Psychological and behavioural approaches to understanding and governing sustainable tourism mobility

An international workshop in the Black Forest (Freiburg, Germany)

3rd - 6th of July 2012

Workshop reader
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Introduction

In order to mitigate tourism’s contribution to climate change, there is the need for innovations at political, technical and individual levels. Yet, despite a growing contribution to climate change, tourist and traveller behaviour is currently not acknowledged as an important sector within the development of climate policy. Influencing individual behaviour and informing effective governance will require a sound understanding of the psychology and social factors that surround contemporary tourism and travel mobilities.

This workshop aims to explore the psychological and social factors that may contribute to and inhibit sustainable behaviour change in the context of tourist and traveller behaviour. We seek to form a stronger knowledge base and research agenda for the effective governance of tourism’s contribution to climate change.

The programme will consist of multi-disciplinary sessions and discussions in plenum about the following topics:

- *Psychological understandings of climate change and tourism mobilities*
- *Behavioural aspects of climate change and tourism mobilities*
- *Governance and policies based upon psychological, behavioural and social mechanisms*
Rationale of the workshop

Despite a growing contribution to climate change, tourist and traveller behaviour is currently not acknowledged as an important sector within the development of climate policy, including the Intergovernmental Panel on Climate Change reports. In order to mitigate tourism’s contribution to climate change, there is the need for innovations at political, technical and individual levels. Influencing individual behaviour and informing effective governance will require a sound understanding of the psychology and social factors that surround contemporary tourism and travel mobilities. Whilst consumers may be becoming increasingly aware of tourism’s potential impacts on climate change, and in some cases profess attitudes towards mitigating their own impacts, there is evidence that attitude-behaviour gaps exist and that most individuals are unwilling to modify their actual behaviours.

Consequently, this workshop aims to explore the psychological and social factors that may contribute to and inhibit sustainable behaviour change in the context of tourist and traveller behaviour. This will allow for a more informed understanding of how technology, infrastructure (e.g. capacity constraints for certain forms of travel) and/or cost distribution (taxes, subsidies) can be developed/augmented in order to reach stronger mitigation goals whilst ensuring that resistance from consumers for socio-psychological reasons are minimized. The knowledge we seek to generate from this interdisciplinary workshop is of the utmost importance to policy makers, as policies will be less effective if not based on a sound understanding of tourist behaviour and psychology. This knowledge will ideally help remove barriers that policy makers may perceive in implementing stronger mitigation measures by signalling how such measures can be both palatable to consumers and in keeping with economic goals. Ultimately, we seek to form a stronger knowledge base and research agenda for the effective governance of tourism’s contribution to climate change.

The organisers

- Stefan Gössling & Tim Freytag (Freiburg Institute for Advanced Studies, Germany)
- Scott Cohen (Bournemouth University, UK)
- James Higham (University of Otago, New Zealand)
- Paul Peeters (NHTV Breda University, The Netherlands)

Scientific advisory board

The scientific advisory board consists of key researchers from the fields of tourism, mobility and sustainable behaviour.

- Bas Amelung (Wageningen University, The Netherlands)
- Jillian Anable (University of Aberdeen, UK)
- Jean-Paul Ceron (Limoges University, France)
- Janet Dickinson (Bournemouth University, UK)
- Ghislain Dubois (University of Versailles, France)
- Michael Hall (Freiburg Institute for Advanced Studies, Germany & University of Canterbury, NZ)
- Shaun Lawson (University of Lincoln, UK)
- Jeroen Nawijn (NHTV CSTT, Breda, The Netherlands)
- Daniel Scott (University of Waterloo, Canada)
- Gert Spaargaren (Wageningen University and Research, The Netherlands)
- John Urry (Freiburg Institute for Advanced Studies, Germany & Lancaster University, UK)
Venue and accommodation

The conference venue, Hotel Fortuna, is situated in the little hamlet of Kirchzarten, less than ten kilometres from Freiburg im Breisgau, the gateway to the German Black Forest. The place offers not only a perfect venue to host a stimulating workshop, but also opportunities for hiking, cycling and experiencing nature, and visiting the picturesque city of Freiburg.

Location
Kirchzarten is easily accessible by train from the Freiburg main station, which in turn is connected to the European train network. For those arriving by air, Germany's largest airport Frankfurt is just a two-hour train ride away. A map of Kirchzarten and surroundings can be found [here](#) and in the following section on travel information.

Book your accommodation
Participants arrange accommodation directly with Hotel Fortuna at the special conference rate of €50 per night (single room; for doubles please contact the hotel). Please note that Hotel Fortuna only has 30 rooms, which will be provided on a first-come, first served basis. Further accommodation is available in the adjacent Hotel Sonne. Early booking is recommended. When booking, do not forget to note you are a participant of the workshop.

Booking link
For booking a room at Hotel Fortuna click [here](#).
For booking a room at Hotel Sonne click [here](#).
Travel information

Kirchzarten is easily accessible by train from the Freiburg main station, which in turn is connected to the European train network. For those arriving by air, Germany’s largest airport Frankfurt is just a two-hour train ride away.

Sustainable travel
The organizers of the workshop aim to bring tourism transport and mobility towards a more sustainable level. Given the purpose of the workshop and to reduce the carbon footprint of all participants, we would highly recommend travelling to the workshop by train and/or bus, where available.

How to get there
By rail from all of Europe please check timetables and book at the DB website.

Some example travel times up to Kirchzarten:

- Frankfurt a/M: 2.00 hrs
- Paris: 3.00 hrs
- Amsterdam 6.45 hrs
- London: 7.20 hrs
- Brussels: 6.00 hrs
- Berlin: 6.50 hrs
- Marseille: 8.45 hrs
- Rome: 9.30 hrs
- Barcelona: 13.30 hrs
- Copenhagen: 12.45 hrs
- Vienna: 9.00 hrs

By rail from Freiburg: A railway-time table (PDF) for going from Freiburg to Kirchzarten (and back) can be found here. You can also use the time table information of local public transport. See map next page for location station Kirchzarten and Hotel Fortuna (walking distance 600 meter).

