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Environmentalist in Business Class: An Analysis of Air Travel and Environmental Attitude

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ABSTRACT The strong growth in air travel raises the question of environmental awareness among air travellers. This article focuses on the exclusion of serious environmental problems of international air travel from the air travellers’ environmental consciousness. It approaches this question, in particular, by exploring international work-related air travel in two Danish knowledge organizations. The article identifies that the knowledge workers, in general, consider themselves as environmentally aware. However, there is no connection between their environmental attitude and their actual travel behaviour. The article shows that a number of other rationalities seem to affect the travel behaviour more strongly than environmental attitude. Subsequently by reviewing other studies, the article describes how the exclusion of air travel from the environmental consciousness is not only the case among knowledge workers but also seems to be a general problem in relation to flying in modern societies. In the discussion and conclusion, the article therefore focuses on the possibility of creating a stronger link between air travel behaviour and environmental attitude.

Introduction
International flying seems to be more important than ever in western societies. Globally, there are 1.9 billion air journeys each year, and at any moment in time, there are 360 000 passengers in flight above the USA (Urry, 2007). Global air travel growth rates have been in the order of 5–6% per year in the period from 1970 to 2000, and the volume of air transport is now five times that in 1970 (Gössling and Peeters, 2007). It is predicted by Airbus, one of the global leaders in airplane production, that air travel will continue to grow with annual rates of 5.3% until 2023 (Airbus, 2004). It has, therefore, been argued that air travel has become the industry that stands for and represents the new global order (Urry, 2007). However, the increase in international air travel is related to serious environmental impacts (Høyer and Naess, 2001; Lassen, 2005; Gössling and Peeters, 2007). Aviation emissions have increased by almost 87% since 1990 and today account for around 3% of the total CO₂ emissions in the European Union (EU) (Beliscwitz and
Furthermore, various scientists estimate the total contribution of aviation emissions to climate change to be at least two times as high as ground-level emissions because the greenhouse effect is considerably greater in the higher part of the stratosphere (Sausen et al., 2005; Forster et al., 2006; Stuber et al., 2006; Lian, 2007).

The strong growth in air travel raises the question of environmental awareness among air travellers. A number of studies have shown that the public awareness of environmental problems in relation to flying is low (Gössling and Peeters, 2007; Holden, 2007; Skovsmose, 2007). Therefore, this article focuses on the apparent disconnection of the serious environmental problems related to international air travel and the air traveller’s environmental attitude, with a particular focus on long-distance, international, work-related air travel. In relation to this, the following research questions are addressed in the article: How is the air traveller’s environmental attitude created? How does the traveller understand the problems of climate change related to flying? Does environmental awareness, in general, and awareness to climate change problems, in particular, have any impact on actual travel behaviour? Which other mechanisms and rationalities are in play?

Approaching such general research questions, the article takes a point of departure in a case study of work-related travel in Danish knowledge organizations. Figures from the World Tourism Organization (2005) show that 19% of all international travel is work-related. Traditionally, work-related travel has been seen as something closely related to work and determined by the employer’s needs and demands without much space for the employee’s individual decisions and rationalities (Lassen, 2006). The business traveller thereby differs from the tourist traveller whose activities reflect spare time and freedom (Urry, 1990). The Danish case study approaches work-related travel differently and shows that the employees have much more space for individual decisions in relation to travel frequency and destinations than the conventional understanding of work-related travel assumes. This means that it is relevant to explore the meaning of a number of individual rationalities in relation to work-related travel, and in particular, the question of environmental attitude becomes important in this approach. However, the Danish case study also shows that there is no connection between environmental attitude and the actual travel behaviour. Knowledge workers generally consider themselves to be environmentally aware, but the study identifies a number of other rationalities that seem to affect travel behaviour more strongly than the question of environmental attitude. Therefore, the article asks whether this is only the case for knowledge workers and work-related flying by reviewing other studies of air travel and environmental attitude concerning tourist, business and private travel. The article shows that the exclusion of air travel from the traveller’s environmental attitude seems to be a general problem in relation to flying in modern western societies. In the discussion and conclusion, the article therefore focuses on the possibility of creating a stronger link between air travel behaviour and environmental attitude.

The article is divided into four parts. In Part 1, the methodology, research design and sample of the Danish case study are presented. In Part 2, the theoretical understanding of attitude and behaviour is explored. In Part 3, the results from the Danish case study related to flying and environmental attitude are explored. In Part 4, various studies of flying and environmental attitude are reviewed. Finally, the conclusion and discussion is made, and particularly, the possibility of
establishing a higher degree of climate change awareness among air travellers is discussed.

**Part 1: Methodology, Research Design and Sample**

The environmental attitude study is part of a research that focuses on the driving forces and mechanisms behind international travel in Danish knowledge organizations. Previously, other parts of the study have been published (see Lassen, 2005, 2006, 2009; Lassen et al., 2006); however, this article particularly presents the part that is relevant to the question of environmental attitude.

