested that it was their generation who had to change their attitudes and behaviours.

Some individuals demonstrated an awareness of the wider issues in Theme B. Some spoke for instance of creation of demand for energy using products, which they felt was instigated through business and deployed through the influence of media campaigns. It was clear during some of these discussions that some individuals recognized that their own personal choices and responsibilities were made within larger cultural, **political and economic structures**. Thus, some individuals argued that barriers to more efficient energy use could be viewed as a result of lack of political will to intervene in a business-as-usual consumer driven society, where the emphasis remains on driving profit.

6. Theme C: Travel and Fuel Consumption
6.1 Summary
The major themes that emerged from the four focus group discussions on 'travel and fuel consumption' related to:
- Convenience;
- Cost;
- The psychology of car use;
- Safety;
- Transport infrastructure

The main issue to emerge from this part of the discussion related to the idea of **convenience.** For most of the individuals who participated in the focus groups, the private car was simply the most convenient and reliable way of undertaking any journey that they had to make. As with findings from Theme B, and also to an extent in Theme A, the issue of convenience was informed by things such having children; distance from work; and different perceptions on the costs and benefits of other modes of travel such as public transport, cycling and car-sharing.

Cost and economic factors were also high on the list of priorities with respect to individuals' travel routines. Again, echoing some of the findings to emerge in Theme A and Theme B, there was a general impression that convenience sometimes overrode financial considerations, although this was not always the case. Certainly, some of the participants considered public transport costs to be too high and many felt that public transport did not give good value compared to the private car, notably in terms of convenience, comfort, personal liberty and also safety. Some individuals for instance, suggested that public transport would become more attractive if the costs of traveling this way were reduced, although this viewpoint was complicated by continuing perceptions of the convenience of the private car; discomfort and overcrowding on trains; and also safety issues and fear of violence when using public transport. The measure of disagreement that existed within and across the groups regarding the economics of private car use was generally informed by the weight of priority that individuals gave to these preferences.

Ideas relating to the **psychology of car use** were also big issues across the four focus groups in relation to travel decisions. There was a general feeling that the private car offered the most comfortable way of traveling. There was also a general perception that public transport services would need to be greatly improved if it were to become a more mainstream travel option for the general public. Participants complained for instance, that during peak travel times on train journeys, they often had to stand up in overcrowded carriages, making for an uncomfortable journey. Individuals generally felt that the private car offered a more comfortable journey than alternatives modes of transport.

Some individuals in the groups argued that the private car was a way for them to experience a sense of **personal identity.** People argued that the private car gave them a sense of *ownership* over their travel routines and time schedules. Again, there was a general perception that individuals would not experience this through use of public transport and that this was one of the ties to use of the private vehicle.

The issue of **safety** in relation to transport decisions was a frequently recurring theme across the four focus groups during Theme C. Perceptions of safety were generally a concern for female participants using trains and buses – particularly during the evening – but fear of violence was also a concern for some of the male participants. These individuals argued that the private car was a safer way to travel in relation to the possibility of crime or violence. Another perception of safety was offered by some of the cyclists among the groups, who pointed out that this was often risky, with inadequate cycle lanes and dangerous drivers.

Related to many of the the above issues – but also a stand-alone concern – many of the focus group participants argued that the **transport infrastructure** in the UK did not encourage more sustainable ways of travelling. It was argued for instance that the growth of out of town shopping centres has been based on an assumption that most people drive and that cycle lanes are currently inappropriate to more widespread uptake of cycling.

6.2 Travel and fuel consumption in the UK: an overview

Increases in both the number of cars and associated social and cultural practices related to private transport use, are largely responsible for the biggest percentage of CO_2 emission level increases in the UK over the last two decades. While an increase in the actual *number* of private cars on the road in the UK has actually slowed down more recently (Goodall, 2007) and average mileage per vehicle itself has flattened out from a previous upward trajectory, nevertheless, private transport use contributes to a significant percentage of the UK's greenhouse gas emissions. This had been considered to be problematic as long ago as 1990 where the a White Paper on the environment *This Common Inheritance* pointed out that pollution from road transport accounted for as much as 20% of the UK's total carbon emissions (HM Government, 1990). This paved the way for a series of policies which were designed to try to address pollution from road transport and, perhaps more importantly, the dynamics of vehicle use. A series of policies aimed at this sector began during the Conservative reign and continued after the New Labour Government came to power in 1997. The most notable of these policies have been the various congestion charges which have been set up and changes to road tax which have been designed to incentivize more efficient and more environmentally friendly vehicles.

6.3 Convenience

The main issue to emerge during the discussion on Theme C concerned different ideas of 'convenience'. The importance of convenience to people's lives had been a discussion point from both Theme A and Theme B, and this was quite clearly the case in relation to many of the social norms which seem to influence private vehicle use. Many participants argued that private transport to them was simply the most logical way for them to negotiate the requirements of the particular lives that they led. This corroborates research on private car use and findings in studies by Geller *et al*, 1982); Gollob *et al*, (1979), and Stegg (1996). This was not true of all individuals however and some had, for a variety of reasons, tried and were currently engaging with a variety of different approaches to travel. Many individuals in fact raised issues around public transport that they felt were barriers to moving away from private car use. However, some participants argued that, due to increasing congestion, public transport or cycling was now slowly becoming a more convenient way to travel.

Advocates of private car use made the case that it was simply the most convenient way for them to get to work, to carry out family responsibilities – particularly those involving children and, for some, to engage in their chosen leisure pursuits. The

majority of individuals who took part in the four focus groups possessed at least one private vehicle. Many had two – particularly those who had partners. Some participants made the case that the location of their workplace – too far from a public transport route or too far to cycle – meant that a car was the only realistic way for them to get there. These were some of the responses that people gave when asked what the attractions of private car use were for them:

> *I work out in the community and I have to have a car (female, low-mid income, stable, Slough).*

> *Shopping…getting backwards and forwards to work at three o'clock in the morning when there's no public transport (female, low-mid income, stable, Slough).*

> *Convenience – to get the kids to all their different groups and clubs that they go to (female, low-mid income, stable, Slough).*

Echoing some of the findings in Theme A and Theme B, for some individuals, the convenience of car use was tied to family responsibilities and for lifestyles that were influenced by having young children. However, whilst this is an issue of convenience, at least one participant made the link to cultural expectations of working mothers. Some felt that there were now more expectations in people's lives than there used to be:

> *I didn't have a car when my children were young and used to do everything like walk to school and so on. I would say it took me all day to do the shopping, walking to school and back and everything. When I finally did get a car to help with all that, it just made life so much easier (female, mid-high income, stable, Richmond).*