By car (from Freiburg): Exit Freiburg-Mitte, proceed in direction Donaueschingen/Titisee-Neustadt, you are reaching Kirchzarten after roughly twelve kilometers, after crossing Freiburg. See also map next page.

From Frankfurt International airport (Germany): There is a railway station at the airport. Take the train towards Basel. The train takes roughly 2 hours to Freiburg railway station.

From Basel airport (Switzerland): The airport has a Swiss and a French exit. Leave the baggage area via the exit marked France (do not take the one marked Switzerland). At the outside of the Airport building (French side) take the Bus to the Freiburg - railway station. The bus ride takes one hour.

At Freiburg railway station: take either a taxi (about 25,- EUR) or take the train to Kirchzarten (towards Titisee), leave at the third station. The ride takes about 12 minutes. In case that you do not have a long-distance train ticket to Kirchzarten you have to obtain a ticket for the local transport services at the train station. It is not possible to buy such a ticket in the train. There are ticket machines on the platforms, you will need a "zone 2" ticket. The train generally leaves from platform 7.

More information can be found at the website of the tourist information center. This link provides traveling information, including a route-planner.
Freiburg 2012
## Programme (version of 22-06-2012)

### Tuesday 3\(^{rd}\) of July 2012

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>16:00</td>
<td>Reception and registration open at the venue (Hotel Fortuna, Hauptstraße 7, Kirchzarten, Germany)</td>
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<tr>
<td>19:00</td>
<td>Dinner at the hotel Fortuna</td>
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### Wednesday 4\(^{th}\) of July 2012

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>9:00</td>
<td>Opening and welcome session (plenary)</td>
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<tr>
<td></td>
<td><strong>Chair: Stefan Gössling</strong></td>
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<tr>
<td></td>
<td>- Welcome and opening by Stefan Gössling, conference host</td>
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<tr>
<td></td>
<td>- Introduction to the conference theme by James Higham and Scott Cohen</td>
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<td></td>
<td>- Background to the climate mitigation problem of tourism and the role of psychological factors by Paul Peeters</td>
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<tr>
<td>10:30</td>
<td>Coffee break</td>
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<tr>
<td>11:00</td>
<td>Paper session 1A: Attitude-behaviour gaps</td>
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<tr>
<td></td>
<td><strong>Chair: Scott Cohen</strong> (<a href="mailto:s.cohen@surrey.ac.uk">s.cohen@surrey.ac.uk</a>)</td>
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<tr>
<td></td>
<td>Weeden, Clare: 'Mind the gap!' A consideration of the disparity between intention and behaviour</td>
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<td>Hibbert, Julia: Identity and tourism mobility: an exploration of the attitude-behaviour gap</td>
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<td>Malhado, Acacia: Mega-Events: Does the <code>attitude-behaviour gap</code> promote or hinder behavioural change?</td>
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<tr>
<td>11:00</td>
<td>Session 1B: Experience</td>
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<td></td>
<td><strong>Chair: Eke Eijgelaar</strong> (<a href="mailto:Eijgelaar.e@nhtv.nl">Eijgelaar.e@nhtv.nl</a>)</td>
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<tr>
<td></td>
<td>Ram, Yael: Challenges for Creating a Sustainable Tourist Experience</td>
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<td>Le-Klähn, Diem-Trinh &amp; Regina Gerike: Analysis of tourists' satisfaction with public transportation in Munich</td>
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<td>Nawijn, Jeroen &amp; Paul Peeters: How the need for happiness affects the (un)sustainable development of tourism</td>
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<tr>
<td>12:30</td>
<td>Lunch</td>
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<tr>
<td>13:30</td>
<td>Session 2: Air travel psychology</td>
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<tr>
<td></td>
<td><strong>Chair: Paul Peeters</strong> (<a href="mailto:peeters.p@nhtv.nl">peeters.p@nhtv.nl</a>)</td>
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<tr>
<td></td>
<td>Hares, Andrew: Barriers to reducing climate change impacts: a social practice analysis</td>
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<tr>
<td></td>
<td>Eijgelaar, Eke &amp; Danny de Kinderen: Carbon offsetting: motives for participation and impacts on travel behaviour</td>
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<tr>
<td></td>
<td>Higham, James, Scott Cohen &amp; Christina Cavaliere: Climate change and discretionary air travel: An international comparative analysis</td>
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<tr>
<td>15:00</td>
<td>Tea break</td>
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## Freiburg 2012

### Wednesday 4th of July 2012 continued

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>15:30</td>
<td>Session 3: Geographical psychology</td>
<td>Chair: James Higham (<a href="mailto:james.higham@otago.ac.nz">james.higham@otago.ac.nz</a>)&lt;br&gt;Peeters, Paul &amp; Eke Eijgelaar: Modelling tourist travel behaviour for a global tourism flow model&lt;br&gt;Larsen, Gunvor: Tourists consuming distance&lt;br&gt;Dickinson, Janet, Tom Cherritt, Nigel Davies, Sarah Norgate &amp; Chris Speed: Sixth Sense Transport: Visualising Future Space-Time and the Potential for Behaviour Change</td>
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<tr>
<td>17:00</td>
<td>Close of first day</td>
<td>Chair: Scott Cohen</td>
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<td>18:30</td>
<td>Dinner</td>
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### Thursday 5th of July 2012