The Danish case study of the driving forces behind international work-related travel focuses on two different knowledge organizations: Aalborg University and Hewlett-Packard, Denmark (Hewlett-Packard). It is chosen to design the study as an in-depth case study, instead of a bigger sample study, because, as Flyvbjerg (2001) argues, from an understanding-orientated perspective, it is often more important to clarify the deeper causes behind a given problem and its consequences than to describe its symptoms and how frequently they occur (Flyvbjerg, 2001, p. 78). The idea is that by selecting two very different knowledge cases in terms of private–public dichotomy, organizational structures, work cultures, tasks, reasons for travelling, etc., it is reasonable to assume that such shared mechanisms and rationalities can also be found in other forms of organizations.

The study focuses on knowledge organizations and air travel because in the public debate, this form of organization has been mentioned as an example of a ‘dematerialization’, meaning that it is assumed to make continuous economic growth compatible with reduced material consumption and pollution (Heiskanen and Jalas, 2000). However, various studies seem to indicate that a high level of flying is a fundamental component for work in knowledge organizations (Høyer and Næss, 2001; Wittel, 2001; Klok, 2003). Seen from an environmental perspective, this perception is, however, problematic because of the more serious environmental impacts from long-distance international air travel (see above).

Another important element in the study is to understand work-related travel not only as a result of organizations’ demands and needs but also as something related to the everyday life of the employees in the knowledge organization. In the new knowledge-driven labour market, decisions in relation to travel are much more individualized compared to the previous times (Castells, 1996; Bauman, 2000). Therefore, the case study does not only involve the organizational level but also has a strong focus on individual factors in order to understand the mechanisms and rationalities behind work-related travel in the two organizations.

In order to explore the driving forces behind international work-related travel, the case study uses both qualitative and quantitative data. The data are collected by a web-based questionnaire distributed to all the employees in the two companies. This survey included both closed category questions that mapped the actual travel behaviour within a year and a number of attitude questions concerning travel, work and environmental issues. On the basis of the web survey, a number of employees have been selected for qualitative in-depth research interviews. Interviews with the top management of the two organizations have also been carried out. The research interviews with the employees focused on the relation between air travel, work, everyday life and environmental attitude, while the interviews with top management in the two organizations focused on the relation
between individual behaviour/attitude and organizational structures. The reasons for the research design, sample frame and qualitative approach are presented in detail in Table 1. The table also states how the question of environmental attitude has been addressed in the data collection.

**Theoretical Perspectives on Attitude and Behaviour**

Before moving on to the findings from the Danish case study, the theoretical position in relation to the question of attitude needs to be clarified. The study approaches the attitude question by understanding environmental awareness among air travellers as one possible mechanism among a number of mechanisms that can potentially affect the travel behaviour. This approach indicates another theoretical point of departure from what can be termed the ‘traditional’ monocausal attitude–behaviour approach in which improved knowledge of climate change is presumed to automatically generate change in travel behaviour. Attitude–behaviour questions have traditionally been important in social psychological research, especially with a focus on (and belief in) attitude–behaviour consistency. In his classical study, LaPiere (1934) investigated whether the behaviour of US hotel and restaurant owners was consistent with their self-reported attitudes towards discrimination against ethnic groups. He showed that there was attitude–behaviour inconsistency and questioned whether attitude is actually related to behaviour. In another social psychological study of 46 studies on attitude–behaviour, Wicker (1969) supports this by concluding that attitude research is of no use in understanding behaviour. Similarly, from a sociological perspective, Bourdieu (2000) has shown how humans often reproduce the complex social structures and codes that they are part of, and he stresses that human praxis is often out of step with the norms and values that human beings pretend to follow as well as the representations they indicate in relation to their praxis. The same conclusion is reached by Hares et al. (2010) in a review of a number of more recent studies (e.g. Blake, 1999; Kollmuss and Agyeman, 2002; Barr, 2004) that investigate inconsistencies between people’s attitudes and behaviour. However, as Pieters (1988) argues, attitude theory should not only ask whether there is a connection between attitude and behaviour but also focus on the conditions in which there is and is not a connection (Pieters, 1988 in Holden, 2007, p. 118). Following this, Holden (2007) stresses that the failure to find attitude–behaviour consistency can be due to the fact that attitude is only one of the factors that influence behaviour.