> *I'll often drive the kids to school because I haven't got enough time to walk them to school so I drive them to school. So my life has become dependent on sort of timing…so it's a cultural issue (female, low-mid income, transition, Brighton).*

Some participants were more ambivalent about the centrality of car use to everyday lives – even their own – and what they considered to be a few of the downsides of private motoring. These participants for instance argued that the exploding popularity of the car has led to greater congestion on UK roads; problems in finding parking spaces; and accompanying levels of stress for private motorists. Some of these responses then challenged the idea of the private car as enabling personal choice or encouraging this idea of convenience:

> *Yes, I can't bear it…I get stressed (male, low-mid income, transition, Brighton).*

> *The trouble is it's more like one person each [in the UK] has a car. What worries me is the amount of cars does seem to be exploding and every household, once somebody gets to seventeen…pretty much it's on the cards they'll somehow or other be getting a car each (female, mid-high, stable, Richmond).*

Some participants were also aware that greater congestion on the roads also equated with increasing damage to the environment:

> *Pollution…you know, whilst I'm not into this global warming thing, I am anti-pollution…we don't want to end up like California you know, or whatever it is (male, mid-high income, stable, Richmond).*

> *Damage to the environment and the expense (male, mid-high income, transition, Birmingham).*

Some of this reflection on the problems with private car use had led some participants to more fully consider the consequences of their own journeys. This 'moral dilemma' has been studied by Dawes (1980) who suggests that people may encounter a situation or come to understand the implications of a situation which makes them reassess their own behaviour. These participants, for instance, had begun cycling for a limited number of the journeys they had to make. A few had had the realization that cycling, for instance, was often a more convenient way of getting to some locations. Indeed comments were made suggesting that, for some people, things such as 'health benefits' may ultimately outweigh the convenience factors of private vehicle use:

> *It just dawned on me that, you know, I tend to go places within four or five miles of my house and think 'well, why take the car if I can go on my bike' and in some cases I can get there quicker by bike than I can by car. It's such a good feeling that when you've done it, you know you've done your half hour fitness for the day, so I'm really enjoying it (male, low-mid income, stable, Slough).*

> *Oh I should think for certain [using a private car] is probably down to you get very, very lazy. I mean, one thing I do try to make myself think like 'do I really need to use the car and I won't just use the car to come into Brighton, park up and walk somewhere…I always walk into Brighton (male, low-mid income, transition, Brighton).*

Distance was also often factored into transport decisions, particularly where individuals perceived that they had *longer* journeys to make than was usually the norm. For these individuals, the train for instance, was invariably preferable to traveling the same distance by private car:

> *On a long journey I like the train. I'm not a lover of driving long distances…on a long journey I like being on the train (male, mid-high income, transition, Birmingham).*

> *It's that middle distance isn't it? I mean, we'd take the train into the city or into the town and we would probably take the train up to see my mother in Aberdeen, something like that (male, mid-high, stable, Richmond).*

Some individuals pointed out that they were currently participating in car-share schemes. Some of them argued that this in itself was often a more convenient way of getting around. They suggested that it also lowered the cost of travel; addressed environmental concerns; and provided traveling companionship:

> *A colleague of mine and his wife moved a mile from my house and last summer when the petrol prices were like one-thirty, we said 'well, why don't we just car share you know?' (male, low-mid, stable, Slough).*

> *A car full up is probably one of the most efficient and least polluting forms of transport that there is (male, mid-high, stable, Richmond).*

This was not a view shared by all participants. Some, such as this one, felt that the whole ethos around car-sharing militated against the individual liberty which was offered by the private vehicle:

> *In an ideal world I think yes it doesn't make sense to have the A40 grid-locked every day when you could probably, if you pooled all the people together you could probably, like you say, a few mates in together…but at the same time, I wouldn't want anyone telling me that I have to have strangers or even other people in my car. That's a personal choice and I like driving and listening to the radio on my own and having that peace and quiet before I get in (female, low-mid income, stable, Slough).*

This has been an area explored by Anable and Gatersleben (2004) who have argued that people's motives for using particular modes of transport when they weight up the costs and benefits that they perceive will be related to different types of journeys.

6.4 Cost

The issue of cost was a consideration for many of the focus group participants in the discussions in Theme C, although it was not always the number one priority. Parity of cost with other forms of transport and type of journey was often assessed in relation to issues such as convenience, comfort and safety. For many people, convenience was often an overriding factor, although there was a strong suggestion from some participants that alternative methods of getting around – particularly public transport – would become more attractive if they were to become cheaper or even free! There was a measure of disagreement within and across the groups as to whether private vehicle use was economically advantageous:

> *In my particular life, I'm not a very wealthy person so yes; of course you know the consumption of fuel in your car is an issue, isn't it? (female, low-mid income, transition, Brighton).*

> *Well I personally would prefer if there was a really good public transport system which I could rely on because it's very expensive running a car you know (male, low-mid income, stable, Slough).*

> *Train travel is not cheap (male, low-mid income, transition, Brighton).*

Additionally, since the complexities of everyday lives mean that many people require a car; individuals argued that it becomes cost effective to use the car once it is owned:

> *Once you are taxed and insured, it's actually the cheapest way of getting around (male, low-mid income, transition, Brighton).*

Some individuals argued that, while environmental considerations would ideally be the principal consideration for transport decisions, it was still the relatively low cost of using a car which would always come first for them:

> *I don't think it's bound up as close for me I have to say. It's cost first and foremost. In the back of my mind it's also an environmental issue…but they're not so tightly bound (female, low-mid income, transition, Brighton).*

> *Well I have a more economical car now simply for my own personal needs, you know, saving myself money not the environment (male, mid-high, stable, Richmond).*

However, some of the focus groups members argued that the rising costs of private motoring, alongside greater concern for the environmental consequences of burning fossil fuels, were bringing parity to the attractiveness of using public transport:

> *An individual train from London to Brighton costs about twenty quid and you probably would do a tenner in fuel and almost treble that in parking for a day in London (male, low-mid income, Brighton).*

> *Private motoring is going to be too expensive…it's going to be too costly whether it's financially or environmentally because we can't sustain the number of cars (female, mid-high, stable, Richmond).*

While some participants displayed a level of skepticism regarding economic policies which had been put in place to address congestion and environmental – the congestion charge and higher parking costs were discussed – some individuals argued that they did work to some extent to change people's attitudes towards private car use as they tapped into the kind of decision-making that the majority of

people engaged with regarding the costs and benefits of using particular forms of transport.