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 4A: Social Psychological aspects</th>
<th>Details</th>
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<tbody>
<tr>
<td>9:00</td>
<td>Session 4A: Social Psychological aspects</td>
<td>Chair: Tim Freytag (<a href="mailto:tim.freytag@geographie.uni-freiburg.de">tim.freytag@geographie.uni-freiburg.de</a>)&lt;br&gt;Cohen, Scott, James Higham &amp; Arianne Reis.: Sociological barriers to sustainable tourism air travel behaviour&lt;br&gt;Gronau, Werner: Individual life-style as determinant for sustainable tourism mobility&lt;br&gt;Huber, Donomik, Simon Milne &amp; Kenneth Hyde: The impact of life events on the travel behaviour of seniors. The case of Freising, Germany</td>
</tr>
<tr>
<td>9:00</td>
<td>Session 4B: Marketing</td>
<td>Chair: Stefan Gössling (<a href="mailto:sgo@vestforsk.no">sgo@vestforsk.no</a>)&lt;br&gt;Dickinger, Astrid &amp; Anja Hergesell: Travel mode choice: The trade-off between price, comfort and time&lt;br&gt;Khoo-Lattimore, Catheryn: ZMET as a Psychological Approach to Understanding Sustainable Tourism Mobility&lt;br&gt;Hall, Michael: Beyond the neoliberal consumer and green economy: Expanding governance for sustainable mobility</td>
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<tr>
<td>10:30</td>
<td>Coffee break</td>
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<tr>
<td>11:00</td>
<td>Session 5: Theoretical concepts</td>
<td>Chair: Paul Peeters (<a href="mailto:peeters.p@nhtv.nl">peeters.p@nhtv.nl</a>)&lt;br&gt;Olaussen Ryeng, Eirin: Grid-group theory versus holiday preferences among young people from two continents&lt;br&gt;Gössling, Stefan: Advancing a Clinical Transport Psychology&lt;br&gt;Linden, Sander van der: Achieving behavioural change: Towards a new model for communicating information about climate change</td>
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<tr>
<td>12:30</td>
<td>Lunch</td>
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**Thursday 5th of July 2012 continued**

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<tr>
<th>Time</th>
<th>Session/Activity</th>
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<tbody>
<tr>
<td>13:30</td>
<td><strong>Session 6: Policies and psychology</strong></td>
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<td></td>
<td>Chair: Eke Eijgelaar (<a href="mailto:eijgelaar.e@nhtv.nl">eijgelaar.e@nhtv.nl</a>)</td>
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<tr>
<td></td>
<td>Holden, Erling &amp; Kristin Linnerud: The Contradictions of Sustainable Transport Policies</td>
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<td>Thimm, Tatjana: Governance Structures for Sustainable Tourism Mobility in the Lake Constance Region</td>
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<td>Nilsson, Jan Henrik: “It’s the economy stupid”. An institutional and genealogical perspective on the development of excess</td>
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<tr>
<td>15:00</td>
<td><strong>Tea break</strong></td>
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<tr>
<td>15:30</td>
<td><strong>Final discussion and research agenda</strong></td>
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<td>Chair: James Higham</td>
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<tr>
<td>16:30</td>
<td>Closure of workshop</td>
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<tr>
<td>16:54</td>
<td><strong>Departure train to Titisee from station</strong></td>
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<tr>
<td>19:00</td>
<td>Dinner Titisee</td>
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<tr>
<td>22:30</td>
<td>Last train back to Kirchzarten</td>
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**Friday 6th of July 2012**

<table>
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<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>10:00</td>
<td><strong>MTB excursion (half or all day)</strong></td>
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Abstracts

Session 1A: Attitude-behaviour gaps

'Mind the gap!' A consideration of the disparity between intention and behaviour

Clare Weeden
University of Brighton, UK

In seeking to understand why consumers express concern over the ethical implications of their holidays but do not act in accordance with their concerns it is fruitful to examine the motivations of ethical consumers, many of whom apply ethical principles to all areas of their lives, including holidays. What makes these people act on their beliefs, how are they different from those who express guilt, shame or anxiety over the impact of tourism but who do nothing but invoke various strategies to help them overcome these negative emotions?

The attitude-behaviour gap, hotly debated since LaPiere first noted it in 1934, is often associated with Ajzen’s theory of planned behaviour (1988), which has the attitude-intention-behaviour relationship at its core. This concept refined Ajzen and Fishbein’s earlier (1980) theory of reasoned action by incorporating perceived behavioural control, articulated as the ease, or difficulty of performing a behaviour. Perceived behavioural control is linked to perceived consumer effectiveness (PCE) through Tucker’s (1980) locus of control, which posits those possessing a high degree of internal control believe themselves influential, whilst those with a high degree of external control lack confidence in their ability to influence others, and often feel powerless as consumers.

Not only are individuals with high levels of PCE confident in their ability to influence others and society, they are also more likely to take consumer action in support of their ethical beliefs. Conversely, “Consumers who feel their choices will not have an impact are less likely to factor ethics into their purchasing decisions” (Cowe and Williams, 2000:29), making PCE a key differentiating factor between those who act on their ethical concerns and those who do not. Whilst PCE has been investigated extensively in ethical consumption research with many studies arguing that it is responsible for the attitude-behaviour gap (see for example, Kinnear et al., 1974; Antil, 1984; Paek and Nelson, 2009; Roberts, 1995; Straughan and Roberts, 1999), it has not been widely considered in tourist research.

This paper therefore reports on a study designed to explore some of the variables pertinent to the ‘gap’ and concludes with recommendations for stakeholders seeking to extend their understanding of responsible tourist behaviour.

Identity and tourism mobility: an exploration of the attitude-behaviour gap

Julia Hibbert
Bournemouth University, UK & Linnaeus University, Sweden

It has been suggested that identity issues lie at the heart of our desire for greater tourism mobility. It is widely acknowledged that travel plays an important part in shaping the perception of self through experiences of other people and places. Whilst the notion of ‘finding yourself’ through travel has been widely accepted in the tourism literature, relatively little has been documented about how identity can influence an individual’s travel choices and drive the desire for travel. In exploring this area, this paper focuses on the dissonance experienced when multiple identities occur, paying particular attention to conflicts involving ‘green identities’ and how these are negotiated in relation to the
individual’s tourism mobility.

Studies have shown that in order to gain insight into identity there must be an understanding of the narratives used to create and affirm identities. A narrative interview method was used to explore the travel life history of 25 participants. This method allowed for insight into identities using stories of travel and was able to explore how the personal identity of the individual shaped their tourism mobility. Using the empirical material collected during this study this paper proposes a conceptual framework, which, through a focus on identity, offers some explanation for the attitude-behaviour gap. This will assist in an understanding of the importance of identity and tourism mobility. Given that behavioural change is considered to be the most successful method of reducing the effects of climate change, it is pertinent to gain an increased understanding of the process of decision making when it comes to tourism mobility.