Recently, a review of public attitudes to climate change and transport (Anable et al., 2006) has focused on why knowledge and attitudes about climate change often fail to be translated into changes in travel behaviour. Anable et al. point towards what they term as an attitude–behaviour gap and suggest that this gap represents one of the greatest challenges facing the public climate change agenda (2006, p. 8). They argue that a source of difficulties may lie in the expectation that there should be a consistency between attitudes and behaviour in the first place. In this body of research, two main opposing positions can be identified according to the authors. The first position believes that if people are informed and knowledgeable, then they will act in accordance with this knowledge, while the second position believes that information is necessary, but not sufficient, to encourage individual action, and it recognizes the need to understand behaviour change from a number of different perspectives
Table 1. The research design of the case study on long-distance work-related travel carried out between 2003 and 2005 in two Danish knowledge organizations

<table>
<thead>
<tr>
<th>Method</th>
<th>Reason for using the method</th>
<th>Length and content of the method</th>
<th>Aalborg University</th>
<th>Hewlett-Packard</th>
<th>How is environmental attitude addressed?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web survey</td>
<td>Map actual travel behaviour and explore attitude among the knowledge workers in relation to air travel, work, everyday life and environment.</td>
<td>In total 31 questions</td>
<td>Distributed to 1200 employees</td>
<td>Distributed to 600 employees</td>
<td>By a number of stated preference questions concerning environmental attitude</td>
</tr>
<tr>
<td>Qualitative interview with selected employees</td>
<td>Identify knowledge workers that travel on different levels and differ in relation to sociological factors such as age, gender, family relation, job position, etc.</td>
<td>Two hours in-depth interview with each employee Interview guide with 47 ‘open’ issues</td>
<td>Six in-depth interviews</td>
<td>Five in-depth interviews</td>
<td></td>
</tr>
<tr>
<td>Qualitative research interviews with top management</td>
<td>Focus on structural explanations behind the travel activities at organizations level</td>
<td>One hour of in-depth interview with top management Interview guide with 20 ‘open’ issues</td>
<td>One in-depth interview</td>
<td>One in-depth interview</td>
<td>Questions concerning the environmental awareness of the organizations</td>
</tr>
</tbody>
</table>
(anthropological, sociological, socio-psychological, economic, etc.). In the second perspective, an in-depth understanding of the different roles played by knowledge, attitudes and behaviour is required before it is possible to appreciate the factors that inhibit, drive and facilitate behavioural change. In this perspective, no single theory can, on its own, explain the relation between attitude and behaviour; various theories and types of knowledge have to be involved (Anable et al., 2006, p. 8).

This article follows in the footsteps of the second perspective in the study of work-related travel and attitude in the two Danish knowledge organizations. Therefore, the focus is on the employees’ creations of their environmental attitude, how they understand flying and climate change, and which role their attitude plays in relation to their international air travelling behaviour. Moreover, the study does not only address attitude but also a number of other mechanisms and rationalities that influence the employees’ international travel behaviour by airplanes. This means that attitude in the Danish case study is understood as one mechanism among a number of mechanisms that affect the pattern of international air travel. The main focus is therefore to investigate how such different mechanisms are brought into play, and how they together affect the level of air traffic.

Part 2: The Insignificance of the Environment in Air Travel Behaviour

In this part, the most important results from the Danish case study at Hewlett-Packard and Aalborg University concerning environmental attitude and air travel are presented. In the web survey, the employees were asked to type in their international trips within the last year and to answer a number of environmental attitude questions. Overall, the survey shows that time, money and comfort are the three most important priorities when the employees in the two organizations decide means of transport on international work-related trips. Only 1% of the employees at both Aalborg University and Hewlett-Packard have the environment as their number one priority when they choose means of transportation on long-distance international journeys (>600 km), and less than 6% in both organizations list it in their top three priorities (see Lassen, 2005, for further elaboration on this subject). This is also the picture when the employees are asked the same question in relation to short international trips (<600 km) in which real alternative means of transport exist. However, the web survey also shows that, in general, they have environmentally friendly attitudes. As Figure 1 illustrates, 84% of the employees surveyed at Hewlett-Packard and 83% at Aalborg University say that they think that it is important to reduce their CO₂ emissions because of global warning, while 61% of the employees surveyed at Hewlett-Packard and 71% at Aalborg University agree that people should use the most environmentally friendly means of transport. Furthermore, a majority at both workplaces agree that growth in human consumption is one of the most important obstacles for sustainable development. This illustrates a paradox because on the one hand, the employees seem to be positive towards climate change problems and environmental questions, in general, and acknowledge the role of transport in this perspective, whereas on the other hand, almost no one takes environmental considerations into account when they choose their means of international transportation. In the following section, the qualitative research interviews therefore focus more in depth on the creation of environmental
attitude by the employees in the two knowledge organizations in relation to this paradox.