6.5 The psychology of car use

A general perception emerged from Theme C that the private car offered a way of traveling which was linked to **psychological preferences**. This became particularly apparent when individuals across the four groups compared private car use with public transport. Many individuals felt that the private car was a particularly attracted proposition when compared, for instance, to crowding on trains; issues of cleanliness; and the logistics around preferred routes.

This has been an area explored by Steg *et al* (2001) who suggest that there are a variety of reasons why individuals continue to choose the private car as a preferred method of transport. They suggest that one of the reasons for this is that the private car continues to offer psychological attractions over other forms of transport; notable for instance in perceptions of sensation; power and superiority; privacy; status and feelings of control (Stegg *et al,* 2001). There was a general opinion across the four focus groups that public transport did not match the psychological attractions of private vehicle use that there was need of improvement if it were to become a more realistic, widespread alternative to car use.

Some individuals argued that private car use offered a sense of individual freedom that was an important part of their journey:

> *I like my own car...the freedom; I love it (male, low-mid income, stable, Slough).*

> *I like the independence of a car (female, mid-high income, transition, Birmingham).*

Some individuals argued the point that car use for them was a *pleasurable experience.* Thus it was suggested that even if public transport was made accessible and convenient, some participants would still prefer to use the car for the pleasure of driving.

> *I get pleasure from driving my car (male, low-mid income, stable, Slough).*

> *I love my car. I couldn't be without it (female, mid-high income, transition, Birmingham).*

> *Plus the music you want to listen to don't you? (female, low-mid income, stable, Slough).*

This individual pointed to the reasons why he felt that this 'psychological' need would not be met if he were to consider using public transport:

> *To be honest with you, if a bus picked me up outside my house and dropped me to work and then dropped me off home again, I still wouldn't use it. I wouldn't want it…I like driving (male, low-mid income, stable, Slough).*

There was also a perception that the private car offered a way of traveling which was, not only more *comfortable,* but was also cleaner than other alternatives.

> *It's [the train] packed, so given that option or sitting in the comfort of my car for an extra couple of hours I would take the car (female, low-mid income, stable, Slough).*

> *If you sit on a bus you get chewing gum stuck to your bottom and anything else (female, low-mid income, transition, Brighton).*

6.6 Safety

Ideas of **safety** also came up frequently during this part of the discussion. Individuals argued that they felt that public transport was not always a safe option – due to overcrowding and the threat of violence. Cycling in the UK was also seen as problematic however and some people argued for instance that safety issues constituted a real barrier to more widespread uptake of cycling:

> *Well I have got a cycle and I do like to cycle, but I wouldn't where I live. We've got nice, quiet lanes so I do cycle on the lanes, but that's just for pleasure…I wouldn't cycle to work or anywhere because it's too dangerous (female, mid-high income, transition, Birmingham).*

> *Well, look outside here [gestures towards the window]…would you want to trundle up and down on a bike round this road here? (female, mid-high income, transition, Birmingham).*

> *Unless you are a motorist and a cyclist you don't bother about cyclists…they'll drive straight past you, they're not bothered with you. I give a lot of berth to cyclists because I've been a cyclist (male, mid-high income, transition, Birmingham).*

Individuals who sometimes cycled argued that they often found it dangerous:

> *You've got to cycle on the pavements…you've got to cycle on the pavement – you can't cycle on the roads (male, mid-high income, transition, Birmingham).*

> *Cycle lanes are just a joke; they stop randomly don't they? (female, mid-high income, transition, Birmingham).*

A few individuals suggested that, for different reasons, they felt that public transport was often an unsafe decision to make when making travel plans:

I quite like getting on trains actually and I would like to do it more often if I thought I would be safe but I would feel completely vulnerable because it's a horrible world out there really and it isn't safe for any woman in the dark you know (female, low-mid, stable, Slough).

All that bombing a few years ago, that sticks in my mind and I just think 'no thank you' (female, low-mid, stable, Slough).

It's too dangerous for women really to be on their own (female, low-mid, stable, Slough).

This individual, who stated that he normally drove a car, told of his experience when he decided to take a bus and a tube journey one day:

The other week I had to go up into town; Sunday morning at half-past six at the bus stop and I was dressed in a suit. It wasn't so bad on the bus but when I got to the tube station I actually felt quite vulnerable because at half-past six in the morning in a suit and there's other guys looking at me 'oh has he got money on him?' (male, low-mid, stable, Slough).

The issue of safety was a particular worry for many of the females in the four focus groups where there was a perception amongst some of them that using public transport opened them up to greater safety risks – particularly at night.

It's security as well…if I work late or very there's no way I would cycle at three o'clock in the morning anywhere…so you know, I'd get in the car and lock my doors and I feel quite safe (female, low-mid, stable, Slough).

I think safety as well is an issue; I wouldn't think of getting a train this evening now to get home…I would rather be in my car (female, mid-high income, transition, Birmingham).

6.7 Transport infrastructure and car culture

Many of the focus group participants suggested that the UK's **planning infrastructure and car culture** did not necessarily lend itself to a more sustainable transport system. Many people felt that it was simply illogical for individuals to choose a mode of travel which was inconsistent with their everyday needs.

Would we give up the car? The whole thing is always done the reverse way to how it should be. If you provide public transport that's good, or alternatives, people will give up their car. They won't give up the car unless there's a viable alternative. Get the viable alternative first and it works and then people will give up the cars, but it's always a case of 'you've got to give up the car'. There is no alternative very often; get that alternative in place (male, mid-high, stable, Richmond).

It's all very well saying 'take the bus, you won't look for a parking space' but what are you going to do with eighteen bags worth of shopping (male, low-mid income, transition, Brighton).

One individual argued the case that out of town shopping centres are instrumental in encouraging people to drive more:

I think we had a tendency over the years to sort of put shops, shopping centres outside of towns. There's been a sort of tendency to put things outside of towns so you drive to them (male, low-mid income, transition, Brighton).

Making links to broader issues of planning and continued political support for a car dependent culture, he continued

They're only there because of the car culture and they're there because parking in towns has become impossible and the congestion and stuff, so they've popped them outside saying it's easier to get to (male, low-mid income, transition, Brighton).

Some of the focus group participants took this argument further in suggesting that there was a wider, structural problem related to the influence of the car industry in the West:

I don't think cars will ever disappear because the economy is so based on car production, it's part of the problem because they've just hoped that everyone will buy a car and then two years later trade it in, trade it in, trade it in, which is why we've got this terrible overstock of cars (male, mid-high, stable, Richmond).