**Mega-Events: Does the ‘attitude-behaviour gap’ promote or hinder behavioural change?**

**Acacia Malhado & Rainer Rothfuß**

**Tübingen University, Germany**

Most of the FWC host-cities in Brazil are being challenged by the substantial increase in private car ownership. The strategy of strongly investing in road infrastructure has been shown to be effective only in a short-term (usually during the mega-event); afterwards, it has typically been a source of dissatisfaction for both residents and tourists. One potentially effective means to reduce private car use and to promote sustainable mobility in the long-term is through changing public attitudes. In this context, mega-events may act as an effective vehicle for disseminating information and advocating sustainable transport choices. Thus, mega-events can be used as ‘laboratory’ to monitor communication strategies and attitudes to travel, and to break down information on daily travel choice (habit) and, more generally, transport-related behaviour. However, research integrating mobility, mega-events and travel behaviour is still in its infancy and there is a lack of baseline data and quantitative studies. To address this shortfall, the research uses surveys of tourists and residents during the 2010 FWC (South Africa) and pre 2014 FWC (Brazil) to investigate travel attitudes and behaviours. Our findings suggest that ‘information’ is an crucial factor in influencing attitudes and posteriorly contributing to travel behaviour change; however, information alone does not have sufficient agency to promote travel behaviour change - which is influenced by many others factors acting alone or in concert. Additionally, habit, perceptions of environmental impacts of travel, travel time, travel cost and convenience were found to be significant determinants of attitudes. These results highlight the importance of providing good access to clearly targeted information on sustainable travel options. Based on these results we argue that the successful development of sustainable mobility for mega-events must involve a culturally aligned combination of physical and behavioural measures.
Session 1B: Experience

Challenges for Creating a Sustainable Tourist Experience

Yael Ram
Ben Gurion University of the Negev, Israel

The current study focuses on the notion of the "tourist experience" in order to address the problem of insufficient change in tourist behavior in response to climate change requirements. Based on previous studies which have portrayed the personal and subjective tourist experience, the current study aims to clarify the possible barriers and opportunities for sustainable tourist behavior.

The tourist experience is commonly explored under four domains. The first domain emphasizes the time boundaries of the tourist experience, and describes tourists' thoughts, behaviors, and emotions before, during and after travel (Fridgen, 1984). The second focuses on the permissive atmosphere of the tourism setting, and claims that it enables tourists to suspend social norms (e.g. Turner & Ash, 1975; Wang, 2000). The third domain, influenced by the field of positive psychology, highlights the function of positive emotions (e.g. Nawijn, 2010; Vittersø et al., 2000). The fourth relies on Pine and Gilmore's (1998) "Experience Economy" theory, and stresses the centrality of positive memories in the creation of experiences (Tung & Ritchie, 2011).

It is suggested that these four domains of the tourist experience may have different impact on the willingness of tourists to voluntarily engage in behavioral change. The first two domains, time boundary and permissive atmosphere, leads tourists to perceive the tourism setting as an isolated zone that permits temporary freedom. Thus, may inhibit behavioral changes associated with responsibility. Nevertheless, the other two domains, positive emotions and memories, suggest an opportunity for successful implementation of desirable behavioral changes. These domains could be utilized as indicators for designing sustainable tourism sites as well as for delivering messages addressing behavioral change. In sum, the tourist experience domains of positive emotions and memories may be used to overcome the negative influence of temporary irresponsibility, and enhance voluntary behavioral change through positive and sustainable tourist experience.

Analysis of tourists' satisfaction with public transportation in Munich

Diem-Trinh Le-Klähn¹ & Regina Gerike²
¹ mobil-TUM Research Center Mobility and Transport, TU Munich, Germany, ² TU Munich, Germany

Measuring customer satisfaction for public transportation service has always been an important topic in transportation research. Only by understanding how much customer expectations have actually been fulfilled can transport providers improve their services. However, while there have been several studies on local travelers’ satisfaction for public transportation (see, for example, Diana, 2012; Ji & Gao, 2010; Tyrinopoulos & Antoniou, 2008), to date, little research has examined the use of this service by tourists.

This study investigates the tourists’ level of satisfaction with the public transportation in the city of Munich. Two main dimensions are measured: (1) information and (2) ease-of-use. These two factors are chosen as they have been highlighted as the most important factors influencing customer satisfaction for public transportation services (Dziekan, 2008; Thompson & Schofield, 2007). An administered-survey is to be conducted in April and May 2012 with a random sample at selected tourist sites in Munich. Factor analysis is adopted to generate the important aspects influencing
tourists’ satisfaction. Moreover, the level of satisfaction are to be explained by individual specific travel characteristics (e.g. travel behavior and habit, trip purpose, or car ownership, etc.) using multinomial logit model. Findings of this study will be meaningful not only for Munich local transport and tourism services providers, but also for other cities in their tourism transport and sustainable development planning. Along with the increasing concerns for climate change, promoting the use of public transportation by tourists is important for cities of all sizes. Understanding tourists’ satisfaction of public transportation will enable transport providers to improve their services to better suit their customers and thus, increase their frequency of use.

References

How the need for happiness affects the (un)sustainable development of tourism
Jeroen Nawijn & Paul Peeters
NHTV Centre for Sustainable Tourism & Transport, Breda, Netherlands

Most people strive to become happier. Although this goal is somewhat limited due to heredity, there is still room for substantial gains in happiness through environmental factors and behavioural choices. One way to become happier is to participate in leisure activities (e.g., leisure travel). The effect of leisure travel on happiness tends to be short-lived, which may cause individuals in affluent nations to travel more often. Additionally, more individuals are expected to travel; the UNWTO predicts a vast increase in travel from less affluent nations as they become gradually more affluent. A growth in travel frequency (in particular air travel) increases emissions (e.g., greenhouse gases) and consequently stimulates climate change.

Our paper studies the relation between leisure travel and happiness by systematically analysing the observed associations between overall happiness and its two components (i.e., cognitive and affective) and leisure travel as gathered in the World Database of Happiness. Furthermore, we will point out the main aspects of leisure travel that affect happiness by reviewing a large body of (recent) literature on happiness and vacationing.

