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Happiness and limits to sustainable tourism mobility: a new conceptual model

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Current leisure mobility patterns are not sustainable. Because energy efficiency measures appear insufficient to accommodate predicted future volume growth, changes in transportation modes and volume are needed. Short-haul should be the preferred distance, public transportation the preferred mode and length of stay should increase rather than trip frequency. However, tourists are unwilling to adopt these changes. This paper proposes a new conceptual “three-gear model” demonstrating how happiness, travel motivations and perception of distance set barriers for desirable behavioral change. The model improves understanding of the gap between awareness of, and attitudes to, tourism mobility and the gap between environmentally friendly everyday behaviors and unsustainable vacation behaviors. The paper shows that happiness is integral to all stages of the tourist experience. Understanding happiness enhances the understanding of tourist behavior, and how it drives, via the speed–distance–demand loop, the three-stage model presented here. Key practical implications include the need for effective policies to break the speed–distance–demand loop, changes to transport infrastructure policies, and recognition of the role of happiness in sustainable tourism strategies. Theoretical contributions include a synthesis of theories to interrogate key behavioral gaps and a theoretical basis for future empirical studies.

Keywords: climate change; behavioral change; leisure mobility; happiness; long-haul trips; awareness-attitude gap

Introduction

Tourism is both a victim and a vector of climate change (Cabrini, Simpson, & Scott, 2009). Although the impact of climate change on tourism will lead to considerable behavioral change for entrepreneurs, governments and tourists, this paper examines behavioral change required to mitigate the impact of tourism on climate. Global tourism is responsible for 5% of current global CO2 emissions (UNWTO-UNEP-WMO, 2008). The impact of tourism on radiative forcing – the main parameter determining the changes in temperature – is greater. Up to 12.5% of radiative forcing is caused by noncarbon effects such as contrails and contrail-induced cirrus clouds that are caused by aviation (Scott, Peeters, & Gössling, 2010). Approximately, 75% of all CO2 emissions are caused by transportation, of which 40% is caused by air transportation alone (UNWTO-UNEP-WMO, 2008). Adding the effects of radiative forcing, these shares could be as high as 91% and 74%, respectively (UNWTO-UNEP-WMO, 2008). Although air transportation’s share was only 17% of all transportation emissions in 2005, multiple studies (Dubois, Ceron, Peeters, & Gössling, 2010).
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2011; Peeters & Dubois, 2010; Scott et al., 2010) explained that current behavioral trends towards a higher share of air transportation and concomitant increase of distances have caused a significant increase in emissions.

This growth is found not only in business as usual (BAU) scenarios but also in scenarios that take account of proposed pro-environmental measures (UNWTO-UNEP-WMO, 2008). Furthermore, Peeters and Dubois (2010) and Dubois et al. (2011) demonstrate that it is not feasible to maintain current growth trends for trips and achieve the required emission reductions for sustainable development relating to climate change. The required emission reductions are approximately 80% of 1990 global CO2 emissions and other greenhouse gases by 2050 (Hansen, 2008; Hansen et al., 2008; Parry, Lowe, & Hanson, 2009; Rockstrom et al., 2009). BAU emissions are expected to quadruple over this time period. To accommodate a reduction of 80%, overall travel efficiency must improve by a factor of 16, or almost 94%. Although the industry suggests such a reduction is achievable (ATAG, 2010), science cannot confirm this (Lee, Lim, & Owen, 2013; Owen, Lee, & Lim, 2010). Therefore, even though current aviation emissions are low, measured as a share of global emissions, the main problem is the strong future growth rate.

To attain such drastic reductions, the tourism system itself needs to change. Theoretically, opportunities for such a change are evident. Long-haul trips and air transportation cause most emissions. This is partly due to shorter lengths of stay, causing more transport kilometers per guest-night (Peeters, Gössling, & Lane, 2009). Approximately 80% of trips in the world are domestic and involve surface transportation (83% in 2005; UNWTO-UNEP-WMO, 2008). Hence, a reduction of the share of both air transportation and long-haul trips is a very effective method to reduce emissions, with relatively few tourists affected by such measures. Using scenario methods, a recent study (Peeters & Dubois, 2010) indicates that two main “solutions” to the emission reduction problem exist. The first is a significant reduction of total air transportation volume to 1970s levels, with the modal split between cars and other surface transportation modes remaining the same (assuming the same number of trips as in the BAU scenario). The second option is to maintain 2005 air transportation volumes (i.e. no growth until 2050 in passenger-kilometers), but to transfer 80% of all car use to other transportation modes, particularly rail and coach (Peeters & Dubois, 2010).