Recognising the complex relationships between economic structures and a car dependent society, this participant questioned the likelihood of the possibility for reduced car ownership and associated travel preferences in the UK:

How that whole industry which underpins economies…how could that disappear even if it's the greenest idea in the world for everyone to do. I just don't see how because it would shake up the whole world (male, mid-high, stable, Richmond).

6.8 Section conclusion
The main issue to emerge during Theme C related to peoples' ideas of convenience around traveling and preferred modes of transport. Again, echoing some of the findings in the earlier discussions, many of the participants suggested that using a private vehicle was simply the most convenient and reliable way of 'getting from a to b'. In this way, there were very clear **cultural and social barriers** amongst group

participants in relation to the possibilities for more sustainable transport use which went beyond a preference for the private car. Many individuals justified private car use with what they perceived to be lifestyle imperatives such as family responsibilities; distance and route to work; and shopping.

While the issue of convenience was often the principal justification for private car use, **cost** was also a consideration for mode of transport. However, while **economic barriers** were seen as important by many individuals, there were often clear indications that convenience was more important. While many participants felt that public transport costs were currently too high, some felt that this 'good value' was also related to convenience, comfort and also safety. Some participants did suggest that public transport would become more attractive if costs were lowered but many felt that this in itself was not enough and that services on both buses and trains needed to address issues of discomfort and overcrowding and also safety issues and fears of violence when using public transport, particularly in the evening. There was a general feeling in the groups that these were **political barriers** which needed to be addressed by government and policy-makers.

The 'psychology of car use' was a big issue for individuals during discussions in Theme C. Many felt that the private car offered **psychological** incentives to users which could not be replicated through other modes of travel. For some individuals, there was an expressed psychological need related to ideas of individual freedom, pleasure and comfort. Some individuals did however point out that public transport did become a more attractive proposition – mostly in terms of comfort – the further the distance that they needed to travel. Many individuals felt that the private car was a particularly attracted proposition when compared, for instance, to overcrowding on trains; issues of cleanliness; and the logistics around preferred routes. These findings could also relate to **cultural and social** ideas of comfort – which reappeared in the section on 'transport, planning and car culture' – and what is and what is not acceptable for individuals.

The issue of 'safety' was mentioned across all focus groups as a barrier to greater use of public transport. Again, this could be construed as a **psychological barrier** but linked to **cultural and social** ideas of risk. This was particularly true – although not exclusive – for some of the females in the four groups who felt that public transport was often unsafe for them. Again, perceptions of safety were generally a concern for female participants using trains and buses – particularly during the evening – but fear of violence was also expressed as a concern for some of the male participants. Some individuals made the case that the private car offered them greater protection against the perceived risks of public transport and was a safer way to travel in relation to the possibility of crime or violence. The safety factor was also expressed by focus group participants who were cyclists, where they argued that car drivers did not pay them enough attention and that cycle routes were inconsistent by way of safety measures.

Related to some of the above issues, but often articulated independently as a stand-alone issue, some of the focus group participants pointed out that the planning of the

UK's transport infrastructure did not encourage more sustainable ways of travelling. Seen to be a **structural barrier** it was suggested that the development of out of town shopping centres for instance, has been based on a prior assumption that most people drive so there are currently inadequate public transport routes. This is closely related to broader cultural and economic barriers to intervening in a car culture and car dependent economy. As already argued, it was also pointed out that that cycle lanes are currently underdeveloped in the UK and may be disincentives to more widespread uptake of cycling. Participants argued that public transport was often *not* the most comfortable way of traveling and it was suggested that this would need to be greatly improved – at a **political level** – if trains and buses were to become a more mainstream travel option for many. One of the main complaints was that there was often overcrowding and no seats on trains during peak travel times. As argued above, while individuals generally felt that the private car offered a more comfortable journey than alternatives modes of transport, although this sometimes became the reverse if there was a great distance to be traveled where the downside of car-use was more likely to become apparent.

7. Theme D: Wider Issues

7.1 Summary

The major themes that emerged from the four focus group discussions on the 'wider issues' relating to energy use and transport emerged according to issues concerning:
- Whose responsibility is it?
- The role of trust;
- How knowledgeable people are;
- The role of information sources;
- What direction do we need to take?

The discussion around the **responsibility** for moving to a more sustainable society raised some interesting issues. While some participants were not convinced of the reality of climate change for instance, there was a general consensus around the need for greater urgency and to be more resourceful with the earth's resources for both present and future generations. Echoing some of the issues raised in the earlier themes, some individuals saw this as a responsibility for everyone, while others perceived a greater role for governments, businesses, and also other nations. Again, some linked this responsibility to *generational* reasons, with a few individuals voicing concern that today's generation would be unwilling to change their patterns of consumption.

Following on from the issue of responsibility, some participants voiced scepticism that those who seemed to be in positions of greater influence could be **trusted** to lead the changes that would be necessary to encourage a more sustainable society. It was argued that there was a lack of trust currently in effective political leadership to deal with the problems regarding sustainability; some individuals believed that businesses were in operation primarily to make profit; and lastly, some participants suggested that they themselves would be unwilling to change their own behaviour

because they believed that other individuals would not. This is concurrent with some of the findings in WP-5 over a general lack of trust in political leadership to take the lead in energy issues.

Following on from the discussions in the first section of the focus group interviews, individuals argued that people generally are **knowledgeable** about sustainability issues. Echoing some of the findings in section two, participants suggested that people generally have some understanding of energy issues through things such as energy efficiency ratings on electrical appliances; educational programmes in schools; government information campaigns; and television and media messages. There was awareness however, that this knowledge did not always necessarily translate into action. For example, a few participants argued that, while they were aware of sustainability messages, they did not necessarily believe in the reality of climate change.

It was suggested during the discussions in Theme D that it was important where *messages* on sustainability and **sources of information** actually came from. Echoing perspectives on trust, it was argued that, while some agencies seemed to be in a more influential position to deliver these messages, businesses sometimes used sustainability messages or advertising to 'brand' and sell products rather than to deliver green messages *per se.*

Finally, there was no real consensus on the direction which would need to be taken if we were to **encourage a more sustainable society.** There was awareness amongst the focus group participants that there were a number of different avenues which could be taken. Most of the participants agreed that a sustainable future would involve a measure of behaviour change amongst consumers which would need to be reconciled with technological development, innovation and a leading role for government and policy-makers.