**Air Traffic has Nothing to do with Environment!**

While conducting the qualitative research interviews, it was experienced that the employees addressed a number of environmental issues with a very positive attitude. The employees consider themselves environmentally aware, and they were very emotionally engaged in environmental problems. On a general level, the employees point out a number of environmental problems, but when asked about climate change problems in relation to flying, it was not something they were very keen to discuss. They were very surprised when confronted with the fact that flying is related to more serious environmental problems than movement on the ground level. Many of them tried to answer evasively or change the conversation to other issues not related to flying. In general, the employees consider the airplane differently than other means of transport in relation to the question of climate change. When critical questions on flying were addressed in the interviews, the employees gradually turn to questions related to cars and road traffic. And instead of talking about problems in relation to international work-related journeys, they preferred to talk about commuting to their workplace. In general, the knowledge workers have a lot of ideas when it comes to coping with climate change problems and other environmental problems related to automobility. Additionally, they know about the emissions from cars and point towards alternative means of transport, for example train, buses, bicycling, walking as well as cars with low emissions. However, when it comes to flying, the employees do not see the airplane as an environmental object. Airplanes and the aviation industry are considered as unquestionable. They see air traffic as something that is placed outside their sphere of influence on a much higher level than themselves and therefore not something that they can affect. They do not think that their individual actions have any meaning in the big picture because they only consider themselves as a pawn in a “big technical system” (Graham and Marvin,
A number of the employees say that ‘they see no alternatives to flying’, even when it comes to flying short distances within Scandinavia, where there exist real alternative means of transport (ships and trains). In general, they care about ‘the environment’, but what they consider as ‘environment’ differs from employee to employee. It is typical that the employees shape their environmental attitude around local and visible issues. Environmental considerations are about buying ecological products, saving energy, reducing local consequences from traffic, etc. For the employees, the environment is something tangible, present and local. As will be evident in the next section, the local understanding of environmental issues stands in contrast to the international orientations and practises around which many of the employees create their self-identity.

Environmental Deniers and Bystanders

The unwillingness of the employees to discuss flying and climate change is related to various types of rationality in which two groups can clearly be identified: Deniers and Bystanders. Deniers do not think that air traffic is related to particular climate problems, whereas Bystanders acknowledge it, but for different reasons, they have excluded the problem from their general environmental attitude, and it does not influence their actual travel behaviour. The following quote gives an example of the Deniers:

I am very aware of environmental issues. I believe in recycling and what else there might be in it. On the other hand, I don’t have any environmental considerations in relation to my choices of means of transportation. I drive a diesel car and fly by airplanes. I see that there is a great division in the society concerning whether airplanes actually pollute more than a train or a diesel car, or whether a diesel car maybe is more environmentally friendly than an ordinary petrol car. So I have not seen any argument supporting that I should change to a petrol car or that I should take the train instead of the airplane. (28-year-old salesman from Hewlett-Packard)

The Deniers do not take climate change problems into consideration when they plan to step onto an airplane because they reject the idea that air travel is related to climate change problems. Opposite to the Deniers, who reject that flying is connected to climate change at all, are the Bystanders who acknowledge the problem but have excluded it from their consciousness. The quote below illustrates the Bystander perspective:

No, not particularly much, I switch off my computer, I turn off the light etc., but I travel, when I travel. No, I will probably take the train, when I think that it is worth it to take the train. If I am going to Aarhus, then I would probably take the train instead of driving by car. At the local level, it is a factor, but in relation to international trips, it is time that is the decisive factor. Time and comfort, and then I feel guilty about the jet stream behind me. (40-year-old female associate professor at Aalborg University)

On a general level, Bystanders think that air travel is related to climate problems, but they do not think that through their individual behaviour, they can really do anything about it. The Bystanders are similar to what Holden terms as the “powerless” (Holden, 2007, p. 133). Their environmental attitude stands in
contrast to their pattern of activities, horizon of actions, identity and lifestyle, all elements that to different degrees take place on a global level:

Yes, I have tested my environmental impact; I know that it is high. I do not like to think about it, because I am aware that I have a really extreme environmental impact via my business trips. Actually I’m thinking about it a lot because it is probably a little bit in conflict with my beliefs and my philosophy of life, because I support green environment and ecology and flying is not in harmony with that. (42-year-old female consultant from Hewlett-Packard)

The scale and content of the environmental attitudes are disconnected from the rest of the employee’s horizon of actions. One explanation for the exclusion of the problem by Bystanders is that they want to avoid continuously having a bad conscience. This means that they have established watertight shutters between climate change problems and their own mobility behaviour in relation to work. Læssøe (1999) argues that such ambivalence between environmental attitude and practical behaviour can cause a cognitive emotional stressful condition if the subject feels that there are no possible alternative actions. This condition can cause a repression of environmental problems from the consciousness (Læssøe, 1999, p. 44). The employees’ repression of environmental problems can, for some, be caused by their inability to see alternatives to flying in relation to coping with work, while for others, it reflects a lack of acknowledgement of the problems or a downgrading of the problems in relation to other issues. Many employees think that change must come from the leading institutions of society, nationally as well as internationally, and from the aviation sector itself. They have exempted themselves from having a personal responsibility because they do not want to have this responsibility or they do not think that they are capable of reducing their international work-related travel (Lassen, 2005). As it will be shown in the following, another possible explanation might be that other mechanisms, which are stronger than the environmental attitude, are affecting the behaviour of the employees in the two organizations.

**Why is Flying excluded from the Environmental Attitude?**

In the web survey, the employees were asked to indicate to what extent they decide the frequency of their work-related trips themselves. The survey shows that knowledge workers have a high degree of self-determination when it comes to deciding the destination and frequency of international work-related travel (see also Lassen, 2006). This means that a number of mechanisms and rationalities also play a role when an international trip is carried out.

