Technology Analysis & Strategic Management

Aviation, consumption and the climate change debate: 'Are you going to tell me off for flying?'

Sally Randles & Sarah Mander
Published online: 09 Mar 2011.

PLEASE SCROLL DOWN FOR ARTICLE

Aviation, consumption and the climate change debate: 'Are you going to tell me off for flying?'

Sally Randles* and Sarah Mander

'Are you going to tell me off for flying?' This question was asked three times by a lady in South Manchester, England, when we asked her to participate in our qualitative in-home study on flying. She asked it once when we approached her in the street to ask if we may interview her. She asked again when we phoned to confirm the time and address of the interview, and she asked it a third time while serving tea and biscuits at the beginning of the interview. Needless to say we had given absolutely no indication that the interview would pass 'judgment' on her flying activities. The lady had undertaken six return trips by air for leisure in the previous year, and in the final section of the interview commented 'I will have a conscience, but I won't not fly to Miami. . .'. As this one example shows, the frequent flying/environmental impact question is currently a hot topic. It brings forth a cocktail of rich unprompted discussion and a mixed bag of responses, it has become emotionally charged and polemic. Accounts and justifications concerning frequent flying range from surprise that a taken-for-granted everyday activity which until very recently had been considered a culturally desirable thing to do, has suddenly become frowned upon; to a sense of almost guilty pleasure, apology and, at its extremes, defiance. What the significance and explanation for this might be in sociological terms is the focus of this paper. The answers are important, in particular for policy stakeholders seeking to curb consumption behaviours as one of a portfolio of emissions reduction strategies. It is to the policy audience that this paper primarily speaks. It also provides a quite different – out of the box – insight and contribution to the aviation and emissions debate, which complements the more 'supply side' technology and research and development focused papers which dominate the aviation and emissions-reduction literature currently.

Keywords: mobility; aviation; flying; practice; climate change; environmental impact

1. Introduction: situating flying through theories of practice

We often hear the terms 'demand' and 'demand drivers' when discussing aviation and the environment, but in these accounts demand tends to be reduced to a notion of counting passengers, counting passenger behaviours, or asking about motivations and attitudes. These approaches make no attempt to get 'below' behaviours to uncover their sociological significance or explanation.

---

*Corresponding author. Email: Sally.Randles@manchester.ac.uk

In response, we have sought in our work on aviation production–consumption systems to shift away, conceptually, from this emphasis on demand and towards a different concept: 'consumption'. This is a more holistic notion that contextualises and goes beyond 'demand' bringing in the technical, institutional and cultural settings, which shape and condition 'demand' (Harvey et al. 2001; McMeekin et al. 2002). Through this focus on 'consumption', we have sought to understand what people do and why they do the things they do. Thus we explore the 'doing' of flying through peoples' own narratives describing the historical and social context of their recent (one year history) of air-travel 'events' and experiences (Randles and Mander 2009).

In interviews with frequent flyers we elicited unprompted discussion about experiences of the whole event of flying, from the decision to 'go away' through each link in the chain: coordinating a group to holiday with, booking the trip, the airport experience and the flight itself, arriving at the destination, participating in the event which the flight enabled, then returning home, and engaging in post-trip conversations with friends and family. In this way we also sought to uncover the social significance, meaning and expectations that surrounded the trip(s).

We argue this approach provides nuanced insights that challenge some important received wisdoms. We beg to differ, for example, with the statement that 'people love to fly' where this is deemed to provide an explanatory link to the growth in passenger-km flown. As our account of the doing of flying shows, although some people do substantiate the 'love to fly' thesis, for many others, it is simply a means to an end, with aspects of the experience ranging from an enjoyable opportunity to 'switch off' and read a book, to descriptions of flying as uncomfortable and frustrating, indeed inducing feelings of stress and anxiety.

These experiences appear to be socio-technically explained. On the technical side it is framed through a sense of (at the airport) being herded through a technologically complex myriad of electronic information boards, baggage check-in systems, security scanning, audio-announcements, boarding card and passport checking, plane-boarding and seat-finding. From the social side it is framed around a weariness of delays in crowded airport terminals (or worse, actually on the aeroplane), and the discomfort that arises from judging the appropriateness or not of engaging in conversation with complete strangers. This arises from the fundamental conditions of in-flight social and technical settings, i.e. sitting in unusually close proximity for a long period of time with strangers, and managing the feelings of claustrophobia, absence of fresh air and worries about take-off and landing that flying as a mode of transport was revealed in the interviews to be uniquely associated with.

Indeed the in-flight experience appears to combine 'legacy' aspects that are traditionally enjoyed and pleasurably anticipated – such as the first alcoholic drink of the holiday, with new experiences of budget flying where in-flight meals are only provided on a for-sale basis, are perceived as unreasonably expensive, and at the same time of variable quality.

Such an in-depth qualitative approach sits alongside, and not in opposition to quantitative analyses of what people do, who does it and when, but we are able to obtain richer, evidence-based accounts of why people do what they do, in this case why they fly. At the same time our focus is on the ordinary routines and activities of everyday life, so-called 'lived lives' (pace Garfinkel 1967) and so-called Ordinary Consumption (Grenow and Warde 2001).

This takes us into the domain of sociology.

Importantly, this is an approach that holistically situates the practices that underpin consumption within wider contexts of the construction (and change) of socio-technical infrastructures. For example, domestic practices of cooking and eating are co-constructed with technologies of fridges, freezers and microwave cookers. Fridges enable the purchase and storage of processed chilled foods, while microwaves heat the food rapidly, making it ready to eat (Shove and Southerton 2000;

Southerton 2001a,b). These processes, which combine and shift eating practice as it comes into contact with new technologies, enable the emergence of the new innovations and product/service combinations – in this case processed convenience foods, with implications across all stages of the production, distribution, retail and consumption system. Indeed we now see that this process has very little to do with the narrower notion of 'demand'.

Another example is temperature control within buildings, which is not set according to individual 'choice' but rather is determined by the norms of accepted comfortable indoor temperatures. Elizabeth Shove concludes that the 'normalisation' of internal temperature is determined by a small number of global corporations who build and maintain office, hotel and shopping mall complexes standardising these across the world. The widespread adoption of standards and systems of heating/cooling technologies results in shared understandings of a comfortable temperature (Shove 2003a,b), with unintended energy and resource use outcomes. In hot climates, for example, energy is used to power air-conditioning while simultaneously people add layers of clothing when they enter buildings from hot exteriors, because the air-conditioned building is 'chilly'.

Furthermore, practice accounts tend to produce different policy conclusions and recommendations. For example taking an economic perspective which focuses on 'demand' and methods which measure responsiveness to price as both the primary entry point and object of study does not, in explanatory terms, get beyond or behind price elasticity. Equally, approaches that rely upon a so-called values–action gap, and conceptually take behaviour as causally derived from attitudes and motivation seek, as their natural policy recommendation, to alter attitudes by addressing the so-called 'information deficit' through education and persuasion campaigns. These have had variable success, especially when (according to Southerton et al. 2004) the causal explanations of behaviour lie deep within the interactions between social practices, the supply and circulation of products and services; and physical technical infrastructures. Together these three dimensions co-construct each other, but also create a propensity for 'lock-in' and therefore there is an inherent resistance to change. In particular, practice theory suggests that change is unlikely to occur as a result of communication campaigns focusing soley on behaviour and hence ignoring the other two factors. See also Harvey, Ramlogan, and Randles 2008 who argue that behaviours become 'instituted' through a raft of social, economic, technical and political factors.