As a result, we are able to discuss the relation between a search for happiness through leisure travel and its consequence for climate change. Our findings potentially allow for a better understanding of the frequently observed gap between tourists’ attitude, awareness and behavior related to sustainable leisure travel. Finally, we will point out gaps in current research and discuss the consequences of our findings in terms of a sustainable travel policy.
Session 2: Air travel psychology

Barriers to reducing climate change impacts: a social practice analysis
Andrew Hares
Bournemouth University, UK

The rapid growth of low-cost carriers has opened up international holidays to the masses, as well as enabling more wealthy members of society to become hyper-mobile tourists. The expansion in the aviation market has realised people’s social and cultural aspirations for international travel and has resulted in air travel becoming firmly embedded in contemporary tourism practices. Although air travel contributes the bulk of tourism’s greenhouse gas emissions, it is the wider tourism practice that needs to be addressed. Tourists engage in air travel in order to fulfil their desires for international holidays, rather than specifically consuming flights because of ‘a love to fly’. Treating holidays as a social practice, in which the type of holiday, destination and transport mode are considered integral to the holiday package, this research examines the barriers to tourists changing their holiday taking behaviour in order to reduce their impacts on climate change.

A questionnaire survey was conducted on a representative sample of 621 respondents from the Bournemouth postcode area of the UK. Items representing barriers to engaging with climate change in a holiday context were derived from the literature and previous focus group research. These included a combination of social psychological constraints and external structural constraints. This paper reports cluster analysis which identified five groups. The most salient barriers for the different clusters have been identified and the implications discussed. The most powerful social psychological barriers varied between the different cluster groups, although external barriers relating to situational factors in the tourism industry were relevant for all clusters. Resistance to behavioural change in a holiday context was very robust amongst the majority of tourists and the barriers preventing action remain strong. The paper concludes with recommendations for policymakers.

Carbon offsetting: motives for participation and impacts on travel behaviour
Eke Eijgelaar & Danny de Kinderen
NHTV Centre for Sustainable Tourism & Transport, Breda, Netherlands

In the absence of short-term structural changes in travel behaviour and acknowledgement of the limited short-term energy reduction potential of technological improvements in aviation, carbon offsetting has been accepted as an intermediate, albeit less effective solution for mitigating tourism emissions. Even with a large uptake of offsetting, which is currently not the case, there is debate about the actual effects on emissions. The psychological and behavioural effects of offsetting have not been widely studied so far. It has been argued that offsetting could increase the environmental awareness of travellers, and eventually contribute to the structural behavioural changes needed. This research aims to register the motives for buying offsets, but more particularly the effect of offsetting, as well as not-offsetting, on the travel behaviour of Dutch tourists. These effects could be a reduction of travel because of the cost involved with offsetting or awareness of the large share of travel in individual carbon footprints. But it can also be hypothesised that the relatively low cost of offsetting provides an incentive to travel more. For this purpose a survey has been set out among the clients of several Dutch tour operators, some of whom show an above-average uptake. Results show differences in knowledge, awareness, attitude and behaviour between travellers that offset and those that do not, as well as between various market segments. Factors for a high offset uptake are identified, and recommendations
Climate change and discretionary air travel: An international comparative analysis

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Within the context of global climate change aviation has been identified as a rapidly growing contributor to CO2 emissions. This is evident in the expanding body of academic literature addressing aviation CO2 emissions. While awareness and concern for climate change has become (or is slowly becoming) increasingly mainstream in many European countries, relatively little is known about consequential changes in attitudes towards discretionary air travel. This paper reports on a trans-national comparative research project that explores attitudes towards climate change and discretionary air travel in three European countries; Norway, the United Kingdom and Germany. The results of the study are drawn from the interpretation of qualitative materials derived from 48 semi-structured interviews conducted in Stavanger (Norway), Bournemouth (UK) and Berlin (Germany) between July 2009 and October 2010, followed by a tripartite comparative analysis of those interpretations.

The paper reports on interviewees’ broad ranging understandings and responses to the climate impacts of air travel, evidence of changes in domestic living behaviours due to climate concerns and, fundamentally, personal attitudes towards behavioural changes (both actual and latent) in the consumption of air travel. It then highlights and explores areas of convergence and divergence in attitudes towards such important matters as voluntary offsetting and calls for government action in a comparative analysis of results from the three study nations.

aimed at increasing the mitigative impact of offsetting are given.
Modelling tourist travel behaviour for a global tourism flow model

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Global tourism flows are basically the result of billions of individual travel decisions regarding destination and transport mode choice, travel time and willingness to pay. Though travel behaviour may seem very complex at both the individual and collective level, there is some evidence that such complexity may develop based on a limited number of simple behavioural rules. Actually, econometric (elasticity) based models are a representative of such simple rule based models, but these models fail to represent the richness of behavioural patterns observed and are generally only valid for small changes, failing to describe the large behavioural changes required for mitigating tourism’s contribution to climate change. The paper therefore will describe a travel behaviour model that is part of a global tourism flow model.

The behavioural model will draw on prospect theory, which has its roots in psychology, to determine simple rules for contextual constraints, loss aversion, and diminishing sensitivity for travel decision making. To this we will add the valuation of physical (perceived) distance. From some preliminary work it appeared that, all other elements equal, a tourism trip is valued proportional to the physical distance of home to destination. Finally, there is also an element of social psychology involved, which relates preferences and psychological values to the values and behaviour of the social group. Some consequences and results of this on-going modelling will be shown.

Tourists consuming distance

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The environmental impacts of tourism mobility, such as air pollution and increasing consumption of fuel, is linked to the distances travelled to reach a holiday destination, and with tourists travelling more and further than previously, an understanding of how tourists view this distance and how distance is part of their holiday experience becomes relevant. Based on interviews with Danish tourists about their holiday mobility, this paper defines ‘consumption of distance’, a concept which explores how tourists perceive the distance they transcend when travelling on holiday. The ‘consumption of distance’ concept offers an understanding of distance seen in the light of consumption, which is discussed from the practical consumption of distance when driving a car or sitting in an air plane, to the symbolic consumption of distance that occurs when holidaying becomes part of a lifestyle.