Changes are needed in leisure mobility behavior because the current situation is not sustainable. There is an increase in distances, frequency of transportation in planes and cars, and trip numbers, all bringing larger trip volumes and emissions per trip. For instance, the number of trips by Dutch tourists between 2002 and 2010 increased by less than 2%, whereas the total distance traveled increased by 36% (de Bruijn, Dirven, Eijgelaar, & Peeters, 2012). The share of air transportation increased from 12% in 2002 to 17% in 2010, and all Dutch tourism-related CO2 emissions increased by almost 20%.

This study has two main goals: (1) to explore the psychological causes for this development towards unsustainable tourist mobility behavior, by focusing on the notion of happiness and (2) to demonstrate how happiness hinders desirable behavioral change towards more sustainable tourist mobility behavior. Although tourism is a global phenomenon, the paper specifically addresses the leisure travel of western tourists. According to UNWTO (2012) data, this segment creates the majority of tourism; more than half of global trips are made by western tourists for leisure purposes. Additionally, most studies of leisure mobility involve western tourists (Antimova, Nawijn, & Peeters, 2012; Cohen, Higham, & Cavaliere, 2011; Hares, Dickinson, & Wilkes, 2010; McKercher, Prideaux, Cheung, & Law, 2010). Therefore, the ability to make inferences about non-western tourists is limited. This study aims to explain the gap between the broad understandings of the importance of changing
western tourists’ leisure mobility behaviors and the opposition of these tourists to behave in a sustainable way. It seeks to eventually bridge this gap.

The paper is structured as follows: First, the shortcomings of the existing literature explaining insufficient behavioral change in leisure mobility are reviewed. Then, the conceptual method of analysis (Xin, Tribe, & Chambers, 2013) is used to explain the unsustainable foundations of leisure mobility. Third, a synthesis of theories derived from psychology and tourism (e.g. Diekmann & Preisendörfer, 2003; Fridgen, 1984; Nawijn, 2011b; Nawijn, Mitas, Lin, & Kerstetter, 2013; Tung & Ritchie, 2011a; Uriely, Ram, & Malach-Pines, 2011) is described to present a new conceptual model that explains why leisure tourist mobility is difficult to change. The conclusion portrays the practical and theoretical contributions of the suggested conceptual model as well as its limitations.

Unsustainable leisure travel and behavioral change

Most previous studies that addressed the issue of behavioral change in a leisure mobility context (e.g. Antimova et al., 2012; Cohen et al., 2011; Hares et al., 2010; Higham & Cohen, 2011; McKercher et al., 2010; Miller, Rathouse, Scarles, Holmes, & Tribe, 2010) reported two main gaps that hinder the likelihood of changing western tourists’ leisure mobility behaviors. The first was described by Hares et al. (2010, p. 472) as “an awareness-attitude gap rather than an attitude-behavior gap”, indicating that tourists’ awareness of their unsustainable behaviors does not produce corresponding support for more sustainable tourist behavior or enhance behavioral change. The second gap is a contextual gap, labeled by Barr, Shaw, Coles, and Prillwitz (2010, p. 474) as “a holiday is a holiday” problem, describing resistance to adopt environmentally friendly mobility practices during vacations, although they apply environmentally friendly practices in their everyday lives (Barr et al., 2010; Cohen et al., 2011; McKercher et al., 2010; Miller et al., 2010). Cohen et al. (2011) suggested that this gap produces tension, causing negative emotions of guilt and denial among specific consumers. A defense mechanism of rationalization was revealed in a study describing how the opportunity to recycle paper causes an increase in paper consumption (Catlin & Wang, 2013). Based on this study, it can be assumed that people may exhibit environmentally friendly behavior, such as recycling or “eco tours”, as an “alibi” or rationalization to consume more. These defense mechanisms, together with the human tendency for cognitive dissonance, may hinder behavioral change.

Interestingly, the comprehensive review of Pearce and Packer (2013) about new links between psychology and tourism highlights topics such as memory, satisfaction and personal growth but overlooks the growing debate about the need for behavioral change with regard to sustainable tourism requirements. Our discussion about behavioral change is, therefore, also based on literature outside the tourism domain, and refers to behavioral change in general, and in environmental context in particular.