This is illustrated by the continued and rising levels of obesity, which sit alongside high levels of public and media campaigns, supported by popular celebrity chefs, which seek collectively to improve diets away from current high fat/high sugar content. The latter is predicated theoretically on a supposed link between a values and action interpreted as a values–action deficit. In policy terms the response is primarily to attempt to 'close' the values–action gap through information campaigns aimed at changing individuals' beliefs and values in order to bring about a change in behaviour. Examples can also be found in environmental policy where it is hoped that education can bring about reductions in energy and resource-use (Lorenzoni, Nicholson-Cole, and Whitmarsh 2007). Ultimately, the difficulty is that such approaches are uncontextualised and do not take account of the embeddedness of behaviours in social and technical worlds as highlighted above.

Rather than asking people directly to comment on their scope, willingness or propensity to change their behaviour, a practice sociology approach points out the scope and limits for changing practice from the accounts people tell about their everyday lives – uncovering the socially and technologically textured nature of practice. A totally different concept of behaviour emerges. Behaviour is seen as constituted through practice. According to this thesis practice precedes both attitudes and behaviour and becomes our primary unit of analysis. Indeed, it may help at this juncture to provide a classic definition of practice as it is currently being used by practice sociologists:

> A 'practice' (Praktik) is a routinised type of behaviour which consists of several elements, interconnected to one another: forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge. A practice – a way of cooking, of consuming, or working, of investigating, of taking care of oneself or others, etc. – forms so to speak a 'block' whose existence necessarily depends on the existence and specific interconnectedness of these elements, and which cannot be reduced to any of those single elements.
>
> (Reckwitz 2002, 249–250)

A practice is a coordinated entity that is reproduced and transformed through its performance. It has understandings, rules and purposes that constitute it as what Schatzki (1996) calls an 'integrative practice' (Warde 2005).

Such investigations often highlight the 'stickiness' of practice, which leads to a degree of scepticism concerning simple solutions around the need, or indeed the likely success of campaigns which seek to 'educate' individuals into changing their behaviours. On the contrary, behaviours are revealed to be structurally, institutionally and socially shaped, and therefore more likely to be both constrained and co-evolve with institutional, technical and physical infrastructure, than to change as part of a process of autonomous, isolated or rationalised decision making (Southerton, Chappells, and van Vliet 2004).

2.   The frequent flying study

The aims of the frequent flying[1] study were threefold. First, to gain a better understanding of the sociology of frequent flying, interpreted through a combined lens of recent work on the sociology of 'mobilities' (Urry 2002, 2007) and the sociology of practice (Bourdieu 1984, 1990, 1998; Warde 2005; Randles and Warde 2006). Combining these frameworks we have (elsewhere) shown how the social standards of the practice of 'celebration' (birthdays, anniversaries, weddings, stag and hen parties, retirement, etc.) and the standards and norms of pursuing hobbies and interests (golfing, climbing) have significantly changed over recent years to involve more short break holidays and more longer journeys to ever more distant overseas destinations, creating a 'ratchet' between these activities and the frequency of taking trips which involve flying. These changes are evidenced both in terms of increasing the number of flying trips taken, and increasing the passenger km distances travelled (Randles and Mander 2009).

Second, we elicited discussions about the flying process starting from how the decision to 'take a break' is arrived at and for whatever reason, to returning home. Third, having contextualised and framed the interviews by asking for detailed accounts of the events and practices into which we find flying appears these days to 'naturally' insert, we moved the conversation to the perceived environmental impacts and implications of the previous year's flying events that interviewees had just described. We intentionally did not 'lead' this discussion, neither did we expect or assume any prior knowledge about asserted relationships between flying and environmental impacts (especially emissions); or indeed about climate change debates more generally. We simply asked for impressions, views and reactions, gleaned from any source – from popular media, or prior knowledge, or simply 'in the ether' of ideas, opinion, popular discourse and conversations. We also explored awareness and views of different policy options designed or proposed to bring about climate change mitigation, such as off-setting, fiscal measures and the scope/limits to voluntarily modify the respondents' own flying activities in the specific context of the one-year flying history that interviewees had just described to us.

For this paper we focus on findings from the latter two stages of the interviews; however, we first situate these findings within two prior analyses. In Section 3 a brief summary of a sociology of mobility is provided that highlights the significance of mobility as a 'social good' (based on the work of John Urry). In Section 4 we provide a brief overview of secondary quantitative material – primarily keynote reports – which capture statistics on who flies and for what purpose. This highlights some difficulties with the 'trickle-down' thesis of flying, i.e. that falling prices, particularly characteristic of the low cost (or high volume) carrier business model, is permitting less well-off groups to participate in flying whereas previously cost prohibited them from doing so. While this is undoubtedly true, it is only part of the story. The evidence suggests that there are significant asymmetries in terms of the profile of flyers (and frequent flyers). A far higher penetration of the flying market and indeed a far higher penetration of the frequent flying segment is accounted for by higher income and higher social class groups: Flying is still primarily the preserve of wealthier social groups. Interestingly, there is also recent evidence to suggest that people who elsewhere carry out pro-environmental behaviours, such recycling and energy conservation, have a propensity to off-set (see Section 6) the emissions associated with their flying. In sum, a recent survey finds that pro-environmentalists fly, and fly more, than others, but are more likely to try to compensate for the emissions impact of their flying by off-setting (Whitmarsh and O'Neill 2008).

In Section 5 we discuss the process of flying, in particular, how people describe the airport and flight experience. In Section 6, we discuss how people responded to the juxtapositioning of their own frequent flying activities, against the possibility of adverse environmental/emissions impact caused by aviation. Findings in this section show how our interviewees coped with (and rationalised) their activities within this juxtaposition. A degree of dissonance and discomfort is clearly evident in their explanations and in their responses to perceived cause, effect, responsibility, blame and solutions in the flight emissions/environmental impact debate. Three key findings from this section are worth summarising: (1) that there are indeed 'limits' to frequent flying in terms of the total flights per year that it is comfortable to do (but this is high at around 12 trips or one return flight per month); (2) that a notion of 'relative commitment' can be offered to show how some flights are considered indispensible, for a range of reasons, whereas almost everyone could identify actual or potential flights 'at the margins' where either they could comfortably envisage not taking the trip at all, or could envisage transport mode substitution (trains or boats for planes); (3) that a significant minority were becoming 'irritated' by the perceived unjust targeting of flyers in climate change debates: there was some hint in the more defiant responses of what we might call 'aviation rage'.

Finally in Section 7 we conclude by highlighting some implications of the study for both the aviation industry and for climate change policy.

3. Mobility as a social 'good' and carrier of social and cultural capital

John Urry (invoking Putnam), says that physical travel can be understood by appreciating its role in the formation and maintenance of social capital. Simply, it is understandable, and indeed highly likely that where people have a wide (and increasingly international) network of friends and family. They will travel to see them, and this has positive outcomes in terms of well-being. He links mobility with a notion of the 'good life'. He posits a link between a society that enables and facilitates mobility for its subjects, and its characterisation as a 'good society', i.e. one that recognises the social and mental health returns to society of enabling corporeal travel (that is co-presence, involving physically being in a place, as opposed to virtual presence, mediated by

information and other technologies). In a number of contexts, from spending time in the physical presence of friends and family, to bodily experiencing place and landscape, he suggests it makes a difference as to whether the travel is corporeal or virtual.