Different attitudes towards distance are also explored, discussing how the interviewed tourists show nonchalant, pragmatic, reluctant, unknowing and deliberate attitudes to the distance they transcend when they go on holiday. These different attitudes towards distance displayed by the Danish respondents show that the journey to and from holiday destinations and the distance travelled have very different impact on the holiday experience, where for some it is relevant how and how far they travel, while others do not regard the holiday transit as a significant element of their holiday.

This paper offers empirically based insights into how distance is, or is not, part of a tourist's holiday experience, and adds to existing understandings of how distance is an important part of tourists’ holiday mobility. Understanding how tourists perceive distance as part of travelling on holiday is an important step towards influencing their travel decisions to become more sustainable.
Sixth Sense Transport: Visualising Future Space-Time and the Potential for Behaviour Change

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Tourism has become a fertile ground for developments in mobile media and, given the rapid growth in users, the smartphone is increasingly seen as an indispensable travel partner. A variety of smartphone apps have emerged which assist tourists in the travel domain. Among other things, these harness context awareness functionalities and social networking capabilities. This is changing the tourist travel experience and co-evolving new travel practice. Of particular interest here is the emergence of a more flexible relationship with space and time. The shift to the ‘microcoordination’ of co-presence brought about by mobile phones is well documented, however, the powerful mobile computing capacity embedded in smartphones is emerging new travel coordination opportunities. This presents a moment of transition that could be harnessed to bring about new tourist travel practices that are more sustainable.

The Sixth Sense Transport project is experimenting with increasing the visibility of current travel opportunities and those in the immediate future. Based on mobile social networking capabilities, the project seeks to realise more opportunistic and collaborative uses for transport resources and reduce carbon emissions. This paper will explore the potential opportunities emerging through the capacity to visualise immediate and future travel opportunities relative to a user’s current location, other users, places and objects needed. Drawing on current literature from geography, sociology and media studies, analysis focuses on how mobile media is evolving a new relativity of people, place and objects that is changing the travel competences of tourists. Questions are raised about opportunities for sustainable travel practice.
Session 4A: Social Psychological aspects

Sociological barriers to sustainable tourism air travel behaviour
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One route to mitigating the negative environmental impacts of air travel is to influence public behaviour towards flying less for leisure-related purposes. The viability of this approach, which sits within a wider rubric of behaviour change, in which governments seek to encourage positive lifestyle choices amongst individuals, rather than develop restrictive policy, rests on the assumption that behaviour will be sustained consistently across domestic day-to-day and tourism contexts. However, behaviour is often inconsistent and contradictory, especially so within tourism practices, which are often symbolically valuable sites of non-rational consumption.

Deploying modern theory on liminoid space and postmodern theory on identity and performance, this paper examines some of the barriers to sustainable tourism air travel behaviour in light of these contrasting sociological perspectives. Based on 50 open-ended, semi-structured interviews carried out in Australia, Norway and the United Kingdom, the findings demonstrate that despite participant attitudinal concern over the environmental impacts of air travel, their actual tourism air travel behaviour is fraught with contradictions and inconsistencies. We explain these contradictions and inconsistencies using first modern, and then postmodern, sociological perspectives, but the implications of either means of analysis for the prospects of governments relying on individual behaviour change remain the same: behavioural adaptations motivated by environmental concern do not necessarily, and often do not, transfer across to tourism practices.

Individual life-style as determinant for sustainable tourism mobility
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The realisation of the importance of leisure mobility in today's transport demand on the one hand and the lack of theoretical models for the explanation of mobility behaviour in the leisure and tourism context on the other hand, form the starting point for the present paper.

Up until today traffic volume in the context of leisure mobility is mainly described by the common quantitative models, known for example from the commuter traffic context. However these rather "mechanical" models, denying the individuality of every person, provide an only insufficient view to the mobile reality. At the same time many interesting qualitative research activities, concerning different mobility patterns, have taken place. A whole variety of different mobility orientated life-style groups have been developed within the social science context but those studies rarely found their way in the field of transport planning.

At the same time those studies have rather been used to describe the demand, than to model traffic volume. Consequently this paper will present a model for the simulation of traffic volumes in the leisure and tourism context based upon individual life-style groups.

The model represents the implementation of a quantitative model, also including qualitative aspects of human behavior to forecast modal-split at specific locations. The developed model is therefore based on seven different lifestyle oriented "leisure mobility groups". These groups have been constructed with reference to a quantitative household survey covering fields of individual interests in leisure time, as well as the expectations concerning leisure and tourism.
transport supply. The whole simulation process has also been empirically tested at eight different leisure facilities.

Besides the high precision of the simulation, the model offers various simulation opportunities; for example a change in the accessibility of an already existing location can be simulated or even a planned project can be tested with reference to its traffic impacts. Consequently the model can be used as a real simulation tool within the planning process.

The impact of life events on the travel behaviour of seniors. The case of Freising, Germany
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Senior tourism is destined to be a driving force in the future of the German tourism industry, just as it will be for many other nations. This trend is based on demographic changes and the evolving travel behaviour of seniors. Between 1970 and 2008 the travel propensity of German seniors over 70 years increased up to 62% which equals a growth of 89%.

The travel behaviour of seniors differs from younger age groups in several ways. With increased age seniors are affected by biological changes and deteriorating health which play a role in shaping travel patterns. For instance, German seniors show lower numbers in travel propensity. They favour domestic destinations and identify trains and busses as the preferred mode of transport. Older age groups are heterogeneous in nature and they also show new interests and post-material values like self-realization, individualism and enjoyment.

This research seeks to learn more about the underlying travel motives and the transition of travel patterns in the later life stages of seniors. The study explores travel behaviour of seniors aged 60+ in Freising, Germany, and focuses on specific life events which affect seniors’ travel behaviour or perhaps even prevent seniors from travelling. Life events can for example include: the birth of a grandchild, moving into a retirement home or the challenges of a negative health event. The interdisciplinary research contains elements of tourism theory and gerontology and adopts qualitative research instruments. Ecological systems theory addresses the social environment of seniors, while activity and continuity theory contributes to a better understanding of behaviour in later life stages.