7.2 Wider issues: an overview
The complexities of integrating effective sustainability measures into mainstream UK policy initiatives have served to highlight a number of difficulties, particularly with regard to how this might be overseen in practical terms. For instance, while policy-makers have focused increasingly on 'behaviour change' in the UK over the last decade, this emphasis has also raised a number of questions in relation to the role of government; it's relationship to business and the media; and what government can and cannot do in the late modern age. In particular, it has been suggested that the market-based approach to policy making in the UK during the previous three decades has meant that policy-makers themselves have been fairly limited in terms of providing substantive political leverage in 'de-constructing' the influence of consumer identities and directing individual behaviour towards more responsible ways of consuming. Fundamental to this dilemma, is the fact that the choices and market freedom which were originally endemic to the success a model offering 'consumer citizenship' often seem to work *against* sustainable behaviour. Commentators such as Norris (1999) and Habermas (1976) in fact, have noted a

'legitimation crisis in Western democracies and a comparative lack of trust in political leaders and democratic institutions. Jackson (2009) has also argued that the political and economic system itself remains focused on economic growth and a continuing 'business-as-usual approach. Climate change has been illustrative of this dilemma, where effectively engaging the range of stakeholders which would be needed to encourage an effective 'environmental contract' in the UK would involve some difficult political choices and dilemmas over the degree of political intervention which can be mobilized; the role and responsibility of business and industry; and to what extent structural change can be balanced with an emphasis on individual change and a transition in cultural norms and values.

7.3 Responsibility

The principal theme to emerge from this part of the focus group discussions related to *who* people thought held the main **responsibility** for encouraging a more sustainable society in the UK. While generally acknowledged to be a complex issue, it was a general perception amongst participants in all of the groups that the government had a leading role to play in a number of ways:

> *It is the government. I do think it's the government that has to put the message out. It has to put it out more regularly and it has to inject some fear into it (male, low-mid income, transition, Brighton).*

> *I don't think anybody else has got the authority but the government unless they set up a separate body to take control of that [sustainability]. So the government kind of say 'well all right, we're not actually hands on with this but... (male, low-mid income, transition, Brighton).*
> *Government, they're elected to govern the country aren't they? Even if you are not happy with the government in there, the majority of people want the government to govern (male, low-mid income, stable, Slough).*

Some of the participants felt that sustainability messages currently coming from political leaders would carry more weight if the politicians were themselves more consistent in their own lifestyles and were also more consistent in terms of current political rhetoric on sustainability. This political dichotomy and its potential effect on the general public has been noted by Goodall (2007), where sustainability messages have been proposed at the same time as announcements over new runways for instance. These interviewees argued that there had to be a much clearer message coming from the UK Government:

> *They all have to lead by example I believe and they don't all have to drive their massive big cars (female, low-mid income, stable, Slough).*

> *I don't think that anybody's got the right to, you know, insist that you do that...especially when they don't do it themselves (male, low-mid income, stable, Slough).*

Related to these observations, other individuals argued that the responsibility, and the political dynamic for moving to a more sustainable society, was more likely to happen at individual level. This has been another argument proposed by Goodall (2007) who argues that change can only happen at an individual and community level. Some of the individuals in the Theme C discussions were in agreement with this where they argued that this is where barriers, and also the opportunities for real change needed to be nurtured and encouraged:

> *Well, ultimately it's all of us…ultimately it's the consumer (male, low-mid income, transition, Brighton).*

> *I don't know. I suppose the argument is if less and less people buy these products the demand is going to be less and then the carbon footprint (female, low-mid income, stable, Slough).*

> *For something to keep going everybody has got to be thinking along them lines as well. You can't change something to be more sustainable if no-one else is going to work with you to do that. So if I have an energy light bulb but no-one else does, it's irrelevant whether or not I have it (female, low-mid, transition, Brighton).*

Some of these individuals suggested that the UK government on its own did not carry the level of political weight and influence which would be needed to change things on its own. They argued that the way in which the potential of this influence is dispersed amongst political institutions, business and consumer power, meant that a more sustainable society would be one in which all these elements would need to work together towards a common goal. Some argued that the role of government, for instance, should be to operate in greater tandem with the power of individual consumers; *encouraging* people to make the right choices:

> *Well, I think the government, or a body such as the government, has got to sort of make the changes happen in terms of saying 'this is what you must do, there's no choice in it' (male, low-mid income, Brighton).*

> *Well I just feel that it has to be individuals because governments and businesses are brought into an unsustainable lifestyle in general…capitalist economies are unsustainable on many dimensions (male, low-mid income, Brighton).*

Several people challenged this argument by suggesting that placing a greater measure of responsibility on the individual overlooked, not only some of the structural and political barriers to change, but it also neglected some of the generational differences in cultural values related to today's western 'lifestyles'. As these individuals pointed out:

> *We've become a throwaway society haven't we (male, mid-high income, stable, Richmond).*

> *I think they do understand it but they look at a map of the globe or a map of the world and they look at how tiny Great Britain is on it compared to the whole oneness and they think 'what's my little bit going to do unless everybody's doing it?' (female, mid-high income, stable, Richmond).*

Conversely, other people were more inclined to think that it was the younger generation themselves who held the agency and the motivation to educate society in general on the importance of being more environmentally aware:

> *I think our children are a big factor here because they are being taught it in schools from a very young age and they can now come home and preach it to their parents (female, low-mid income, transition, Brighton).*

> *Yes the children are coming home and telling us and they are the adults of tomorrow, so that is fantastic that they are getting that information from a very young age (female, low-mid income, transition, Brighton).*

7.4 Trust

Closely related to the issue of responsibility in the discussions in Theme C was the role of **trust.** For instance, while many of the participants felt that the UK Government had a major role to play in leading from the front regarding sustainability issues, this viewpoint was tempered with a measure of distrust in politicians and contemporary governing mechanisms. These were a few of the viewpoints to be voiced during the four focus groups:

> **It's always struck me…these incentives, you know…you feel that they're doing it to try and stop people using cars and things but clearly, look at the congestion zone – it's** *just as chock-a-block now as it's always been. So people distrust government because they feel that every initiative they bring out is geared to make money. I mean for example, for the last thirty years road tax generates twenty-two billion a year, but they never spend more than three. So the rest of it is going in Bank of England coffers (male, mid-high income, stable, Richmond).*

> *You wouldn't trust MPs would you because you'd turn it off as soon as they start (female, low-mid income, stable, Slough).*

A few of the participants were distrustful of the scientific message informing the existence of climate change and environmental degradation:

> *I mean it's happening, absolutely, but I'm not convinced it's brought on solely by man. I'm sure we've had an influence on it but I think it was going to happen anyway just as it has done a million times before you know…Ice Age etc, etc (male, low-mid income, transition, Brighton).*