> Moreover, all other things being equal, then we could imagine that a 'good society' would not limit, prohibit or re-direct the desire for such co-presence. The good society would seek to extend possibilities of co-presence to every social group and regard infringements of this as involving undesirable social exclusion. This is partly because co-presence is desirable in its own right, but also, according to Putnam's research, there are other desirable consequences. It is, he says, 'good to talk' face-to-face since this minimizes privatization, expands highly desirable social capital and promotes economic activity, in mutually self-sustaining ways.
>
> (Urry 2002, 270)

Our analysis supports this thesis. Furthermore this process of extending the 'far-awayness' of holiday destinations was raised in a number of the qualitative interviews, with examples given such as holidaying in more exotic 'undiscovered' locations, playing golf at more distant, often newly constructed golf resorts, climbing in previously inaccessible terrain, celebrating main life-events in far away 'special' places, etc.

We must therefore highlight the specificity of the context of flying which in fact in important ways differentiates it from other case studies of the practice sociologists, and requires that we also call upon additional theoretical tools in the sociology literature to help us understand frequent flying.

Part of this exercise involves re-invoking and re-visiting cultural sociology with its emphases on the symbolic meaning of artefacts, goods and services mobilised and displayed as a signifier of what Pierre Bourdieu calls cultural capital.[2] This is a process that, according to Bourdieu, contributes to the creation, maintenance and reproduction of social class and its attendant stratified structures. So, with respect to the practice of travelling and holidaying, particularly in 'exotic' locations, notably 'off the tourist trail' or indeed paradoxically 'away from tourists', the differential ability to access and experience ever more exotic locations contributes to the accumulation of cultural capital. An important dimension in the accumulation of cultural capital according to Bourdieu is that activities have symbolic meaning – they contribute to the accumulation of cultural capital by providing the opportunity for symbolic display, facilitating the maintenance of boundaries of social class. Put simply, travel to exotic locations is self-referential for the group, and for outsiders to the group it is aspirational, that is the owning of the good or the doing of the activity is seen as constituting a desirability-set: marking out the difference between belonging to the group from aspiring to belong to the group.

> . . . cultural capital, defined by Bourdieu as legitimate knowledge, is accrued through the legitimating force of experience that travel is thought to provide. Knowledge of the world and oneself gained through this experience are valuable, and being acknowledged as such more widely in almost all social contexts … as Harrison points out, travel is a way of expressing particular tastes that reinforce middle class status and help guard against falling down the social ladder, even when income levels are not, for the time being at least, commensurate with the social status a person wishes to demonstrate.
>
> (O'Reilly 2006, 1013)

Interestingly, in Bourdieu's (1984) *Distinction*, and in subsequent studies, aspirational groups are shown to mimic the material displays of the social group to which they aspire, usually through the visible show of wealth, demonstrating accrued economic capital as well as social and cultural capital, but such mimicking is recognised as awkward and unsubtle in some cases. This explains

in fact the subtlety of what Bourdieu's notion of 'Taste'. Taste, and indeed perceptions of good taste combine some interesting characteristics. Taste is easy to recognise, yet difficult to mimic, despite groups possessing shared understandings of when and how so-called 'good' taste is mis-read, at its worst it can slip into 'poor' taste. Perhaps an example in our context would be flying with a large group of family and friends to an exotic location for a marriage celebration, even when such an activity takes a large percentage of household income or savings. This is a notion, which in popular terms, is captured in the idiom 'all fur coat and no knickers',[3] but that is an aside.

More significantly for now, we can see that flying, in contrast to the ordinary, everyday settings on which practice theorists have recently alighted to investigate the relationship between sustainability and consumption, remains a highly visible, conspicuous, form of consumption (pace Veblen 1925). It provides a vehicle through which cultural, economic and social capital can be accrued and displayed as a marker of social status (Bourdieu 1984).

> Long weekends will come up. A group of us might just fancy Prague. I would avoid Spain. I don't want to go to Spain. I'd like somewhere more different than Barcelona. Spain is too close. I'd rather go somewhere not close. . . . I think you should see as many countries as you can: South America – Chile, Peru, Honduras, Nicaragua, Costa Rica . . . .
>
> (Frequent Flyers Study: Stuart).

In terms of contemporary leisure travel, however, this accrual of cultural capital takes on some quite specific forms that have significant implications in terms of the sustainability of behaviours and paradoxes of cultural capital, in that the pursuit of cultural capital becomes fetished as 'quick fixes' that sit uncomfortably with the idea of experiencing other cultures and places 'deeply'. Two particular examples are captured in the ideas of *Trophy Tourism* and *Last Chance Tourism*.

Trophy tourism

Our study found support for the phenomenon of *Trophy Tourism* (e.g. see Barkham 2008), that is, a tendency to mentally 'tick off' destinations that have been visited or experienced in a process of 'in filling' visited destinations, even if for only a couple of days, in order to add that destination to one's mental list of places visited. It matters little how superficial or 'surface' the experience. In our interviews Louis provides an illustrative example. He and his friend have organised an extensive Pacific, North America and Latin America tour for next summer. The tour will take five weeks and in that time they will visit Thailand, Mexico, Cuba, Chile, El Salvador and Belize. They will spend just four days in Thailand, describing this length of time as:

> Just enough to have a look at the place.
>
> (Frequent Flyers Study: Louis)

When discussing the city breaks to be taken within the package of destinations he suggested that four days, three nights is

> About right for a city itinerary, it gives you just enough of a 'a bitesize package'.
>
> (Frequent Flyers Study: Louis)

Last chance tourism

Louis's comments also provided an illustrative example of what might be termed 'last chance tourism' that is being able to say that you have witnessed a destination before a particular, significant and widely known characteristic of it disappears forever. Referring to a previous trip to Cuba:

> Cuba was terrifying, but I wanted to take a look at the place – Fidel will die soon.
>
> (Frequent Flyers Study: Louis)

Referring to the rise in visits to the Antarctic continent, now estimated at around 50,000 per year (officially, a rise during the summer season from 7413 in 1996/97 to 29,530 visitors 10 years later), Barkham reports on one visitor who says:

> It gives you a much better perspective about what people are talking about when you hear about global warming.
>
> (Collins reported in Barkham 2008)

For Collins, as for many others, the irony of rising numbers of tourists to the Antarctic is that it provides a chance to witness shrinking glaciers first-hand, while contributing in emissions terms to the processes that are causing those same glaciers to melt.

4.   Who flies?

Secondary data supports the thesis that flying in general (and frequent flying in particular) is differentiated by social class. Simply, wealthier people and those in higher social class bands are more likely to fly, to fly frequently and indeed contribute disproportionately to the growth of the number of journeys taken by air.

This contradicts a familiar discourse from airlines about low cost flying. It is asserted that falling ticket prices, especially as offered by so-called Low Cost Carrier (LCC) airlines or as we prefer, High Volume Carriers (HVC) have made flying more accessible to lower income groups, thus producing a more equitable distribution of flying across social class. We might call this a 'trickle-down' thesis of flying. The secondary data does not support this claim in relative terms however, though it does in terms of absolute numbers, as we can now demonstrate in the UK context.

The travel and tourism sector can be divided into three categories: domestic tourism by UK residents within the UK; outbound tourism by UK residents travelling abroad; and in-bound tourism by oversees residents travelling to the UK.

In 2004, total expenditure across the three categories was £70.08 bn, a rise of 4.8% on 2003 levels, rising in 2004 to a total of 239.8 million visits and 1.35 billion overnight stays, but the best performing sector between 2000 and 2004 was outbound tourism, which experienced 12.9% growth in number of trips, compared to domestic tourism, which declined by 15.6%, and inbound tourism which grew at a slower rate of 9.9%. Expenditure saw an even more dramatic increase, with 24.9% increase on the value of outbound tourism during 2000–2004 and only 1.7% increase in in-bound tourist expenditure.