Businesses, travel destinations and policy makers need to adjust their strategic planning to match supply to likely demand patterns with the objective to maximise visitor satisfaction. The study contributes to a better understanding of seniors’ travel behaviour and has implications for the travel industry, travel destinations and public policy development.
Travel mode choice: The trade-off between price, comfort and time

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Adopting “the polluter pays principle”, current policy interventions for climate change mitigation have been criticized to have a limited effect on tourists’ travel mode choices. However, these findings on price effects are based on aggregate models that examine the price elasticity under the condition, that other factors like travel time and comfort are constant. Related research on the drivers of travel mode choice is still not conclusive. Therefore, the paper at hand aims to assess the effects of price, travel time and comfort on travel mode choice and to identify options for behaviour change. The contribution of the study is twofold. First, it contributes to theory on travel mode choice by providing insights on the reactions of consumers to changes in price in interplay with other key elements (time and comfort). Second, it contributes to methodology by examining the usefulness of stated choice analysis in complementing results based on reported decision factors and revealed preference. On the one hand, the chosen approach considers self-reported revealed preference data and importance ratings on the factors determining travel mode choices (price, time, flexibility, comfort and environmental impacts). On the other hand, stated choice data from an experiment allow analysis of the (substitution) effects of price interventions. This leads to supply-side implications.

An online survey with 716 respondents conducted in November/December 2011 provides data on current travel behaviour, motives and socio-economic status. The survey included a discrete choice design with travel mode choice tasks related to short holiday trips in Europe. This included answers to 18 choice sets of which 16 were blocked in 8 versions based on an Orthogonal Main Effects Plan and its foldover. Each choice set contained 4 alternatives (train, car, plane and none option) described by 6 attributes with 4 levels each and 9 attributes with 2 levels each.

Preliminary results show the complexity of trade-offs between price and other varying factors such as comfort and time. Furthermore, the chosen method provides detailed insights into the complexity of decision making.

ZMET as a Psychological Approach to Understanding Sustainable Tourism Mobility

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Zaltman Metaphor Elicitation Technique or better known as ZMET, is patented as “a technique for eliciting interconnected constructs that influence thought and behaviour” (Catchings-Castello, 2000, p.7). Given that the technique was mainly used in corporate market research, it is therefore not surprising that not many academic studies have adopted ZMET as a research method.

This paper makes recommendations for scholars in tourism, particularly those interested in understanding psychological factors underlying behaviour, to consider utilising ZMET. Derived from Freudian psychology, ZMET is a projective technique based on the notion of unconscious and repressed thoughts – thoughts that patients were unwilling or unable to reveal to their psychologists. It does so by combining photography, that is, it uses the respondents’ photographs as entry points to understanding the respondents’ actions.

From a method point of view, the use of the respondents’ photographs as metaphors within ZMET has proven to be particularly valuable in engaging the respondents to begin talking about their reasons for choice, actions and behaviour,
be they conscious or unconscious (Khoo-Lattimore, 2008). Following up on respondents’ photographs, a nine-step interview process takes place. Data analysis is covered in the ZMET method as the tenth step. The final result from the analysis is a consensus map that diagrammatically portrays the relationships among the constructs elicited by respondents from their photographs and pictures. This paper compares ZMET to other methods employed by past scholars in their work on sustainable tourism mobility and argues that ZMET can be employed in tourism research to understand the subtleties of behavior in tourism stakeholders.

References

Beyond the neoliberal consumer and green economy: Expanding governance for sustainable mobility
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Changing patterns of consumption towards more sustainable paths is a prerequisite for sustainable tourism mobility (STM). However, much of the policy and governance agenda for STM is grounded in a neoliberal construction of political-economy and consumer behavior. In governance terms this is primarily evidenced in ‘green economy’ policies of ecological modernisation that aim to decouple economic growth from environmental degradation via a range of market-based measures including consumer demand. Such measures reflect a seeming preference of governments to ‘outsource’ their responsibilities for sustainable consumption to non-governmental actors, including businesses and consumers. This paper examines the main approaches to sustainable consumption: ecological modernisation’s ‘cognitive’ approach; social marketing; and the ‘systems of provision’ approach. These approaches are also related to the organising principles of institutional organisation for sustainability of coordination, efficiency and sufficiency. The resultant framework highlights that the cognitive and social marketing approaches reliance on encouraging voluntary individual action has not achieved the changes in consumption necessary to move towards sustainable mobility. Evidence from both policy analysis and consumer research are used to illustrate these issues. Given the failure of neoliberal approaches a reconsideration of governance mechanisms will be required that will need to tackle issues of regulation, ecological citizenship, responsibility and behavioural change. Such a situation recognises the need for a more progressive examination of the carbon and sustainable capabilities of individuals in light of the political, socio-economic, and technological structures within which they are embedded as well as the means by which the actual and potential role of consumers may be enhanced.
Session 5: Theoretical concepts

Grid-group theory versus holiday preferences among young people from two continents

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The grid-group theory originates from anthropology, and has been successfully applied within social and political sciences. The theory postulates that by categorising along the two axes of group and grid, four viable cultures can be identified. These are hierarchy, egalitarianism, individualism and fatalism, all of them being present in any group or society of people. These cultures, or worldviews, can be regarded as lenses through which each individual perceives and interprets the world. Thus, an individual adhering to one culture may have diverging preferences and behaviours from an individual adhering to another culture. These four cultures have been associated with four myths of nature, expressing four different ways of considering the vulnerability of nature.

This paper presents a study in which grid-group theory is used to explore the holiday preferences and experiences of a group of engineering students, both in Argentina and in Norway. Do students adhering to different cultures and believing in different myths of nature have different ideas about the ideal holiday, as well as different travel experiences in terms of number of continents visited? Are there any patterns to be found? Are there any differences between Argentine and Norwegian students? Also, what gives these young people a good feeling of freedom is discussed. The paper is based on a questionnaire study among 357 students. The results from the analyses are presented and discussed, suggesting that cultural adherence and considerations about the vulnerability of nature do not significantly manifest in actual behaviour as measured in this study, and only to a minor degree in dreams about the ideal holiday.