> *Well I'm not saying it's not happening, I'm not saying it is. You know, I listen to a lot of talk radio and you know, I watch a lot of documentaries and the vice president Al Gore made a film and then there's a documentary saying 'well, actually it's not really happening'. It's a political thing and for someone who goes to work everyday in Ealing, the only access I have to information is the media and you just don't know who to trust (male, low-mid income, stable, Slough).*

For some individuals, the issue of trust relates again to what they see as the problematic power relationship between political leaders in relation and the influence of business and private corporations. This has been an issue explored by Mitchell (2007) where she suggests that the Regulatory State Paradigm in the UK is currently a problematic mix between the public and the private sector. This was alluded to by these individuals:

> *That is the problem. Over the years, the government have foisted all the responsibility onto private companies, whereas it's a government responsibility to get these things up and running…but they won't because they're leaving our nuclear future to France so we're in the same boat as having our gas from Russia (male, mid-high income, stable, Richmond).*

> *Yes, because they've privatized all the energy companies so the energy companies…their profits go to the shareholders, whereas if it's nationalized they'd invest…surely they'd be doing a lot more investment into the future (female, mid-high income, stable, Richmond).*

7.5 How knowledgeable are people?

There was a general perception across all of the groups that the majority of individuals were aware of sustainability issues in the UK. Many participants felt, however, that this awareness did not necessarily equate to action:

> *I think people are more aware of what is happening. It's those people that actually dismiss it because it because it because 'it's not going to bother me in my lifetime (male, low-mid income, transition, Brighton).*

> *Yes I think there's enough evidence actually been put in front of us now so that I don't think anybody can really say 'no this isn't happening (male, low-mid income, transition, Brighton).*

During the mid section of the discussion on Theme C, focus group participants were asked if they recognised or were familiar with, a list of policies that had been developed in the UK to address climate change. The policies were selected as a mixture of different styles of intervention from taxation measures (London Congestion Charge) to grant and information style policies (Home Energy Conservation Act, Warm Front Grant). These were some of the responses from individuals in the four groups:

> *I know the Climate Change Levy as I have clients who pay it (female, mid-high income, stable, Richmond).*
> *I'd heard of the Fuel Price Escalator (male, mid-high income, stable, Richmond).*
>
> *Probably seen them but not understood fully what they mean (male, mid-high income, stable, Richmond).*

A number of individuals across the four groups also had a degree of awareness of some of the individuals and circumstances that different policies had been aimed at:

> *If you're looking to do something in the home then obviously you see the Home Energy Conservation Act and so on (male, mid-high income, stable, Richmond).*
>
> *I've heard of the Warm Front one but only because it's available to the over-sixties, which there's one or two of us here…but only if you qualify and you're already getting benefits (male, mid-high income, stable, Richmond).*

Some individuals were aware of other policies that had been put in place to encourage environment and energy efficiency goals:

> *The road fund licence…isn't it different if you've got a large or a smaller vehicle? (male, mid-high income, stable, Richmond).*
>
> *There are tax breaks now for companies so people can buy their bikes through the company…so the company will loan you the money to buy a bike and you can get that tax free; the government does that (male, mid-high income, stable, Richmond).*

Quite a few individuals felt that it was the London Congestion Charge which had most impacted on them as part of this range of policy initiatives. While some of them felt that it had worked to a certain extent – reducing traffic flows at peak times in Central London for instance – a few were more sceptical, both in relation to its original motives and also whether it had actually proved to be effective over time:

> *I personally think that it was just a money making scheme" (female, low-mid income, stable, Slough).*
>
> *The reason Boris Johnson hasn't cancelled it is because it creates too much revenue (female, low-mid income, stable, Slough).*

7.6 The role of information sources

As argued above, many individuals felt that one of the main problems in putting over effective messages on sustainability was that these are messages are currently inconsistent and often contradictory. However, quite a number felt that the role of

education was hugely important in informing people of the importance of sustainability and in beginning to redirect behaviour:

> *I still say like through children's education, they just learn almost about, you know, like recycling and where energy comes from as part of a particular lesson or whatever (female, mid-high income, stable, Richmond).*

> *The education system surely? (male, mid-high income, stable, Richmond).*

> *But it's coming through the TV so, say its ARGOS selling you their products…rather than just selling their products, perhaps there should be some sort of clause that as well as selling their product, they've got to put the energy efficient part with it (female, low-mid income, transition, Brighton).*

Some participants pointed out that they had the information on their utilities bills were a useful way for them to gage their own use of energy:

> **"When you get your bills…electric, gas bills, they put in…quite often they'll put in something about ways of saving, information or something"** *(female, low-mid income, transition, Brighton).*

7.7 What direction do we need to take?

Participants had a lot of different ideas on what routes need to be considered regarding the move to a more sustainable society. Some respondents were pessimistic regarding the behaviour change route for instance, arguing that such a transition could well require enforced change:

> *If you start getting shortages…if you start getting power cuts, people will start to change their habits. You'll never be able to get people to just change without force (male, mid-high income, stable, Richmond).*

> *Yes like wind turbines and things like that. Why not have them? Mind you, I don't know…you'd probably have to get planning permission and things like that wouldn't you? I suppose it depends on where you are I suppose (female, mid-high, Birmingham)*

Other participants argued that change will require an effective relationship between changes in behaviour and technological innovation:

> *I think it'll be a mix…it'll be some technological answers that will offer perhaps replacement for sources that we've got at the moment but they might come at a price and therefore people will start to change their behaviour because it's becoming too expensive, something like that. It will be one or the other and you won't…it won't be people changing their behaviour just morally (male, low-mid, stable, Slough).*

For some people, change would come about as a result of actions which were *not* taken – particularly at a political level:

> *Not having a third runway...because whatever we do as individuals it's going to be nothing compared to all the increases in aviation is doing (male, low-mid, stable, Slough).*

> *I have to say there's quite a lot of scary information out at the moment. They talk about 'oh oil's going to run out or water's going to run out by 2050'. In a way, sometimes if you make things too scary, people just turn off because they think 'oh well, it sounds too ridiculous, I'm not going to listen to it' (female, mid-high income, stable, Richmond). female, mid-high income, stable, Richmond).*

7.8 Section conclusion

The dominant theme to emerge during Theme D revolved around where the *responsibility* might lie for encouraging a more sustainable society. Echoing some of the issues raised in the discussions which took place during the earlier themes, there was some agreement that encouraging a more sustainable society constituted a responsibility for *everyone*. Others participants however, viewed this situation within a wider hierarchy of responsibility, incorporating the influence of governments, businesses, and also other nations. A few of the focus group participants argued that they could identify clear **cultural and social barriers** in contemporary society where they felt that today's generation would be generally unwilling to change their patterns of consumption. Some individuals pointed out that there were a number of **economic** barriers to overcome. Many participants held the view that there should be a strong role for political leaders. Interestingly, perceptions of a **political barrier** to sustainability reappeared periodically throughout the focus group, where the issue emerged in greater depth during Theme D.