Those holidaying abroad are more likely than others to be young (aged 20–24) and social group AB (Table 1). The predominant mode of transport for all the outbound trips was by air, with 27% taking scheduled and 18% taking chartered flights (Gower 2005).

Table 1. Social class of UK residents holidaying abroad, 2004.

Social group	Those who took their one holiday abroad, 2004 (%)	Those who took their one holiday in the UK, 2004 (%)
A	31	25
B	27	25
E	12	17

Source: Gower (2005).

Frequent holidaying

The group most likely to take multiple oversees holidays is, in fact, an early retirement group with 9% of 45–54-year-olds and 10% of 55–65-year-olds taking three or more holidays abroad in the previous 12 months (2004), compared to 5% of 20–34 year olds. Income data adds to this revealing that the highest penetration of those taking three or more holidays in the previous year is those with annual income of over £50,000 (Gower 2005). This finding was supported in our qualitative interviews where the group of lady golfers, most of whom described themselves as early retired, recorded the highest levels of frequent holidaying overseas, reaching 10 and 12 oversees holidays in the previous 12 months.

Short breaks

The number of short breaks (defined as holidays of one to three nights) duration taken in any of the years 1999–2003 exceeds the population, so that the average number of short breaks taken by a UK resident is more than one a year, although 15% of UK adults have never taken a short break.

Quantitative secondary surveys confirm that household tenure (which we take as a proxy for income and social class) differentiates those taking short breaks, as demonstrated in Table 2 below.

A particularly notable trend (again supported and illuminated in our qualitative interviews) is for so-called long-haul mini-breaks, dubbed 'speed breaks' or 'break-neck breaks' (Halifax plc 2008). A survey commissioned by Halifax General Insurance finds that 3.7 million Britons flew for long-haul mini breaks in the 12 months to March 2008. They endured a flight of at least seven hours for a holiday lasting less than seven days. Britons from SE England were most likely to take a long haul mini break with the most popular destination being New York and Los Angeles (for shopping), while for so-called cultural trips, the Far East was the second most popular destination, and India the third.

Table 2. Housing tenure of those taking short breaks.

	Home owners with a mortgage	Rented council accommodation
Taking a short break (%)	40	12
Taking a historical/cultural break (%)	46	8
Taking a short break to the beach (%)	12	36

Source: Graham (2004, 62); BMRB Access Survey data (2003).

Activity holidays

Activity holidays can be defined as holidays that involve some form of physical, sporting or related activity as their main purpose. Once again we see strong growth in overseas markets. Between 2001 and 2005 activity holidays taken abroad by UK residents increased by 8.2% to 7.4 million trips in 2005, while domestic activity holidays rose by 4.0%. The profile of respondents who have taken an activity holiday abroad in the last five years (survey date 2005) are male 58.4% (women 41.6%); young 46.6% (of the 16–19 year olds surveyed), and more likely to be social grade A or B (40.9% of those in Social Grade A surveyed and 35% of those in Social Grade B surveyed).

Considering individual activity areas the profile of people who had taken at least one overseas golfing and/or walking/trekking holiday abroad in the last five years, was male (79.9%); aged 25–44 (28.9% of the total population) or 35–44 (24.9% of the total population), and social grade B (29.0% of the total population) taking 2005 figures (Gower 2006).

> People who off-set their carbon emissions are more likely to lead pro-environmental lifestyles, be educated to (natural sciences) degree or higher, and be more likely to vote green . . . but are also more likely to fly . . . .

To cater for those who wish to compensate for the environmental impact of their flying, there is a growing number of companies offering offsetting schemes whereby companies and individuals can pay for emissions reductions elsewhere to 'offset' their own climate impact (a discussion of carbon offsetting for aviation can be found in Gossling et al., 2007). In a recent study which combined postal and web surveys, Whitmarsh and O'Neill (2008) report the rather paradoxical finding that carbon-offsetters (see Section 6 below) are more likely to engage in pro-environmental behaviour, such as recycling; and energy conservation such as switching off lights, are more likely to be educated to a (natural science) degree or higher degree level, are more likely to have a higher income (over £50,000 per year), be knowledgeable about climate change, and perceive risks to themselves of climate change, and be more likely to vote green, than their counterpart non-offsetters.

But, off-setters were also more likely to fly, and fly a lot than non-offsetters. Two surveys were conducted, one web-based, which aimed to 'boost' the set of off-setters surveyed, and a random sample survey with questionnaires delivered to homes. Taking the web-respondents, 70.2% of the 'off-setters' in the survey had flown at least once in the previous year, while only 62.3% of the web-respondent non-offsetters had flown.

Focus groups conducted by Stuart Barr et al. (Barr, Coles, and Shaw 2008) provide an explanation. They found even the greenest people fly, and they justify it by saying that holidays are different to everyday choices, and they feel their everyday pro-environmental choices balance out their travel for holidays (i.e. they have earned the right to a 'little' green sin). This finding was echoed in our qualitative research where similar comments were made by frequent flyers who had 'green' credentials but were significant frequent flyers with between four and eight return trips involving flying in the previous year. At some level it was considered legitimate to talk in terms of their everyday pro-environment behaviours, cycling to work for example, providing an emissions quid-pro-quo 'fair' exchange for flying.

Summary

Before moving on to discuss the flying experiences and aviation/environment relationship investigated in the frequent flyers study, we can recap three significant findings:

(1) We argue that flying is not a practice in its own right, rather it is a means to an end: the 'end' being access to the appropriate or preferred/desirable conduct of other practice*s*. In recent years, changes in the standards and norms of these practices can be considered part of the causal explanation of 'ratcheting' levels of frequent flying. That is changes in the appropriate and expected conduct of celebrating a special occasion. There has been significant drift and re-defining of activities that constitute and are appropriate conduct for the celebrating of a special occasion. In particular, this is now more likely than previously to involve a trip abroad and, as a consequence, is more likely to involve flying. Examples are changes in the way we celebrate Christmas (to involve at its extreme a 24-hour visit to Santa, literally, in Lapland) weddings (in exotic locations), stag and hen nights (literally, spending a night abroad), retirements, special birthdays and anniversaries. In addition there have been significant shifts in norms and standards of practice of hobbies and special interests such as playing golf (seeking out new golf courses abroad and discussing them on return home) and climbing (seeking out different or particularly challenging climbs abroad and participating in increasingly internationalised competitions). All of these have the appeal of 'suspending' everyday life and routine and providing a sense of special occasion. Paradoxically, the increased frequency of opportunities to 'get away' has the effect of re-defining such events, no longer as exotic and different, but rather as part of the fabric of life's normal routines: hence re-inserting the ordinary into the special of everyday consumption (Randles and Mander 2009; drawing on Grenow and Warde 2001).

(2) Mobility can be considered a social 'good' that also accumulates and maintains for the traveller, social and cultural capital (Urry 2002, 2007)

(3) Flying is not an activity that is either equally accessible or equally participated in by all social groups. On the contrary it remains heavily skewed towards higher-income social groups. Thus the notion of mobility as a signature of a good society needs to be qualified in reference to flying and frequent flying, which is still an activity that is primarily reserved for the playful rich. It is interesting to note recent findings that social class, income, and higher education appears to trump 'green' credentials such that commitment to, and participation in, pro-environmental behavioural restrictions does not appear to easily spill over in the form of self-induced curbs on frequent flying.