Advancing a Clinical Transport Psychology

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This contribution argues that mental disorders are an important dimension so far largely overlooked in studies of transport behaviour and mobility consumption. Yet, they may to a considerable degree affect how we understand, value, and use different transport modes. It is shown that mental disorders are a widespread phenomenon in the population of industrialized countries, which affect mobility consumption in various ways. Based on an exploratory research approach, observations, media reports and scientific articles are evaluated to derive an understanding where mental disorders, including anxiety-, substance abuse-, and personality disorders affect mobility consumption. The article also identifies a wide range of mechanisms that contribute to or reinforce mental disorders. It is argued that without a better understanding of these aspects, mobility consumption and -growth cannot be adequately understood. Results are consequently of relevance for transport planning, prevention of accidents, as well as the design of interventions to develop more sustainable transport systems.
Achieving behavioural change: Towards a new model for communicating information about climate change
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It is widely known that despite increasing scientific consensus on the existence of anthropogenic climate change, people around the world still remain reluctant to change their behaviour. In fact, while nearly 20 years of public communication about climate change has undoubtedly increased international awareness, the literature dealing with how this has affected actual mitigation behaviours remains relatively dispersed. For example, how do people understand the concept of climate change and, more importantly, how does this knowledge affect their behaviour? What emotions does the risk of global warming invoke and how do these emotions regulate response behaviours? The current paper advances a unique angle on this topic by evaluating past and current communication efforts directly in terms of actualized behavioural change. It does so by offering a critical, more holistic review that brings together previously unconnected findings from social (cognitive) psychology, neuroscience and the persuasion literature. Public communication interventions are often divided into two broad categories: (1) the 'cognitive-analytical' approach and (2) the 'experiential' approach. This distinction matches the divide between more traditional research that focuses largely on informing the public through the knowledge-attitude-behaviour route as well as more recent attempts to make distant climate change more of an ‘experience’ for people by constructing rather visual, interactive and emotionally charged messages. Yet, this paper argues that such divisions paint a misleading picture about human behaviour. In fact, a critical review of both the theoretical and empirical evidence indicates that strategies which adopt an ‘either/or’ approach are unlikely to inspire more sustainable behavior. Instead, a new, integrated framework is offered, connecting cognitive, affective and social-environmental factors in an attempt to enhance our current understanding of how behavioural change can best be achieved through the communication of climate-change related information.
Session 6: Policies and psychology

The Contradictions of Sustainable Transport Policies
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In order to achieve sustainable leisure travel, politicians must be willing to initiate, adopt and implement sustainable policies and individuals must be willing to support these policies and change their behavior accordingly. However, both politicians and individuals seem to lack the motivation to change their behavior with respect to leisure travel. Politicians may view leisure travels as less economically productive than work travels and, therefore less relevant for policy-making. They may also confront greater problems in reducing the amount of leisure travel because this kind of travel may be valued in its own right. Finally, politicians and individuals may not have the opportunity and/or lack the ability to change their travel behavior.

These barriers direct the policy focus towards everyday travel, ignoring the large and expanding amount of leisure travel. And, interestingly, policies aimed at reducing energy consumption and CO2 emissions for everyday travel may have the opposite effect on leisure travel. To prove this claim, we discuss some empirical findings related to two sustainable transport policies: developing more compact cities and building pro-environment awareness and attitudes. We show that although green families living in compact cities consume less energy in their everyday life, they consume more energy on long-distance flights in their leisure time. We suggest several mechanisms that may explain this result.

These results illustrate the need for designing sustainable travel policies which includes the impacts on both everyday and leisure travel and which are publically and politically acceptable. We end the presentation by proposing a research project to be discussed on the Conference. Based on attitude theory we will investigate under what conditions sustainable leisure travel policies and practices are initiated. The project is organized in three main parts: (i) literature review; (ii) empirical quantitative and qualitative travel behavior studies; and, (iii) interdisciplinary theoretical synthesis and policy recommendations.

Governance Structures for Sustainable Tourism Mobility in the Lake Constance Region
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Cross border destination governance is characterized by some extra challenges: national, district or county interests, different administrative structures, a high impact of politics and policies, inequality of tourism infrastructures, power imbalances, incompatible positioning strategies, different innovation potentials and a strong heterogeneity of stakeholders. Politics, policies and informal actions of stakeholders play an even more important role than in destinations without internal borders. The cross border destination of Lake Constance disposes of three neighbouring countries: Austria, Germany and Switzerland. Liechtenstein may also be included although it is a bit farer away from the shore of the lake. Sustainable mobility for tourists in the Lake Constance Region is rather difficult due to untuned mobility concepts of the nation states or even länder, districts or cantons. Thus tourists mainly travel by car to the destination and move also within the destination by car. Therefore government structures in the Lake Constance region must provide incentives and infrastructure for tourists to change tourism behaviour towards a more sustainable tourism mobility.
The aim of this presentation is to discuss a number of conditions that have proved to be favorable for the development of passenger air travel. In the beginning civil aviation was regulated and protected by national governments. Airlines were often state owned, airports were regarded as essential parts of the national infrastructure. International traffic was regulated in agreements between governments. In most European countries this form of governance lasted until the 1990’s. In a process inspired by the US, aviation was to be regarded as a business among others; it was deregulated. Within the EU aviation was integrated in the inner market, allowing for free flows of people, goods, capital and information.

As a result of this process the national states lost most of its influence on air transport policies. In Europe, parts were transferred to the EU level other parts were left to the market. As a result larger markets were created; economies of scale became a more pronounced means of competition; new types of companies entered the market; and new business models were introduced e.g. low-cost aviation. This was a period of intense product innovation and increased productivity; which together with harder competition lead to lower prices on travel and radically increasing demand. At the same time as this liberalization process went on, old governance structures were unchanged. Under the ICAO agreements, taxing air fuel on international routes is still illegal, resulting in artificially low prices on air travel compared to other means of transport. Intensified competition between regions for attracting air connections, i.e. to improve conditions for regional businesses and to increase the number of incoming tourists, has resulted in regional support to airlines. To conclude: state support for aviation still exists despite deregulation. It has merely changed forms and level of governance.