Festinger’s (1957) cognitive dissonance theory posits that individuals need to avoid inconsistencies in beliefs, attitudes and behaviors because inconsistencies are unpleasant. In environmentally responsible behavior, this entails individuals displaying consistent behavior across various life domains. According to Thøgersen (2004), empirical evidence traditionally points in different directions. Some studies found consistent behavior across life domains (Berger, 1997), whereas others did not (Stern & Oskamp, 1987). In the latter cases, environmentally responsible behavior does not appear to spill over to other life domains. Rashid and Mohammad’s (2012) conceptual framework explains that attitude formation within a certain life domain must take place before cognitive dissonance could even play a role. Additionally, Diekmann and Preisendörfer (2003) find that, regarding
environmental concerns, the degree of influence such an attitude has on behavior diminishes with increasing behavioral costs. In other words, if it is difficult for tourists to change their behavior to avoid inconsistencies, then behavioral change will not occur. Literature on tourism transportation supported this logic, arguing that cognitive dissonance would be more severe with respect to tourist travel than for other aspects of behavior (Barr et al., 2010).

These two gaps – the awareness-attitude gap and the contextual gap – imply that the issue of leisure mobility does not correspond to existing theories about behavioral change, such as the theory of planned behavior (Ajzen, 1991) or the motivation-ability-opportunity-behavior model (Ölander & Thogersen, 1995). According to these two models, attitudes, norms and perceived controllability (Ajzen, 1991) together with opportunity and ability (Ölander & Thogersen, 1995) may influence behaviors. However, these models do not refer to different contexts and do not answer the question why norms and attitudes relevant in one context are overlooked by consumers in another context that provides similar opportunities and abilities. Additionally, the models mentioned above cannot resolve the contradiction between awareness of environmental issues and attitudes that support flying as an acceptable mode of leisure mobility (the awareness-attitude gap). The “low cost hypothesis” of Diekmann and Preisendörfer (2003) referred to these two gaps, and related them to the high cost of avoiding vacations. However, their study did not define the components of the cost or why people perceive vacations as so important.

This situation calls for a new model to explore the specific context of leisure mobility and distinguish it from everyday practices. This new theoretical model builds on the conclusions of Barr, Gilg, and Shaw (2011) and Verbeek and Mommaas (2008) about the importance of contextually analyzing sustainable practices. These studies suggested distinguishing everyday practices from leisure and tourism practices when addressing sustainable issues. In other words, the analysis of tourism mobility as a special case of sustainable practice would not need to focus solely on mobility characteristics, such as modes of transportation, information about greenhouse gas emissions and people’s preferences, but would instead address the context of leisure vacations.

The conceptual method
In their recent work, Xin et al. (2013) defined the conceptual method of tourism studies as “a set of activities that focus on the systematic analysis and profound understanding of tourism concepts ... Its major outcomes include the clarification of a concept, the proposing of a new concept, the modification of an existing one (re-conceptualization) or ideological or other critique” (p. 84). Xin et al. (2013) noted that this method is not popular in tourism studies and that empirical methods (both quantitative and qualitative) are much more prevalent. However, they also demonstrated that the conceptual method is superior to the empirical methods in cases with “big, holistic questions” (p. 73) and when new approaches are suggested. Furthermore, Xin et al. (2013) argued that conceptual analysis enables creativity, adds new insights to old problems and builds bridges between different disciplines.

The conceptual method was determined as appropriate for the current research because it corresponds well with the goal of bringing new insight to the old issues of a lack behavioral change in tourist mobility by bridging two different contexts: the leisure vacation and mobility. Furthermore, it follows Wolf & Moser’s (2011) conclusion about the diversity of findings of empirical studies on environmentally responsible behavior, which lead them to conclude that there is no single empirical theory that explains these variations in behavior.
The current study adopts two themes for conceptual analysis from Xin et al.’s (2013) review. The first is a synthesis of concepts from different disciplines using a literature review; the second applies an existing concept to a new context. Thus, the next section of the paper includes a literature review of different fields and subjects, including the tourist experience, motivations for vacation, happiness, perception of distance and mobility. A model synthesizing these fields is then presented in two steps. First, the model refers to the tourist experience domain (the “happiness loop” model), and will then be stretched to include motivations and mobility aspects (the “three-gear model”). The latter will demonstrate not only that the tourist experience and distance are interrelated in the context of leisure mobility but also that happiness affects all factors of the model – the tourist experience, the motivations for vacations, the perception of distance and the mobility outcomes. Thus, the conceptual analysis extends the concept of happiness to the context of mobility. However, it is worth mentioning here that even though a model is an effective way to present a synthesis of theories (Pearce, 2008), it is a simplification of reality and not reality itself. According to Haggett and Chorley (1967), the function of a model is to highlight important notions or relationships in general terms. Following this logic, the current model does not aim to present the rich range of tourist motivations or to present solutions for unsustainable mobility behavior, but to offer an explanation for the two previously mentioned gaps, the awareness-attitude gap and the “holiday is a holiday” gap, which together hinder behavioral change towards more sustainable tourism mobility behavior.