Following on from the issue of responsibility therefore, some participants voiced scepticism and saw clear **political barriers** regarding whether those who seemed to be in positions of greater influence could be trusted to lead the changes that would be necessary to encourage a more sustainable society. It was argued that there was a lack of trust currently in effective political leadership to be able to deal with the problems regarding sustainability, as well as with other issues. Some individuals also believed that businesses were in operation primarily to make profit and some questioned the power that companies seem to have in generating demand over the power of consumers to decode some of these messages and the ability of governments to intervene. Some individuals also pointed out that they themselves would be unwilling to change their own behaviour because they believed that other individuals would not.

Individuals argued that people generally are **knowledgeable** about sustainability issues and that there *is* a clear message being put across. Echoing some of the findings in Theme B, participants suggested that people generally have some

understanding of energy issues through things such as efficiency ratings on electrical appliances; educational programmes in schools; government information campaigns; and television and media messages. There was awareness however, that this **knowledge** did not always necessarily translate into action, echoing the findings of Wentworth (2008). For example, a few participants argued that, while they were aware of sustainability messages, they did not necessarily believe in the reality of climate change or that they had the responsibility to do anything.

It was suggested during the discussions in this part of the focus group sessions that it was important to consider where *messages* on sustainability actually came from if **knowledge** were to be translated into trust in the validity of that message and the potential for action. Therefore, echoing perspectives on 'trust', it was argued that, while some agencies seemed to be in a more influential position to deliver these messages, businesses sometimes used sustainability messages or advertising to 'brand' and sell products rather than to deliver green messages *per se*. For these participants, this could be perceived as a **structural barrier** intertwined with a **political barrier.**

Finally, there was no real consensus on the direction which would need to be taken if we were to encourage a more sustainable society. While there was a good level of **knowledge** amongst many of the focus group participants as to what options were open, there was an accompanying scepticism that avenues such as renewable energy would be substantive enough to facilitate a shift away from current lifestyles and associated values in the UK. Many of the participants agreed that a sustainable future would involve a measure of behaviour change amongst consumers which would need to be reconciled with technological innovation and effective governance. There was however, no real agreement on what such a balance would look like or how such a settlement would come into being.

8. Overall conclusions

The final section of this report considers some of the conclusions which can be drawn from the research findings. As outlined at the start, the principal aims of the WP-6 research package have to been to provide insights into some of the barriers and opportunities to more sustainable energy behaviours amongst end consumers and to try to identify particular social backgrounds or 'strategic groups' which may be of interest to policy-makers in designing relevant initiatives. The findings demonstrate that there were more similarities than differences between groups overall and most of the themes discussed in this report took place in all of the groups to varying degrees. This section is set out with some concluding remarks in the six behavioural areas identified in the BARENERGY programme document

8.1 Brainstorming exercise

The brainstorming exercise provided some interesting insights into what was to come in the main discussions. People had a variety of different ideas on 'what could

be done to encourage a more sustainable society. Some argued that it was a question of responsibility and locating the level of responsibility between the individual and the political and economic system. Others thought that education – both formal and in formal – would play an important role in encouraging tomorrow's generation to act now. A few people argued that advertising and the media needed to tone down the emphasis on consuming in current messages that were being put out. -Some individuals did not equate sustainability with environmental concerns but with issues such as addressing the failing financial system. Others argued that the development of people and communities was hugely important to a more sustainable society.

8.2 Physical and structural barriers

Physical and structural barriers are defined in the BARENERGY literature as the processes and infrastructures which deploy energy to households and buildings. They can also be identified as the type of economic and political structures which precede the former. The UK is defined by market-led regulatory regime which means that energy utilities are privatized.

Individuals in Theme A spoke of what they saw as some of the 'limiting choices' of energy deployment in a free market. They suggested that these posed structural constraints on the willingness of the consumer to act. It was thought by some, for instance, that green energy was an expensive option and that there were no incentives in place to make solar panels a more attractive option. It was argued that the UK Government needed to play a much greater role in changing this imbalance if a more sustainable energy system were to come into being. Individuals across the four focus groups spoke of the *practicalities* of shifting to a more sustainable society with what they perceived to be the wider, structural constraints of this system. Some pointed out that it was impractical to think of wind farms and solar heating as having the capacity to replace current fossil fuel use as the energy of choice. Some argued that, as well as economic barriers, the buildings in which they resided were not structurally capable of holding solar panels.

There was a lot of agreement across the four focus groups that the transport infrastructure in the UK did little to encourage more sustainable ways of traveling. It was argued that there needed to be structural change introduced in order to discourage individuals away from private care use. It was argued for instance that trains and buses were often unreliable and were characterized by inconvenient routes. Cyclists also argued that current cycle paths are dangerous, inconsistent and do much to discourage more widespread take-up of cycling.

8.3 Cultural-normative and social barriers

The BARENERGY literature suggests that energy behaviours and practices may often be linked to particular cultural practices such as those arising from national, community or social identities. It was pointed out in WP-4 that the UK itself holds some quite distinct cultural norms, of which there is a notable trend towards greater

individualism and an associated political economic structure which favours the primacy of privatized institutions and the idea of 'citizens as consumers'.

Perhaps the most interesting cultural-normative and social barriers to come out of the four focus group discussions, related to ideas of 'comfort' and 'convenience'. In fact, these formed a recognizable thread in many of the discussions which took place throughout all of the themes. In Theme A for instance, individuals pointed out that being in a comfortably heated home – particularly during the winter – was the most important thing for them and would override financial obligation to a large extent. Several noted for instance that turning the heating up would be the preferred option to putting on an extra layer of clothing. There was an almost implicit understanding that home heating and particular temperature 'norms' were almost 'non-negotiable', that a certain level of warmth in the home was taken for granted, and that it would often be achieved at the expense of energy efficiency and environmental aims.

There was a clear suggestion that social norms often develop *within* households in relation to energy use and also in relation to use and purchase of domestic appliances. Several individuals noted that they engaged in debate with other members of their household in relation to temperature in the home and use of domestic appliances and that such norms would come about as a result of debate and negotiation. Some of the parents in the groups argued that there were often *generational* conflicts around energy using products – particularly mobile phones, TVs and computers – where they felt that their children were often unaware or unwilling to change what the parents perceived to be 'negligible' use. Interestingly, there was little mention of environmental issues informing household debates on energy use and practice, where most of it revolved around cost and financial implications.