The qualitative analysis shows that work in the two Danish knowledge organizations is based on individualization, autonomy, networking and network relations between the employees (Sennett, 1999). This means, as is also shown by Nowicka, that for the employees “travel is a tool in achieving better performance at work” (2006, p. 111). On the one hand, there exists a core of obligations where the employees, through culturally embedded expectations, need to travel. For example, it is expected that the employees from Aalborg University do research and communicate this research internationally at conferences. Likewise, at Hewlett-Packard, each individual employee is committed to a set goal for a minimum income to the organization, and therefore is ‘forced’ to participate in
any available project, both nationally and internationally. Such obligations are very difficult for the individual employees in the two organizations to decline if they want to keep their present job position (and make a career). There is a need for what Urry (2002) has described as face-to-face, face-the-place and face-the-moment opportunities (see also Boden and Molotch, 1994). This means that the employees have to be co-present from time to time in relation to people, places and events to manage their job obligations. Such obligations can, for many, feel like a burden (see also Nowicka, 2006, p. 111), and in a number of situations, this means that the knowledge workers do not have any alternative but to travel. However, the qualitative analysis on the other hand also shows that the need for co-presence is individually created (see Lassen, 2005). Not only do the employees face a number of structural obligations but that a number of individual mechanisms that influence how the employees evaluate the need to visit people, places and events abroad also exist. In some situations, such individual rationalities have a much stronger influence on travel behaviour and attitude than the existence of climate change problems in relation to flying. Next, such various forms of individual rationalities related to international air travel will be examined.

First, international work-related travel by airplane is important because it offers the material support to a cosmopolitan identity. Hence, a connection can be identified between the forms of mobility that are practised by the employees in their networked everyday lives and their social identity, for example ways of living in relation to choosing a means of transport. Among other issues, the employees use ‘identity accessories’ in their work of constructions, not only locations and places but also the movement between these places and locations. For a hypermobile ‘way of living’ or ‘way of working’, ‘consumption of distance’ becomes a fundamental element, and there is a connection between this type of consumption and particular human lifestyles and identities (see also Whitelegg, 1997; Adey et al., 2007, for further elaboration on this subject).

Second, it functions as formative journey. It also provides the possibility of developing professional skills. For example, international travel makes it possible for employees to participate in highly specialized courses, only held at a few places around the world. In the same way, a conference or a congress may help the employees in developing professionally in their job as well as exchanging experiences with colleagues in various countries and cultures.

Third, it is offering an escape from time pressure in everyday life. A number of the employees live a hectic and stressful everyday life in which it is difficult to cope with and co-ordinate various tasks of everyday life in relation to work, family and spare time activities. In some cases, an international, work-related trip can feel like a holiday (or escape) from the time pressure of everyday life (see also Rojek, 1993; Gustafson, 2006).

Finally, it offers the possibility of mixing pleasure with work. Some of the employees occasionally use the opportunity to extend the normal working trip for a few days or maybe they use it as a launch pad for a vacation. As Nowicka describes it, the knowledge workers are experts and tourists at the same time (2006, p. 167) (see also Lassen, 2006). Therefore, they extend their trip with some extra days or start their holidays at the end of an international, working trip. The employees sometimes travel to interesting places and want to explore these more than what is possible within the ordinary working period abroad. This could, for example, be to have a holiday after participating in conferences in, for example,
Greece or Australia. Furthermore, international work-related travels often involve ‘family activities’. This includes both ‘bringing and visiting family and friends’ abroad. It happens that employees, especially from the university, bring their partners, children or friends along with them. Furthermore, this mixing of pleasure with work also involves an element of the ‘exotic touch’ (Nowicka, 2006, p. 192), which means that the employees want to experience something new and unusual. If they were not able to travel, they would miss the smell, the food, the air, the people and the experience during the stay in another place. Therefore, the journey always involves small pockets of new and exotic experiences, even when it is not planned or conscious. In summary, this means that environmental attitude is up against a number of structural mechanisms and individual rationalities that have a much stronger impact on the employee’s international behaviour than environmental knowledge regarding the climate problems of flying.

Part III: Other Studies concerning Environmental Attitude and Air Travel

Is the weak connection between environmental attitude and air travel behaviour something exclusively related to workers in Danish knowledge organizations, or is it a more general issue that can be addressed in relation to humans and flying in the modern western world? In the following section, this question is explored more in depth by reviewing other studies of flying and environmental attitude. Such studies are concerned not only with work-related travel but also with tourism and private flights. The list of studies presented next is by no means exhaustive; however, it represents the most important studies on environmental attitude and air travel that the author of this article is aware of. Because the Danish case study presented above is carried out between 2003 and 2005, the review also includes a number of newer studies to assess whether any change can be identified.