The conceptual model: happiness limits sustainable tourism mobility

Literature review: the tourist experience, happiness, perception of distance and mobility

The tourist experience

The Fridgen (1984) model of the “tourist experience” is based on the Clawson and Knetsch’s (1966) “recreational experience” theory that describes the five phases a tourist experiences: anticipation, traveling to the destination, on-site experience, traveling from the destination and recollection. The “tourist experience” concept includes elements from before, during and after the actual experience, which implies that thoughts, plans and memories are part of that experience. Furthermore, both travel to and from the destination are viewed as integral parts of the experience and not as inescapable costs or marginal events. This suggests that tourists may anticipate and recollect not only the on-site experience but also their travel to and from the destination. Recently, Tung and Ritchie (2011b) emphasized the importance of the recollection phase. In their study, they implemented the ideas of Pine II and Gilmore (1998) about memorable experiences by describing conditions that would support tourists remembering their travel experiences.

The “tourist experience” model portrays behaviors and feeling, but does not answer questions such as why people travel and why different tourists engage in different behaviors. It cannot provide ways to promote behavioral change to improve the sustainability of tourism mobility. Therefore, a closer look at the psychological foundations of the tourist experience is needed. The next section is dedicated to understanding the psychological foundations of the tourist experience and, more precisely, tourists’ motivations.

Tourists’ motivations

Plog (1974, 2002) was the pioneer in developing a tourists’ motivation theory. According to Plog’s “venturesomeness theory”, tourists can be described along a conceptual continuum,
ranging from allocentric to psychocentric. Allocentric tourists are characterized by leadership, curiosity and risk-taking motivations, whereas psychocentric tourists are indecisive and risk-averse. Although this theory was defined as the most accepted personality theory in the tourism context (McGuiggan & Foo, 2004), it did not receive much empirical support (Madrigal, 1995; Smith, 1990).

Another approach for analyzing interpersonal differences in tourists’ motivations adopted well-known and established personality theories rather than developing new constructs. The work of Pearce and his colleagues (Moscardo & Pearce, 1986; Pearce, 1988, 1993; Pearce & Lee, 2005) was partly based on Maslow’s hierarchy of needs (Maslow, 1968, 1970) and expanded this theory to two dimensions of analyses. The first dimension addressed travelers’ needs (such as relaxation, safety and fulfillment), whereas the second dimension referred to past experiences, or the tourist’s travel career. However, Pearce and Lee (2005) indicated that the majority of tourists shared a common pattern of motivations or needs, such as novelty, escape and enhancing relationships. This pattern of motivations is congruent with the theory of motivation for recreational travel (Iso-Ahola, 1983). According to Iso-Ahola (1983), the motivations of novelty and change are the foundations of the social activity of recreational travel. However, Iso-Ahola indicated that the combination of the desire to escape everyday life and the need to maintain interpersonal relationships might create a contradiction that the tourist must solve to obtain an optimal solution.

Both Pearce and Lee (2005) and Iso-Ahola (1983) suggest that the motivations for change, novelty and social relations affect the behaviors and experiences of different people in different trips, vacations and locations. Thus, although the “tourist experience” may have different expressions (e.g. backpacking, luxury travels or family vacations), its foundations and motivations are universal. Moreover, it may be reasoned that the motivations of novelty, escaping and enhancing relationships drive the choice of destinations farther from home within constraints posed by travel costs, time and, to some extent, the relationship element. Interestingly, Pearce and Lee (2005) found that more experienced travelers tend to seek social relations with locals in different cultures. This motivation may enhance the importance of distance especially among experienced travelers, instead of focusing on social relations with friends and relatives in known and close destinations. Nicolau (2008, p. 50) noted that “... a greater willingness to travel longer distances is associated with high income (although with a saturation point); with large cities ... with the use of intermediaries (as their use allows a reduction in the inherent uncertainty of long-distance destinations and to save time in the organization of multi-component trips) ... with the interest of discovering new places (as people with this interest may be willing to cover long distances to satisfy this intellectual need, according to the Ulysses factor); with the variety-seeking behavior ...”

The importance of distance

According to the sociological approach, tourism settings allow tourists to have experiences that differ from daily life. Goffman (1963) defined the tourism context as “action spaces” where tourists are allowed – sometimes even encouraged – to experience extraordinary adventures. Psychoanalytical sociology explained the permissiveness of tourism settings by exploring the mental mechanisms that cause tourists to behave in unusual ways. Specifically, it emphasized the idea that perceived distance enables tourists to utilize defense mechanisms such as sublimation, projection and omnipotence, which convert unconscious needs to unusual normative or alternatively deviant experiences. Examples of this idea are the normative participation in safari tours (normative sublimation of unconscious aggression...
needs) or, alternatively, a deviant participation in elephant hunts (deviant projection of unconscious aggression needs; Uriely et al., 2011).