5.   The flying experience

A slight detour is requested here, simply to qualify and counter the received wisdom that people fly because they love to fly.

In fact people differ in how they describe the experience of flying. A small minority enjoy the event, from beginning to end, including the flying part of it. For these, the flight is part of the journey, and the journey is part of the holiday, and the holiday is part of an opportunity to 'suspend' the routines of everyday life. In some respects, some parallels can indeed be drawn with the notion of 'binge flying' (Hill 2008) because quite a few respondents described the 'down' that follows the return home, and a frequently reported strategy for overcoming this down is returning to the internet to begin booking – or discussing with friends and family – the next trip away. Indeed, often an entire year's worth of trips away are already scheduled on the annual calendar, such that discussion turns to the detailed planning, logistics and gathering of information about the destination as part of the process of anticipating and looking forward to the next trip, rather than deciding on it from scratch or booking it.

Into this highly scheduled and coordinated mix of opportunities to get away (both domestic and abroad, and involving flight or not), there still may be opportunities to take advantage of a few 'bargains' as they pop up, i.e. spontaneous trips abroad, such as weekend breaks, where the destination is less significant than the spontaneity and sense of bargain.

For some of these people, therefore, the airport experience in particular (if rarely the flight itself or international transfers) is part of the enjoyment of the holiday:

> The journey is part of the holiday . . . my husband loathes it, people are so close . . . . But from the second I leave home I go onto auto-pilot. Eight hours with no-one bothering you . . . . I can read or think. Choose an aisle seat, I'm very anti-social. I don't talk unless someone insists on making conversation. At the airport I check out the shops, I usually buy something each trip, a cosmetic item or duty free.
>
> (Frequent Flyers Study: Judith)

> Holiday starts at the front door – champagne on the plane . . . . Husband done lot of flying – Executive lounge at the airport.
>
> (Frequent Flyers Study: Lady Golfers)

> We'll be all chatting about the holiday. We'll browse in shops buy books to read & cappuccino . . . . (Chris) I like looking in the 'Duty Free'. You can treat yourself in the airport . . . . I think 'I'm on holiday so I'll have that' – I like the shops – like to buy presents, little things. (Lynn) – I just like people watching . . . . (P) but on the way back you just want to get home.
>
> (Frequent Flyers Study: Lady Golfers)

> We head for the bar – it's all part of the enjoyment.
>
> (Frequent Flyers Study: Hatty)

> *On the plane* I do like it when you are fed and entertained – it has special associations with going on holiday, you can relax & have first drink 'cheers'! You wait for the drinks and food. Then you wait for entertainment. The entertainment is important. You get more enjoyment when you get the lot, it's a fun thing – getting your five containers and packets, it's exciting. Like being given a newspaper though it's cheaper to buy a newspaper (laughs).
>
> (Frequent Flyers Study: Lara)

For many more, flying did not hold such thrills. In general terms, the airport experience was more likely to be disliked by men, and by both sexes if they felt anxious about the process of moving within the airport and terminal complex for different stages of the airport procedures: from of the check-in to security and gate-finding, with one young woman noting how the need to focus on getting these procedures 'right' took all her concentration and distracted from any pleasure or holiday associations this stage of the journey might have.

> If I'm on my own – I just spend all the time working out where I'm meant to be – never talk to anyone.
>
> (Frequent Flyers Study: Carrie)

For men, in particular, whether in the airport terminal, or on the plane itself, the experience is considered wholly uncomfortable. There is a raft of reasons why. Men seem less likely to enjoy the shopping (consumption) opportunities on offer at the airport, which they interpret as attempts to manipulate the 'captive' consumer. They are more likely to feel claustrophobic as a result of both the terminal and flight experience and they were more likely to feel disorientated by the proximity of strangers on the flight. Importantly, several respondents qualified these (negative) feelings about flying by comparing them to other modes of transport (car, boat, cycling), which

did not share the negative connotations, indeed offered a more pleasurable experience along the very same criteria.

Twitched

One respondent was particularly articulate and referred to how people were 'twitched' when flying. He put this down to a sense that people were more likely to feel 'out of control' when flying compared to other transport modes:

> There's no pleasure in the journey (train is hugely more enjoyable). Not at all comfortable in lounges, don't like shopping. People are twitched when they are flying, people like to be in control, when you're flying you have no control – when you're cycling or driving you are in control. On the train you have more personal space, more freedom to move about. People are more likely to engage in conversation. . . . Tony, happy to initiate a conversation . . . less likely to initiate a conversation (on a plane). Can just tell, people don't want to . . . .
>
> (Frequent Flyers Study: Toby)

> I don't like shopping, I'm not a shopper. Well they are not even shopping malls, they are more like one huge amusement arcade . . . . It's perfect for retail – people are in holiday mood and are stuck there for two hours . . . .
>
> (Frequent Flyers Study: Toby)

Security

A familiar theme which we barely need to describe in depth was discomfort with new heightened levels of security, both as a result of tourism fears which have made heightened security necessary, and the actual procedures of body and baggage checking that the procedures involve:

> All the security around tourism makes me nervous.
>
> (Frequent Flyers Study – Stuart)

In flight

Only a small minority (three respondents out of all those interviewed) said they enjoyed the in-flight experience because they considered it part of the holiday experience. For everyone else, narrations of difficult, uncomfortable and stressful experiences surprised us by the depth of negative feelings that were aroused as interviewees recounted experiences of uncomfortable, anxious journeys. Below is a selection of quotations from a large number of possible ones which tell the same story:

> I sat next to the same person for 24 hours but we didn't talk – never chat to strangers because then you'd be obliged to keep up contact for 24 hours. I tried to watch a film.
>
> (Frequent Flyers Study: Carrie)

> Read and wait for it to be over. Don't buy in-flight meals. If food is stuck in front of you [then] you eat it. Not as a choice . . . . (P) I don't drink alcohol on flights, no.
>
> (Frequent Flyers Study: Alistair)

> It was really stressful – we were delayed on the aeroplane and sat for an hour, I hated it and we hadn't even taken off! On that plane it was so long and I was really stressed' . . . a total of four hours on the

plane. I had bought sandwich and drink at Boots and taken it on – food on the plane was overpriced and rubbish.

(Frequent Flyers Study: Hatty)

I really don't like it at all. Turbulence makes me sweat. I always seem to sweat. I listen to my iPod, sleeps as much as I can, I don't talk to people.

(Frequent Flyers Study: Stuart)

I find airlines are anti-children don't you? It's funny how people react to children, they desire not to be disturbed – desire to have no nuisance on the flight. Children are seen as a nuisance I think, I spend all my time trying to keep them quiet.

(Frequent Flyers Study: Heather)

(p) Chris? Earlier you described yourself as a nervous flyer? . . .

Yes I'm a nervous flyer – absolutely terrified.

My husband wants to go, and so do I! But I'm very unhappy about the flight, I have restless nights before, even though I know it's the 'fastest safest way to go' (Sue) – I don't enjoy flying – just do it, because I want to go.

(Frequent Flyers Study: Lady Golfers)

Overall, flying is viewed by many as a necessary evil; the price to be paid for the more agreeable parts of the holiday. For some of those we spoke to, this discomfort may become great enough that it acts to limit the number of flights (Randles and Mander 2008). For those who do chose to fly, trips are taken against a back-drop of increasing policy debate and media coverage of aviation and climate change issues. Following the information deficit model of behavioural change highlighted in the introduction, this increasing awareness may also act to limit people's propensity to fly, and it is to this that we now turn.