Use of private vehicles was also seen by some individuals as almost non-negotiable. As we shall see in the section on 'individual/psychological barriers', there were a variety of different reasons given for this, but some individuals in the focus groups who had families made the case that private transport was the only way in which their collective family lifestyle could function in respect of travel arrangements. In this way, things such as the school run and shopping were seen as fundamental to use of the private car.

8.4 Knowledge barriers

It was suggested in the BARENERGY literature that knowledge barriers can be overcome by supplying people with the correct information to enable them to make the right decisions. This has been a priority in the UK Government's agenda during the last few decades where is has been hoped that the 'correct signals' will encourage individuals to make more energy efficient and environmentally friendly use and purchasing decisions. As argued earlier, all individuals across the four groups were aware of current issues related to energy and environmental concerns. While individuals argued that there needed to be a shift towards a more sustainable society in the UK, some were skeptical regarding the *practicalities* of such a shift. While some

were informed on renewable energy and solar heating for instance, these individuals argued that initiatives remain underdeveloped and uneconomic. None of the individuals who took part in the focus groups had solar heating or used a green energy supplier.

There was a good awareness of the energy rating system in the UK – although some remained unaware of what it meant – and how it worked and, as argued above, many individuals used this to identify, particularly 'white goods', where some suggested that there was now a distinct link between 'brand trust' and level of energy rating. It was notable that these individuals rarely made purchasing decisions on environmental grounds for instance, but often used the energy rating system to assess longevity and cost saving through the level of energy efficiency.

In relation to the environment, some individuals argued that awareness did not equate to action. There were a variety of different reasons given for this. Some felt that the younger generation was not willing to give up some of the lifestyle habits in which many of them were engaged; some suggested that scientific evidence on climate change remained unconvincing; others argued that people in general were too lazy to change.

Some individuals felt that the move towards a more sustainable society would involve an overhaul of the educational system and more intensive government and media campaigns. Others felt that messages on sustainability were often in conflict with those coming from advertising and the media.

8.5 Individual/psychological barriers

Individual/psychological barriers were explored in the BARENERGY literature as emotional responses to energy behaviours. For instance, people may perceive an individual cost to themselves *if* they were to adopt more sustainable energy practices. From the findings in the focus group research, it was clear that these responses are not always easy to separate out from cultural and social pressures. However, a clearly cross-over could often be identified. While many of the individuals across the four focus groups displayed an awareness of a greater profile for energy and environmental issues, many decisions were based on other considerations such as convenience and comfort. There was still a preference for some to turn up the heating for instance rather than to put on extra clothing or, for instance, a willingness to drive rather than to take public transport.

There was some difference noted between purchase of 'brown' and 'white' domestic appliances. While 'white' goods were often spoken about by some of the females in terms of family situation and cultural ideals around convenience i.e. washing machines and fridge-freezers, 'brown' domestic appliances were often more *individual* decisions made in relation to questions such as: 'do I need this product?' 'What will I gain that I don't already have?' and 'how will this facilitate my current lifestyle?'

There was also a discernible 'psychology' related to car use in some of the individual responses. Many argued that they gained 'pleasure', 'personal liberty' and, again, 'convenience' and 'comfort' from driving. For many individuals in the groups, these made the attributes of the private car much more attractive than using alternative forms of transport. Interestingly, for some individuals this was sometimes reversed where on longer journeys, they felt that train travel offered more comfort and convenience than using a car. Some individuals – mainly female although not exclusively – argued that there was a 'safety' aspect to transport decisions. These individuals argued that public transport was often unsafe and that they felt safer using a private vehicle.

8.6 Economic barriers

The BARENERGY literature makes the point that measures to direct behaviour towards more sustainable energy use will include economic incentives and fiscal policy instruments. The issue of cost occurred frequently during the four focus groups, to varying degrees, although there was no discernible link with the different income groups. However, while cost was seen an important factor for individuals, this was part of a complex process of decision-making which also involved making choices around issues such as 'comfort', 'household negotiations', 'convenience' and 'practicality'. Cost was certainly an important consideration for individuals however. In Theme A for instance, individuals articulated that they were more likely to both engage in more energy efficient practices if they could see the financial benefits. This was true of people in both the stable and transitional groups where decisions on insulation, double glazing or wall cavity fill for instance were patently not made for environmental reasons but for the cost savings which would hopefully follow.

In Theme B, cost was often part of a wider decision making process for individuals purchasing domestic appliances. As argued above, for some, these decisions were informed by the energy rating of the appliance where it was argued that brand could often be equated with rating to give a good assessment of energy efficiency, longevity and, consequently, longer-term value for money. Some individuals argued in fact that they would be willing to buy more 'white' products such as tumble dryers, if they had the financial means to do so.

Many individuals felt that public transport remained expensive compared to use of the private car, with some also suggesting that the current service was not worthy of the expense which would be incurred. Some felt that public transport could be made a more viable option traveling costs were to be reduced.

8.7 Political barriers

The definition of 'political barriers' in the BARENERGY literature suggests that politicians offer an influential framework through which individuals make decisions and life choices. It was generally agreed amongst a large number of individuals in the four focus groups that the UK Government had a major role to play in shifting

the UK towards being a more sustainable society. However, while many thought this to be the case, some were simultaneously pessimistic over their actual ability to carry this out. Individuals noted a 'lack of trust' in politicians which was often compounded by conflicting political rhetoric. It was pointed out for instance, that politicians themselves did not set an example for more sustainable ways of living and were also vulnerable to pressure to move away from sustainability goals from business interests and the media. A few individuals noted, for example, decisions to build new runways and to increase new road building projects.

The issue of 'responsibility' was a recurring issue and was explored in depth by all four focus groups during the discussions on Theme D. Some felt that it was the responsibility of everyone to monitor their own behaviour with regard to more sustainable ways of living and others felt that it was more the responsibility of governments and businesses to take a more leading role. Some felt that it should be a combination of all three to work together. As argued earlier, some felt that the UK Government was part of a feedback loop where it had a large role to play but was incapable due to the structural limitations of its own position within a society. It was pointed out that business and the media often offer conflicting messages to consumers who, in turn, demand a particular model of society. Related to this, it was felt that there was a level of mistrust in government itself and some argued that some of the policies that had apparently been initiated for environmental reasons were simply revenue making exercises.

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