The relationship between the perception of distance and opportunities to express unconscious needs through unusual experiences affects all five phases of the “tourist experience”. It shapes pretrip expectations, stresses the importance of long-haul travel, explains various behaviors and experiences on-site and is involved in the mental process of recollection. Distance is an integral part of the tourist experience. Without the element of distance, the experience will not be fulfilled and completed, negatively affecting the happiness of the tourists. However, the important point is “perceived” distance and the role that it plays in tourists’ fantasies. Exotic destinations often “epitomize the dream of the average traveler” (Buhalis, 2000, p. 103). Tourists believe that vacationing at far away or exotic destinations makes them happier, although no empirical evidence suggests that. Burns and Bibbings (2009) suggested that the positive image of far away or exotic destinations is related to Maslow’s concept of “peak experience”, which is a social desire that can be changed. This social desire for distance may be translated into an intensity bias in affective forecasting. According to Buehler and McFarland (2001), this bias causes individuals to overestimate the effect that an event has on their happiness. Similarly, Wilson and Gilbert (2005) named this phenomenon the impact bias in affective forecasting. According to their research, focalism is a major cause of this bias; people focus on one aspect, the effect of which they consequently overestimate. Kahneman, Krueger, Schkade, Schwarz, and Stone (2006) observed the same phenomenon and refer to it as a focusing illusion.

In this context, it is worth mentioning that the concepts of time and pace are also socially constructed (Molz, 2009). Miller et al. (2010) argued that longer vacations are more difficult to arrange because of work and family obligations, but Dickinson and Peeters (in press) demonstrated that this does not decrease travel distances. Interestingly, the opposite was observed when increase in travel speed almost automatically increased distances instead of saving travel time. The importance of distance was found even for tourists who return to the same destinations every year. Selwood, Tonts, Hall, and Müller (2004) demonstrated that in the 1920s, second homes were built less than 20 km from their owners’ urban primary homes, whereas two-thirds of people in the same area (Perth) had second homes 400 km away in the 2000s.

Subjective well-being and happiness

Happiness and subjective well-being are umbrella terms used for several types of cognitive well-being measures and affective indicators of well-being. When people assess their lives, they draw on two sources of information: how well they feel and to what extent their lives meet their expectations (Veenhoven, 2009). The former is a more affective component of happiness and consists of moods, affect and emotions (Diener, 1984). The latter is more cognitive in nature and concerns life satisfaction and domain satisfactions (e.g. job satisfaction; Veenhoven, 1984). Affect is a term used to describe general feelings or an entire category of emotions (e.g. positive emotions). Emotions are more intense than mood. Emotions are more strongly felt but briefer than moods; emotions are caused by events, rather than occurring within a person, as is the case with moods (Beedie, Terry, & Lane, 2005).

Nawijn’s studies (e.g. Nawijn, 2011b; Nawijn, De Bloom, & Geurts, 2013) suggest that individuals become happier by vacationing, but only temporarily. Vacations have no lasting effect on tourists’ life satisfaction (Nawijn, 2011b). Life satisfaction scores are elevated briefly after returning home (Lounsbury & Hoopes, 1986) or when tourists are asked to recall
past vacations and immediately assess their life satisfaction after this instruction (Sirgy, Kruger, Lee, & Yu, 2011). Posttrip effects are present for a minority of tourists and wear off quickly (Nawijn, Marchand, Veenhoven, & Vingerhoets, 2010). Vacations do have an effect on emotion. Tourists experience a peak in positive emotions during their vacation (Mitas, Yarnal, Adams, & Ram, 2012). Even after returning home, approximately 40% of tourists experience increased levels of positive to negative emotions for about two weeks (Nawijn et al., 2010). In everyday life, vacationers’ emotional balance (the difference between positive and negative emotions) is slightly higher than that of nonvacationers (Nawijn, 2011b). Thus, positive feelings are important not only during the on-site phase of the “tourist experience” but also during the fifth phase of recollection. Negative emotions, conversely, were not related to memories of vacations (Tung & Ritchie, 2011a, 2011b). Underlying explanatory factors of this increase in positive emotions are a sense of relatedness and autonomy (Ryan & Deci, 2000).