6.   Flying, the environment, and emissions impacts – from relative commitment to aviation rage

The final section of the interview focussed on levels of awareness and understanding of the flying/emissions impact relationship within the wider setting of the climate change debate. On the whole, interviewees had a very low level of awareness and understanding of the 'science' of climate change, but were of the view that 'something' significant was happening. Their awareness was raised through media coverage: TV, newspapers and films such as 'The day after tomorrow'.

They are harbingers of doom aren't they? In the news. The main message I'm getting is that there has been an increase in number of flights, and that's a problem.

(Frequent Flyer Study: Sean)

I have the impression that things are getting out of control. I've read about tipping points that climate control is getting out of hand. I have the impression of increasing concerns. It seems that climate change will be more extreme than at first thought. From all the observations of scientists – that the climate is changing, and that this will be very dramatic – even though they are not all using the same evidence – lots of different evidence pointing to same thing. Even if the projected figures are different. There seems to be a heightened awareness that something has to happen.

(Frequent Flyer Study: Alistair)

It seems that changes in climate are beyond the normal 'ebb and flow'. (But) Flying is necessary in today's world.

(Frequent Flying Study: young university researcher, Laura)

> There's no hard evidence of climate change. But what's being reported has got to be detrimental, can't be 'natural'.
>
> (Frequent Flyer Study: young university researcher, Carrie)

> You do allow the press to inform you. I think there is still no hard evidence but it seems to make sense, I accept its happening. … Don't want schemes to become the first small breakwater when a tidal wave is coming.
>
> (Frequent Flyer Study: young university researcher, Louis)

> I think it comes from the schools, the main source for us of environmental concerns coming into the home is the schools, my son came home and we talked about it … and they saw 'The Day after Tomorrow' and was really worried about it … . We are becoming more conscious – don't use car much, we have a very small (second) car. I talk to friends and they have been recycling – they moved into the country to be self-sufficient.
>
> (Frequent Flyer Study: Heather)

(Note, however, that this family had taken three holidays involving flying the previous year including a 24-hour family trip to 'Lapland' to see Santa Claus costing £1800.)

The interview finished by exploring views on different policy options for dealing with the flying/emissions issue, from the voluntary curbing of flights to fiscal and other measures such as offsetting. We found that some interviewees were unwilling to self-restrain their flying, on the grounds that many other groups were 'more to blame' for climate change than they were as individuals. These informants had a tendency to displace responsibility for emissions to other groups and individuals.

Relative commitment

However among the large group who did consider flying to be an emitting activity legitimately targeted for emissions regulation in some form, there was a sense of a 'fair' allocation of responsibility that would require everyone to bear a proportion of the cost of emissions control. This calculation of 'fairness' was very approximate and only partially thought through. In terms of what these 'fair' steps should be, interviewees seemed to favour the simplest solutions. They were willing to consider some of their flights as 'marginal' and were willing to see externally imposed restrictions on these, especially the more spontaneous/cheap 'bargain' trips. This coincided with the view that the trips where the cost of flying was very low indeed (so-called pound flights for example) were ridiculously cheap when compared to other items of domestic and holiday expenditure such as the cost of a meal on arrival at the destination. However within the total portfolio of leisure trips taken annually, there were, at the other end of the spectrum core trips which interviewees considered 'no-go' areas in terms of their targeting for emissions reduction. These included regular trips to visit close relatives living abroad, family events such as funerals and weddings, and the more 'special' long-planned holidays such as a six-week summer tour of Asia.

> It's everybody's responsibility, it has to be a conscious decision, you go on main trips for the weather or whatever and think harder about other trips, birthdays and anniversaries.
>
> (Frequent Flyer Study: Helen)

(Note this interviewee had taken six return flights in the previous year, including three to visit relatives in Miami. In asking about environmental impact she said: 'I will have a conscience but I won't not fly to Miami'. She commented that she would consider reducing her three trips to Miami to two, and staying longer on each visit.)

This process of creating a mental distribution or relational hierarchy from core flights to marginal trips, led us to view individuals' flying activities as forming a hierarchy of flying events from central to peripheral revealing a calculative procedure on the part of respondents displaying what we have called 'relative commitment' to different kinds of trip and occasion.

Modal shift

As a legitimate alternative to flying, informants could easily envisage using other transport options, such as taking a ferry or a train.

> If the cost of flights go up – we will stop doing so many flights. We went to London by train at Easter. And we went to Oasis in the Lakes, last time enjoyed it better than Cyprus.
>
> (Frequent Flyer Study: Heather)

> Overland is a valid alternative, you would see a lot more. When I travelled with a Europass – I saw more and had a better experience. I would like to consider – overland Canada.
>
> (Frequent Flyers Study: young university researcher, Carrie)

> I'm not bothered about flying, would rather go by train – Eurostar, city to city I went to Italy by it – was a beautiful journey through Alps. It's better (education for young people) if you travel by train – would give a better sense of geography – how far away the place is, how getting there (across land). Appreciation from looking out window. Not just lift off one place and land in another.
>
> (Frequent Flyers Study: teacher, Toby)

Although in many instances, recent experience of these alternatives had been sufficiently pleasurable to warm people towards them, there were only certain situations where they were considered to 'match' flying as a viable alternative. Central to this was journey time. On those occasions where flying was thought to provide a quicker door-to-door journey, and where journey time was an important criterion, air travel was preferred. This was more likely to be the case where other time-scheduling pressures, such as school holidays and work-schedules were constraining the number of days/time spent at the actual holiday destination as opposed to travelling to it.

> Individuals have to make private decisions about their priorities that day. Contradicts your other persona about what is important. Even if it is uncomfortable, you won't stop because of other constraints. Wouldn't mind doing something for himself as long as it is painless. Simply wouldn't do it if constrained by time. If prices doubled it would still be manageable. You spend more on a meal when you get there, than flying there!
>
> (Frequent Flyer Study: Small Business owner, Alistair)

Informants did feel they lacked (but there again had not sought out) information on the relative merits of different travel modes. Three pieces of information would enable more accurate assessment of different transport modes. These were: the emissions profile of each alternative, timetabling and journey times, and costs. That said, the fact that none of the respondents (bar one) had taken the initiative to gather information on these criteria, it seems that habit, rather than considered decision making through a process of rational evaluation of the alternatives, was a key reason for 'sticking with' flying. However, a new mood, a willingness even a desire to experiment with different transport mode options, was definitely in the air.

Given the view that the price of flying was, indeed 'unnaturally' low when compared with a notional mental calculation of what you might 'expect' to pay to fly, price sensitivity did not appear to be high, especially for central trips where surprisingly, interviewees alleged themselves

willing to accept a two or three-fold increase. They were especially willing to see this additional cost in terms of a 'Green Tax' – provided, and this is the rub – there was clear and direct evidence that the income raised would be used to address the climate change/emissions reduction issue in some way.

> There's a Green tax now but I don't think it is going to the environment. I'm suspect (*sic*) about what they are going to do with it. If it went to climate research or was ear-marked for the environment, it would be a less bitter pill to swallow. The Government should do something – I'm not sure what. Taxes are OK if they are going to be used in the right way. If you can see the projects and someone can benefit from them.
>
> (Frequent Flyer Study: Sean)

Associated with this, although detailed knowledge of technology-based solutions and their time-frames was low, a high level of faith was put on technological development as the main 'escape from gaol ticket' (as one interviewee put it).