Becken (2004) focuses on tourism as an active contributor to climate change and explores how tourists and ‘tourism experts’ perceive climate change (Becken, 2004, p. 332). It is based on two surveys focusing on both national and international tourists visiting New Zealand and one survey that involved participants in a major conference for tourist experts in Australia. All three surveys contained, among other issues, the question: “Is climate change an issue for tourism” (Becken, 2004, p. 334). Here, approximately 50% of the tourists believed that a relationship exists between climate change and tourism in the sense that climate change affects tourism, but only 12% believed that tourism contributes to climate change. Likewise, 97% of the conference delegates believed that climate change was an issue for tourism, but only 9% said that they believed tourism contributes seriously to climate change. Therefore, Becken concludes that “overall, tourism experts were better informed than tourists, although the general opinion was clearly biased towards the perception of tourism being threatened by changing climate and not the other way round” (2004, p. 340). Therefore, he argues that there is a need for more information about the causes and effects of climate change in the context of tourism.

With the same starting point, “the question of the environmental awareness of air travellers”, Gössling et al. (2005) investigated tourists’ perception of tourism-related environmental problems, with particular focus on international leisure tourists in Zanzibar (Tanzania). This study shows that many tourists are unaware of the consequences of air travel, while their perception is dominated by local, visible, ‘immediate’ and comprehensible environmental problems (Gössling &
Peeters, 2007, p. 404). Only 17% of the tourists surveyed addressed problems in relation to flying and even fewer had more profound understanding of such issues. It is also striking that 68% of the surveyed people indicate that they have a university degree. This is similar to the knowledge workers described above. They are also highly educated, but a number of them have only a limited understanding of the relationship between flying and climate change, whereas they are much more aware of local environmental problems.

Holden (2007) explores the role of “green attitudes” in relation to mobility and uses both quantitative survey data and qualitative interviews. Holden examines the relationship between household consumption and environmental attitudes by comparing members of green organizations with non-members. The survey was sent out to 2500 randomly selected individuals above the age of 17 years (40% response rate). The questions concerned the individual’s and the household’s consumption of energy and transport, as well as family structure, income and housing facilities (Holden, 2007, p. 122). Overall, Holden stresses that a membership of an environmental organization is not a good predictor of sustainable household consumption. Rather the opposite seems to be the case; members of environmental organizations have a higher total household consumption than non-members. When it comes to flying, the relationship between membership of an environmental organization and consumption of travel by plane is particularly strong. On the basis of the survey data, Holden argues that “supposedly green individuals cast aside their green concerns when travelling for leisure; at least this seems to be the case when they are travelling by plane” (2007, p. 128). But he also emphasizes that the statistical analysis does not provide an understanding or explanation of the underlying mechanisms that lead to this pattern. Therefore, he uses in-depth qualitative interviews to answer the question: “Why do the green respondents travel by plane more than other people?” He concludes that when it comes to long-distance leisure travel, it seems like many respondents (green people as well as other people) had a desire to exempt themselves from the constraints of environmentally friendly behaviour (Holden, 2007, p. 135). Holden hypothesizes that a possible explanation could be that people with a high level of environmental awareness are also concerned about global environmental issues, which to a large extent include developing countries. Green people, who are particularly aware of these issues, may very well wish to see and experience such places and problems themselves (face-to-place) (see also Urry, 2002, for a further elaboration on this subject). However, on the basis of the analysis of the Danish knowledge workers above, it can be argued additionally that the exclusion of flying from the employees’ consciousness might be caused by the fact that other types of mechanisms and patterns of meaning have a stronger influence on the traveller’s behaviour than their environmental attitude. Mechanisms such as the possibilities of networking face-to-face, creating a cosmopolitan identity, escaping time pressure of everyday life and the chance to explore and consume tourist places are more powerful in relation to behaviour than knowledge of environmental problems when it comes to the question of flying long distance.

Another study of domestic air travel in Denmark focuses on the air traveller’s environmental attitude, in general and in particular, in relation to the means of transport, including both work-related travel and leisure travel (Skovsmose, 2007). This study is particularly interesting because it explores the relationship between flying and environmental consequences on routes between two Danish cities where there exists a number of alternative means of transportation, for
example cars, trains and buses. The survey shows that both female and male travellers on a general level very strongly agree that it is important to reduce CO₂ emissions for the sake of climate change (70–80% agree) (Skovsmose, 2007, pp. 33–34). But when they are asked whether one should choose the most environmentally friendly means of transportation instead of flying, the support for CO₂ reduction is reduced by half, which is similar to the above-mentioned results, indicating that flying is not an object of the traveller’s climate change concerns on a general level.

However, a survey concerning the British attitude to air travel, in general, by the British Department for Transport (DFT) in 2006 showed that air passengers are increasingly aware that air travel causes environmental damage, but they still want to fly without too many restrictions and are willing to pay for mitigating the climate change effect. The survey showed that 70% of the adult travellers, in general, agree that air travel harms the environment. However, they point towards various forms of environmental consequences: 84% mention pollution/poor air quality, 40% point at noise pollution and 35% at climate change or global warming. The survey was repeated in 2008, and this time, it showed that although environmental groups have been campaigning hard to highlight the link between flying and climate change (see e.g. www.hacan.org.uk), the number of people who agreed that flying harms the environment has gone down to 66%. Moreover, 22% of the respondents said that they planned to take more flights than the previous year, and 78% of those who responded said that they support continued access to unrestricted air travel, provided that they were sure that the damage to the environment was limited. This study seems to support the finding from the Danish case study in a number of ways. First and foremost, no matter whether air travellers acknowledge the climate change problems of air travel or not, it does not seem to have any significant impact on their actual air travel behaviour. Furthermore, the study also indicates that the acknowledgement of climate change problems among air travellers, in general, does not seem to have increased markedly since the Danish case study was carried out.