**Mobility**

Transport physically moves people or goods “from A to B as quickly and as smoothly as possible” (Peters, 2006, p. 3). For tourism transport, the idea of transportation always being a cost to be minimized might not be always true because “it is also appropriate to differentiate transport as a means to an end and transport which is integral to the tourism experience” (Lumsdon & Page, 2004, p. 2). Mobility is a characteristic of the persons (or goods) to be transported. As we discuss tourists’ psychology, mobility seems a more appropriate term than transport. Mobility can be expressed in many terms, but common ones are trips and travel distance, time, speed and cost. These properties are connected, and the connections form an important background to our model. The main connections are budgets for travel time, money and a constancy of number of trips per person per day (Schäfer, 2000). The travel time budget is found to be constant at approximately 70 minutes on average per day per person, the money budget is approximately 10% of personal income (Schäfer, 2000) and the number of trips per day is constant at approximately 4–5 per day (Hupkes, 1982) for a very wide range of populations (cities and countries) worldwide and with varying income and transportation infrastructure.

The constants (trips, travel time and money budget) are statistical artifacts, meant to be used at population level only, but they result from averaging all individual mobility patterns. An important consequence of these constants is that increases in the average speed of transport systems will increase the distance people travel rather than saving time (Banister, 2011; Metz, 2008). In terms of average distances traveled, mobility increases with wealth because increased income gives access to faster transport modes such as car (Arentze & Timmermans, 2011) and air transport (Schäfer, Heywood, Jacoby, & Waitz, 2009). Therefore, the common policy to follow demand with infrastructural improvements extends not only capacity but also network density, efficiency quality and overall transport speed, thus creating additional travel demand (Metz, 2008). Theoretically, it can be demonstrated that a positive policy–demand–infrastructure feedback loop exists and naturally will lead to ever increasing mobility and distances traveled (Peeters, 2010).

**The “happiness loop” and unsustainable tourist mobility behavior**

One possible conclusion from the literature review is that a relationship may exist between tourist experience, happiness, perception of distance and the concept of mobility. In light of Xin et al.’s (2013) analysis, these different concepts combined may provide new insights on
Figure 1. The tourism “happiness loop”.

an old problem. Therefore, these concepts were integrated into models, seeking to shed light on the two goals of the current study: enhancing the understanding of the psychological causes for unsustainable tourist mobility behavior and demonstrating how happiness hinders desirable behavioral change towards more sustainable tourist mobility behavior. The first model, the “happiness loop” (presented in Figure 1) demonstrates how the tourist experience theory is integrated with the concept of happiness. According to this model, the positive emotions of happiness are not only linked exclusively to on-site experiences but also affect expectations and recollection. In that sense, every good experience may translate to pleasant memories that produce anticipation for the next trip. However, the phases of traveling to and from the destination are placed outside the happiness loop, because according to the happiness theories, mobility, alone, is not considered a source of happiness. This model suggests that tourists may be aware of the negative aspects of mobility because mobility aspects threaten sustainability, but they may perceive the mobility aspects as a “necessary evil” that enables their tourism-related happiness. In other words, this model offers a possible explanation for the awareness-attitude gap. Tourists may ignore the negative aspects of mobility to preserve their happiness. Therefore, any attempt to promote behavioral change in relation to sustainable tourist mobility behavior would face resistance because it may reduce happiness.

The happiness loop shows only part of the whole system of tourist behavior and has multiple relations, direct and indirect, with tourist motivations, perception of distance and mobility. Satisfying tourist motivations, and specifically motivations for novelty and change, will accelerate the happiness loop. Furthermore, satisfying the perception of distance, mainly by means of mobility, will enhance the motivations for novelty and change, and as a result would strengthen the happiness loop. These interrelations are presented in Table 1.

Given the psychological motivation of tourists for novelty and change, there is a continuous demand for more exciting experiences that may require traveling greater distances
Table 1. Overview of the main constructs in the “three-gear model”.

<table>
<thead>
<tr>
<th>The construct</th>
<th>References</th>
<th>Possible relations of the construct with the “happiness loop”</th>
<th>Possible relations of the construct with other components of the “three-gear model”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tourists’ motivations – specifically – novelty and change</td>
<td>Iso-Ahola (1983), Pearce and Lee (2005)</td>
<td>Satisfying tourists’ motivations driving the happiness loop</td>
<td>Mobility and (increasing) distance are essential elements in satisfying tourist motivations</td>
</tr>
<tr>
<td>Perception of distance</td>
<td>Buhalis (2000), Burns and Bibbings (2009), Dickinson and Peeters (in press), Goffman (1963), Selwood et al. (2004), Uriely et al. (2011)</td>
<td>The perception that novelty and change are better found at greater travel distance satisfies tourist motivations, which drives the happiness loop (indirect relation to the happiness loop)</td>
<td>The perception of the “value” of distance requires mobility.</td>
</tr>
<tr>
<td>Mobility</td>
<td>Arentze and Timmermans (2011), Banister (2011), Dickinson et al. (2010), Lumsdon and Page (2004), Metz (2008), Peeters (2010), Schäfer et al. (2009)</td>
<td>Mobility becomes cheaper and faster and thus enables longer distances, which drives the happiness loop (indirect relations to the happiness loop)</td>
<td>Mobility is a fundamental condition for consuming distance; cheaper/faster mobility incentivizes longer distances</td>
</tr>
</tbody>
</table>