> The solutions lie within technology – technologies need to take off. If we really want a technology breakthrough, we can speed it up, it wouldn't take 50 years, it could be 5 years. It's about the economics. If use taxation you can make it so economically miserable, people won't be miserable they will still fly – so you can use economics as the driver for technology solutions.
>
> (Frequent Flyer: young university researcher, Louis)

Crucially, however, several respondents also referred to the idea that in general terms as far as aviation, especially low cost flying, was concerned the 'genie was out of the bottle': people had become used to flying as part of their everyday lives and expectations. To reverse the phenomenon through voluntary curbs would be difficult.

Offsetting

Consistent with the findings of Whitmarsh and O'Neill (2008) we found a very low level of awareness of voluntary offsetting as an emissions mitigation strategy, and still lower levels of actual experiences of offsetting. We intentionally did not provide a definition or description of what offsetting was, as this would undermine the objective of ascertaining informants' engagement with the idea. For the reader, a simple definition is: 'The purchase of credits from greenhouse gas emission reduction projects in one place to counter the emissions of green-house gases in another place' (Whitmarsh and O'Neill 2008). There is now a significant body of academic research looking at offsetting behaviours and the complex web of organisations emerging around an economy of offsetting, which space precludes detailed discussion of here. (For interested readers see, e.g. Gossling et al. (2007) on the particular context of offsetting and tourism.)

For our purposes we are more interested in how our interviewees constructed and interpreted the idea, and the level of penetration and experiences of offsetting, if indeed informants had offset their flight emissions at all. Strikingly, in terms of actual offsetting activity, none of our informants had engaged in it.

> It's easy to salve my conscience – I am willing to do other things. I'd use farmers markets but there aren't any locally, they are few and far between, I do watch food carefully . . . . The arguments are pointless, I just don't know – what percent is done by airlines? My conscience is easily salved – how

are aeroplanes (to blame?). You can listen to the figures but '16% of what I don't know'. You can be picky about how guilty you feel.

(Frequent Flyers Study: Julie)

Even the most pro-environmentalist in the study had not offset his flight emissions. Furthermore, the most knowledgeable interviewee on the climate change and emissions debate self-curbed his behaviour to what he considered essential flights (one or two 'special' trans-Atlantic flights in the previous year) as opposed to offset, and claimed he would rather give directly to charities than pay the intermediary offsetting organisations who he considered to be making excessive profits from the process.

Across all informants, understandings of the idea were very low beyond very broad ideas of 'compensation'; the practice of carbon/emissions calculation was undertaken by only one out of all the interviewees. Instead very broad and often disconnected activities were considered to provide general 'compensation' to society and the atmosphere for flying trips taken. Needless to say the activities offered bore little resemblance to the carbon levels associated with each journey, rather they were – and were seen cynically by informants to represent – an opportunity to salve ones conscience. Examples given for compensating for the carbon impacts of flying included cycling to work, recycling, 'doing' low carbon things once the destination is reached (ironically not spending money in the local community of the destination country, such that the argument that flying provides tourist income to poorer countries is not universally the case), and going to farmers' markets (had there been one locally, but in fact there was not).

Aviation rage

To conclude this section it is worth noting that a small but significant minority expressed anger and frustration at the perceived unjust targeting of flyers in the general 'noise' of debates around climate change and emissions reduction. We could call this an early warning of something that we might call aviation rage.

There is an important message for policy makers and pro-environmental lobbyists in this finding. A 'backlash' against voluntary measures; and/or government imposed fiscal measures to curb flying is not inconceivable. If this minority 'rumbling' were to become more widespread then it would defeat the object of creating a situation where reducing emissions from either voluntary or obligatory curbs on flying would be socially acceptable, indeed desired, by flyers as the responsible face of flying in an era of climate change. Indeed, our findings suggest willingness, though it is quite fragile and very under-developed to self-monitor and curb flying through a variety of routes. This embryonic good-will could be jeopardised if a sense of 'aviation rage' were to become more widespread than its current minority position.

I fly to climb and live to climb. The reason for flying is access good quality climbing l may see some friends while I'm there . . . . Choice of destination is a combination of the price and the climbing . . . a changing climate won't affect the quality of the climb. Climber wants desert conditions – dry. In Norway for ice climbs – climate change could make the climbing conditions better . . . .

(Frequent Flyers Study: climbers)

The climate change debate it dehumanises people – it turns people into 'the people that don't believe'. . . you need to keep them at arm's length . . . . It's demonizing people for flying! We are force fed news constantly and the politicians are jumping on the bandwagon (raising voice).

(Frequent Flyers Study: climbers)

Under such a scenario one could imagine a further polarisation and the deepening of polemic around the complex and multi-faceted issues of flying, emissions and climate change, which could potentially create more problems than it solves for climate change policy stakeholders.

7. Conclusions

We can see through this in-depth study of frequent flyers how multi-dimensional and emotive the debate around flying from the point of view of passengers has become.

Aviation and consumption can be considered a juncture where many societal issues and values come together forming a cacophony of contradictory positions with the result that currently emotions are running high and the debate has become sensitive and polemic.

We can note that, according to Urry, mobility is a social 'good' and that a 'good' society would be mindful of taking steps which, in general terms would have the outcome of curbing mobility. Moreover until recently (and still very much so according to many of our respondents today) travelling to overseas destinations by air holds only positive symbolic connotations, providing a means to visit globally dispersed friends and family and experience first-hand other peoples and cultures. In theoretical terms overseas travel is a means to accumulate and maintain cultural and social capital.

Flying remains an activity enjoyed disproportionately by higher income and higher social class groups. An argument can therefore be made that the uneven distribution of flying is inherently unjust. Not only is it unjust in societal terms, but from the point of view of the emissions and climate change debate it infers that the cost of climate change, in the absence of counter-regulatory measures, will be disproportionately borne by poorer none- and low-frequency flyers.

The frequent flyers we interviewed however were of the view that climate change is a real concern for societies and that air-travel does have a negative impact in terms of carbon dioxide emissions contributing to climate change.

They appear broadly willing to either self-curb (by modifying the frequency and mode of transport used to enable their leisure activities), or have curbing measures imposed upon them, in terms of a flying tax. This view is qualified however by the need to be confident that there is a direct and demonstrated link between revenues raised and emissions reduction/impact that follows. Currently there is a degree of scepticism about this link, with perceptions that the link is non-existent, undemonstrated or too convoluted to provide sufficient grounds for accepting the increase in the cost of flying that a shared commitment to urgent emissions reduction might entail. In our study, offsetting was poorly understood as an idea and no interviewees had engaged in voluntary offsetting.

Finally, for policy makers there is an important message in the finding that hints of 'aviation rage' were evident in the study. It follows that if this minority feeling were to become widespread then it would potentially undermine attempts to address aviation and emissions issues via 'demand' or consumption-side measures. It is also worth recalling the key findings of a wealth of literature on the sociology of practice and sustainable consumption: that technical infrastructures and consumption practice co-evolve. It is unlikely that one side of a production–consumption system will change without changes in the other. This supports the view that a suite of measures addressing both sides simultaneously is likely to be required to achieve either the objective of curbing flying behaviour or decoupling the link between flying behaviour and aviation emissions growth.