A recent study based on focus group interviews by Hares et al. (2010) explores tourist awareness of the impact of travel on climate changes and examines the extent to which climate change features in holiday travel decisions. Moreover, it identifies some of the barriers to the adoption of less carbon-intensive tourism practices (Hares et al., 2010, p. 466). The study concludes that tourists do not consider climate change when planning their holidays. The interviewed tourists identify barriers as (1) dismissal of alternative transport modes; (2) importance of holidays; (3) responsibility lies with others; and (4) climate change lies with others. In all four groups, the major contributors to climate change were considered to be governments, businesses and other countries. Very little responsibility was seen to lie with individuals in terms of personal contributions to climate change. Furthermore, the study stresses that the lack of personal responsibility displayed by the focus group participants is clearly a barrier to adjusting their holiday travel behaviour in favour of lower carbon options (Hares et al., 2010, p. 472).

To summarize the review above: In general, the various studies show that climate change problems do not play a role at all when people decide to enter an airplane. Some studies indicate that people only have limited knowledge of climate problems related to air travel, while other studies show that people have the knowledge but cast aside their green concerns when they travel by airplane; even people with high levels of education do this. This seems to support the
identification in the Danish case studies of ‘the Deniers’ and ‘the Bystanders’ as two groups of travellers with different environmental attitudes. The common trait of the two groups is that environmental attitude does not affect their actual air travel behaviour. Moreover, two of the studies indicate that people are aware that air travel causes environmental damage, but they still want to fly without too many limitations, and if they are asked to change travel behaviour, the support for environmental issuers decreases. Furthermore, one study has tested how environmental attitude has changed from 2006 to 2008 and shows that the environmental attitude has weakened. Table 2 summarizes the findings from the various studies presented above.

Discussion and Conclusion

In this article, various aspects of flying and environmental attitude among the travellers in two Danish knowledge organizations are examined. It has been argued that attitude must be understood as one mechanism among other mechanisms affecting mobility behaviour. Therefore, it is necessary to examine attitude in relation to other types of mechanisms and rationalities in order to understand behaviour. With a starting point in the two Danish knowledge organizations, it has been showed that the knowledge workers consider themselves environmentally aware at a general level with knowledge about climate change problems, and that a majority sees local transport as a part of the climate change problem. The knowledge employees create their environmental attitude especially around local and visible objects, but with regard to international flying, they do not consider environmental problems before they enter an airplane. This is also the case for short international flights in which real alternative modes of transport exist (see also Lassen, 2005). The article has shown that some of the employees deny the existence of the problem, whereas others acknowledge it, but for various reasons, they exclude the problem from their attitude, and for both groups, the climate change problems of air travel do not affect their air travel behaviour at all.

The article also showed that a number of rationalities and mechanisms other than environmental attitude exist, and these have a much stronger impact on the actual travel behaviour than the climate change problems of air traffic (e.g. work-related travel is related to a number of strong functions such as the need to be co-present with people, places and events to manage job obligations, formative journeys, escape from time pressure in everyday life and the possibility of mixing pleasure with work).

An important question is the validity of the findings from the Danish case study. A lack of awareness about the environmental impact of air travel or exclusion of this issue can be found in a number of other studies that do not only focus on work-related trips but also on tourism and private travel. The studies, which are both quantitatively and qualitatively oriented, generally seem to emphasize that environmental attitudes do not play a significant role in people’s actual travel behaviour. However, it could be argued that the focus on air transport and climate change has been quite strong in recent years, and it is possible that this new focus may have caused important attitude changes since the Danish case study was carried out. This question needs to be explored further in the future, but so far, this article will claim that these developments do not change the general picture that the article presents, and that most recently published studies also seem to indicate. This provides a picture of a
### Table 2. The results of studies that focus on air travel and environmental attitude