(cf. Jang & Feng, 2007; Raghunathan & Irwin, 2001). This process may be accelerated through the components of the happiness loop (i.e. the phases of anticipation, on-site experiences and recollection). According to the suggested model, travel is planned based on previous travel experiences. After someone starts to travel, he/she would plan the next trip in a way perceived as better than the last trip, based on past experiences. According to this theoretical analysis, the motivations for novelty and change both affect the happiness loop and increase the distance component. Figure 2 presents this concept with a metaphor of a three-gear wheel system in which one wheel (the novelty and change motivations) is activating the other two, the happiness loop and travel distance.

The three-gear model does not suggest that the motivations for novelty and change increase over time. Instead, the motivations are the driver for gradual increases in traveled distance over time because the reference point changes with experience. This outcome was also supported by Pearce and Lee’s (2005) study, which demonstrated that, on average, older people have more experience in travel than younger people, although both groups share the same motivations for novelty and change.

In general, a transport policy–infrastructure–demand system favors faster and cheaper transport increasing the demand for distances traveled. For tourism travel, this tendency toward longer travel distances is amplified by the happiness loop. This makes the quest for sustainable tourism transportation even more challenging than other transport motives. Links between distance, mobility and happiness directly hinder two of the most desirable behavioral changes with regards to sustainable tourist mobility, namely, shifting from
A critical review of the model

Xin et al. (2013) highlighted the need for concept skepticism as an integral part of conceptual analysis. According to this principle, issues that might contradict the model should always be discussed. Three subjects were identified as possible critiques for the three-gear model: the habituation tendency, the overemphasizing of good experiences compared to bad experiences and the causation issue between happiness and travel frequency. According to the habituation theory (see Groves & Thompson, 1970), there is an erosion of responses to repetitive stimuli. Thus, the three-gear model will eventually stop working, not because of external forces, but because of habituation. Alternatively, the model will require more energy to continue working. The latter view is supported by the hedonic treadmill theory and metaphor (Brickman & Campbell, 1971). This believes that individuals compare purchases and events over time; pleasure derived from an initial event or purchase is always greater than that from the consecutive purchase or event. In other words, individuals adapt to an event and habituation takes place, establishing a new norm (Kahneman & Miller, 1986). This is most likely the case for vacations. Happiness derived from the same product (a vacation) means that the next vacation must be better (longer, farther, more exotic) to derive the same happiness. Experimental research (Raghunathan & Irwin, 2001) determined that when individuals are asked to report the happiness they expect to derive from visits to certain vacation spots, they compare destinations and their expected predicted effect on long-haul travel to medium/short-haul travel, and the call for renouncing aircraft and private cars for trains and coaches.
happiness. Raghunathan and Irwin’s (2001) study supports the hedonic treadmill theory in a vacation context. Not all tourists seek novelty in their vacations, but both McKercher and Du Cros (2003) and Burns and Bibbings (2009) argued that social pressure influences many to look for “better” vacations.

The second subject, the importance of positive emotions and experiences over negative emotions and experiences was supported by studies from different disciplines. First, people are more likely to remember positive events (compared to bad events) to enhance their self-esteem and well-being (Walker, Skowronski, & Thomson, 1996). Thus, their whole information process is based on biased practices (Frey, 1986), including selective attention that blocks unpleasant information (Hart et al., 2009) and selective recall of positive memories (Walker et al., 1996). Second, given that people feel much better on vacations compared to their everyday lives (Nawijn, 2011a), their happy memories are reference points, triggering new trips. Bad experiences may reverse the three-gear model’s direction, but as long as there is a social acceptance of travel as pleasure sources (Burns & Bibbings, 2009), and good experiences tend to be remembered (Hart et al., 2009; Tung & Ritchie, 2011a; Walker et al., 1996), then the reverse process would not occur frequently. However, one may consider inserting an additional loop from “bad experience” to “congenial ignorance” and back to the positive loop in the current model.