Notes on contributors

Dr Sally Randles, Research Fellow, Manchester Institute of Innovation Research, Manchester Business School, University of Manchester. Dr Sally Randles (BSc, MBA, PhD, DipMRS, DipIM, MMRS) worked for five years as Principal Economic Development Officer (Team Leader Strategy and Regeneration) for Bedfordshire County Council UK. Earlier she managed a community and training development project working with the Bangladeshi community of Spitalfields, East London attaining national recognition and featuring on BBC Radio 4. Her PhD compared the political economy of Manchester (UK) and Lyon (France). Currently she is a Research Fellow at the Manchester Institute of Innovation Research, University of Manchester where she is part of the research team evaluating the Innovation Fund awarded to Manchester by the National Endowment for Science, Technology and Arts and managed by Manchester Knowledge Capital, Manchester Enterprises, Manchester City Council and the North West Development Agency. She is Principal Investigator (UK partner) for the EU FP7 project on public engagement in Nanotechnologies and is Deputy Director of the Sustainable Consumption Institute Doctoral Training Centre.

Dr Sarah Mander, Tyndall Senior Research Fellow and Deputy Manager of the Tyndall Centre's Energy Programme. Sarah started her career as a chemical engineer, initially working as a project engineer in the chemical and pharmaceutical's industry. Upon leaving industry, she spent six years working in a variety of roles for an urban design and build company. For these six years her job included facilitating community engagement in regeneration projects, welding, workshop management and promoting sustainability within urban neighbourhoods. Since completing her PhD, on stakeholder perceptions of wind energy in 2003, Sarah has worked at the Tyndall Centre for Climate Change Research at the University of Manchester, where she is currently the deputy leader. Her research interests are focused on climate change mitigation and she has researched public perceptions of energy supply technologies, long term energy scenarios, sustainable energy in the urban environment, aviation growth and climate change governance.

Notes

1. Respondents were adults from Greater Manchester and Greater London (and their environs), who had undertaken at least two return trips involving flying in the previous year. Interviews were conducted in-home or at a convenient location. A total of 20 people were interviewed either individually or in mini-groups from three to (in one case only) seven persons. Interviews lasted 1.5–2 hours.
2. In Pierre Bourdieu's best known book *Distinction* (1984) he talks about cultural capital as the knowledge, experience and/or connections one has had through the course of one's life that enables them to succeed more so than someone from a less experienced background. Similar concepts include economic capital – the accumulation of economic resources as a signifier of wealth and social status, and social capital, the accumulation of social assets of influential friends, family and work contacts, put simply it is not what you know but who you know. For further information on these and other key concepts from Bourdieu such as habitus, field and practice see http://en.wikipedia.org/wiki/Pierre_Bourdieu.
3. http://en.wiktionary.org/wiki/all_fur_coat_and_no_knickers.

References

Barkham, P. 2008. How far will you go? *The Guardian*, 9 July.

Barr, S., T. Coles, and G. Shaw. 2008. Changing behaviours for a changing climate: a lifestyles approach. Presentation to the Climate Change Impacts and Adaptations to Dangerous Rates of Change Conference, University of Exeter, 22–24 September 2008.

Bourdieu, P. 1984 [1979]. *Distinction: a social critique of the judgement of taste*. London: Routledge.

———. 1990 [1980]. *The logic of practice*. Cambridge: Polity Press.

———. 1998 [1994]. *Practical reason*. Cambridge: Polity Press.

Gossling, S., J. Broderick, P. Upham, J.-P. Ceron, G. Dubois, P. Peeters, and W. Strasdas. 2007. Voluntary carbon-offsetting schemes for aviation: efficiency, credibility and sustainable tourism. *Journal of Sustainable Tourism*, doi: 10.2167/jost758.0.

Gower, I. ed. 2005. *Travel and tourism market review 2005*. Hampton, Middx: Key Note Publications.

———. ed. 2006. *Activity holidays: market assessment 2006*. Hampton, Middx: Key Note Publications.

Graham, H. ed. 2004. *Short breaks: market assessment 2004*. Hampton, Middx: Key Note Publications.

Garfinkel, H. 1967. *Studies in ethnomethodology*. Englewood Cliffs, NJ: Prentice-Hall.

Grenow, J., and A. Warde, eds. 2001. *Ordinary consumption*. London: Routledge.

Halifax plc. 2008. Long haul, mini breaks take off. Survey, 10 March, Halifax Press Office, Halifax.

Harvey, M., A. McMeekin, S. Randles, D. Southerton, B. Tether, and A. Warde. 2001. Between demand and consumption: a framework for research. CRIC Discussion Paper No. 40, The University of Manchester, Manchester.

Harvey, M., R. Ramlogan, and S. Randles, eds. 2008. *Karl Polanyi: new perspectives on the place of economy in society*. Manchester: Manchester University Press.

Hill, A. 2007. Travel: the new tobacco. *The Observer*, 6 May.

Lorenzoni, I., S. Nicholson-Cole, and L. Whitmarsh. 2007. Barriers perceived to engaging with climate change among the UK. *Global Environmental Change* 17, nos. 3–4: 445–59.

McMeekin, A., M. Tomlinson, K. Green, and V. Walsh, eds. 2002 *Innovation by demand: an interdisciplinary approach to the study of demand and its role in innovation*. Manchester: Manchester University Press.

O'Reilly, C. 2006. From drifter to gap year tourist: mainstreaming backpacker travel. *Annals of Tourism Research* 33, no. 4: 998–1017.

Randles, S., and A. Warde. 2006. Consumption: the view from theories of practice. In *Industrial Ecology and Spaces of Innovation*, ed. K. Green and S. Randles, chap. 10. Cheltenham: Edward Elgar.

Randles, S., and S. Mander. 2009. Practice(s) and ratchet(s): a sociological study of frequent flying. In *Climate change and aviation: issues, challenges and solutions*, ed. S. Gössling and P. Upham, chap. 11. London: Earthscan.

Reckwitz, A. 2002. Toward a theory of social practices: a development in culturalist theorizing. *European Journal of Social Theory* 5, no. 2: 243–63.

Schatzki, T.R. 1996. *Social practices: a Wittgensteinian approach to human activity and the social*. Cambridge: Cambridge University Press.

Shove, E. 2003a. Converging conventions of comfort, cleanliness and convenience. *Journal of Consumer Policy* 26: 395–418.

———. 2003b. *Comfort, cleanliness and convenience: the social organisation of normality*. Oxford: Berg.

Shove, E., and D. Southerton. 2000. Defrosting the freezer: from novelty to convenience. A story of normalization. *Journal of Material Culture* 5, no. 3: 301–20.

Southerton, D. 2001a. Ordinary and distinctive kitchens; or a kitchen is a kitchen is a kitchen. In *Ordinary consumption*, ed. J. Gronow and A. Warde, 159–78. London: Harwood Press.

———. 2001b. Consuming kitchens: taste, context and identity formation. *Journal of Consumer Culture* 1, no. 2: 179–204.

Southerton, D., H. Chappells, and B. van Vliet, eds. 2004. *Sustainable consumption: the implications of changing infrastructures of provision*. Cheltenham: Edward Elgar.

Urry, J. 2002. Mobility and proximity. *Sociology* 36, no. 2: 255–77.

Urry, J. 2007. *Mobilities*. Cambridge: Polity Press.

Veblen, T. 1925 [1899]. *The theory of the leisure class: an economic study of institutions*. London: Allen and Unwin.

Warde, A. 2005. Consumption and the theory of practice. *Journal of Consumer Culture* 5, no. 2: 131–54.

Whitmarsh, L., and S. O'Neill. 2008. Carbon off-setting behaviour: catalyst for – or evasion of – low-carbon lifestyles? Presentation to the Climate Change Impacts and Adaptations to Dangerous Rates of Change Conference, University of Exeter, 22–24 September 2008.