<table>
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<th>Study</th>
<th>Objectives</th>
<th>Methods</th>
<th>Results</th>
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<td>Becken, 2004</td>
<td>Tourism as a contributor to climate change, especially how tourists and tourism experts perceive climate change problems</td>
<td>Two surveys</td>
<td>Tourism is threatened by changing climate and not the other way around</td>
</tr>
<tr>
<td>Gössling et al., 2005</td>
<td>The question of the environmental awareness of air travellers</td>
<td>Survey</td>
<td>Only a minority of the surveyed travellers addressed environmental problems of air travel. A very high number have a university degree</td>
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<tr>
<td>Holden, 2007</td>
<td>Green attitudes in relation to mobility</td>
<td>Survey and in-depth interviews</td>
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</tr>
<tr>
<td>Skovsmose, 2007</td>
<td>The relationship between flying and environmental attitude on domestic flights</td>
<td>Survey</td>
<td>On a general level, air travellers strongly support reduction of CO₂ emissions from flying. But only half of the travellers support if they themselves should change travel behaviour</td>
</tr>
<tr>
<td>British Department of Transport, 2006, 2008</td>
<td>The attitude to air travel</td>
<td>Survey</td>
<td>In 2006, a large number agreed that air travel harms the environment. In 2008, the number was reduced, and the majority supported unrestricted air travel if environmental impacts are reduced</td>
</tr>
<tr>
<td>Hares et al., 2010</td>
<td>Tourist awareness of the impact of travel on climate change</td>
<td>Focus group interviews</td>
<td>Tourists do not consider climate change when planning their holiday. Lack of personal responsibility is a barrier to adjusting to lower carbon options</td>
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C. Lassen

modern society in which aircraft becomes a more and more integrated and indispensable part of everyday life, and in which travellers increasingly build a sort of aerodynamic mobility habitus (Cwerner, 2009). The problems in relation to this development are that aeromobility appears as a strong example of the displacement of people’s intuition regarding the consequences of their behaviour. As shown in the Danish case study, the environmental consequences of the employees’ air travel behaviour are invisible, while a number of advantages are very clear to people.

In discussion, it should, therefore, be stressed that in many ways, air travel tends to be an unquestionable area outside the normal sphere of regulation and policy (Lassen and Jensen, 2004). On the basis of the findings, it can be argued that there exists a lack of mechanisms that can connect climate change problems with the attitude of the air traveller and more important mechanisms and structures that can support those who have a green attitude, but do not see it as realistic or possible to change their air travel behaviour. Three important points can be made in relation to the lack of mechanisms.

First, compared with other means of transportation, air traffic is globally the least politically regulated area, and it has historically been lifted out of the sphere of the nation state (Gidwitz, 1980, pp. 37–73; Graham, 1995). For example, airline fuel has been exempted from taxation since 1944 under the rules of the International Civil Aviation Organization (ICAO) (Lassen et al., 2006). Emissions from international flights are not included in the Kyoto protocol on greenhouse gases because of difficulties in allocating emissions between countries. Moreover, the European Commission has shown that the external costs of airplanes measured in EUR/1000-person-kilometres are more than the double of the external costs of trains (Europakommissionen, 2001, p. 116). In a number of western countries, the construction of new airports is very much a local matter for local politicians and developers, and it is not particularly governed by any coherent national plans for the future development of airports and aeromobility. This means that there is a lack of air regulating policy, in general.

Second, even though the debate on air travel and climate change has increased recently, it can still be argued that the public debate has a number of shortcomings. In many western societies, the public debate is dominated by the rationality of the space of flows (Castells, 1996). As Gössling and Peeters (2007) have shown by analysing the dominating discourses surrounding air travel, four major industry discourses can be identified: (1) air travel is energy efficient and accounts only for marginal emissions of CO₂; (2) air travel is too important, both economically and socially, to be restricted; (3) fuel use is constantly minimized and new technology will solve the problem; and (4) air travel is treated unfairly in comparison with other means of transport. Gössling and Peeters argue that there are substantial gaps between such discourses and the reality of environmental performance of aviation, which might partially explain the conventional understanding of air travel and its environmental consequences among the public—an issue, which the above-mentioned examples of Deniers also illustrate.

Finally, particularly in relation to work-related air travel, it should be stressed that in many international organizations and institutions, no policy exists that supports reflexive air travel behaviour (see also Denstadli, 2004). These issues need to be addressed in order to gain a stronger connection between air travel and environmental attitude in the future.
Acknowledgement

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Notes

1. Such various theories are the deficit model; rational choice theory; the theory of planned behaviour; norm activation theory; values-beliefs-norms theory; Triandis’ theory of interpersonal behaviour; social learning theory; social capital theory; diffusion of innovations; transtheoretical model; systems theory (Anable et al., 2006, p. 9).
2. Bauman introduced this term during a Ph.D. course held by Øvind Larsen at Copenhagen Business School in 2002.
3. The employees were asked to indicate, on a five-point Likert scale, to what extent they can decide the frequency of their work-related trips, ranging from ‘completely free choice’ to ‘no influence at all’. The tendency in the answers is that, in general, the employees have a determining influence on their work-related travel. At Hewlett-Packard, 32% of the employees expressed that it is ‘predominantly a free choice’, while 41% said that it is ‘partly a free choice’. Finally, 22% said that they ‘have little influence’ on the period of travels in relation to their work. At Aalborg University, 72% of the employees answered that the frequency of work-related trips is either a ‘totally free choice’ or ‘predominantly a free choice’. Furthermore, 22% expressed that it is ‘partly a free choice’ and 6% said that they ‘have little influence’.

References