The third issue addresses the causation problem: are happy people going on vacations, or the opposite – do vacations make people happy? Although important, this question is beyond the scope of this study, with its main argument that happiness plays an important role in the tourist experience and hinders attempts for behavioral change in leisure mobility.

Discussion and conclusion

Happiness is an integral part of the tourist experience. It is part of the decision making (Hart et al., 2009), the experience (Nawijn, 2011a) and the memories (Tung & Ritchie, 2011a). Understanding happiness enhances the understanding of tourist behavior in general. Including the concept of happiness in our three-gear conceptual model gives a better understanding of both the awareness-attitude gap and the contextual gap. The awareness-attitude gap reflects the contradiction between tourists’ understanding of the negative impacts of their mobility patterns and their attitudes favoring such behaviors. The contextual gap refers to people’s resistance to extend environmentally friendly daily mobility practices to the tourism context. According to the three-gear model, these two gaps result from tourists’ search for happiness, which for many depends on perceived distance and mobility. Furthermore, the tourists’ demand to travel farther and faster increases over time through a continuous process that involves elements of the tourism happiness loop together with the need for change and novelty. Happiness has been shown to play a role in the unsustainable development of tourism. Specifically, the role of seeking happiness in the continued increase of distances tourists travel causes further unsustainable development. The happiness loop also hinders change towards less distance-intense forms of tourism behavior.

Using the three-gear model, there are three options for policies promoting behavioral changes in tourist mobility. First, policies may attach to the wheel of distance by changing current transport infrastructure policies, thus disrupting the speed–distance–demand feedback loop. Second, policies may be aimed at altering the motivations of novelty and change (e.g. the wheel of motivation). Third, policies may aim to implement elements of the happiness loop wheel for a tourism mobility context.

Policies proposed to break the speed–distance–demand loop include increases in the cost of less environmentally benign transport modes through taxes on carbon emissions
(Tol, 2007) and airline tickets (Mayor & Tol, 2007) or by including aviation in carbon trading (Mayor & Tol, 2010). The advantage of taxing is that rebounds are generally small or nonexistent, whereas they are common in efficiency measures that increase demand by reducing fuel consumption and cost, for example. However, all past studies reveal that the impact of financial measures in aviation is small and sometimes the changes cause undesired side-effects, such as in the UK ticket tax (Mayor & Tol, 2007). Still, for car and petrol taxes, for example, the historical effect has been shown to be substantial (Sterner, 2007). Another potentially effective approach would be to increase infrastructure capacity selectively such as by prioritizing rail infrastructure over airports (Åkerman, 2011). Interestingly, scenario analysis indicates that a shortage of airport capacity will significantly affect future air travel demand (Evans & Schäfer, 2011). This means that the standard policy of demand following infrastructure should be reversed so that environmental limits induce constraints on capacity, which could potentially be more effective than most pricing policies. Of course, such policy changes are not easy because it requires strong behavioral change from both policy makers and the public. Behavioral change by policy makers is probably the main issue: Dickinson, Robbins, and Lumsdon (2010) found that holiday travel is constrained by existing structures within the travel and tourism industries.

Most previous research that focused on the motivations of tourists to engage in behavioral change (the wheel of motivation in the three-gear model) (Antimova et al., 2012; Hares et al., 2010; Miller et al., 2010) found that tourists would not voluntarily change their motives. Interestingly, they pointed back to the wheel of policies, claimed that interventions in mobility policies are required. Becken (2007, p. 365) noted that “everyone waits for someone else to do something”. However, Antimova et al. (2012) and Miller et al. (2010) argued that societal change would be more efficient than policy change because social norms and role models have more influence on personal motivations and would more effectively bridge the gap between awareness and attitudes.

Focusing on the wheels of motivations and policies, as in the studies above, excluded two factors from the discussion: the “happiness loop” and the gap between everyday practices and tourism mobility. Therefore, one negative theoretical outcome in implementing policies based on motivations alone can be that people will act in sustainable ways at home but use that behavior to ignore the negative environmental impacts of their vacations, which are generally more severe.

Our conceptual model supports shifting policies for behavioral change to the third wheel, the wheel of the “happiness loop”. The “happiness loop” is composed of three distinct parts: the anticipation stage, the on-site experience and the recollection stage. We observe that the environmental impacts are located outside the “happiness loop”, in the stages of traveling. This means that strategies to further improve the anticipation, the on-site experience and recollection stages could theoretically improve happiness. However, this can only be achieved if the distance-generating transport policy related loop would be disrupted by policies that limit capacity rather than price. This would be an important departure from current transport policies that follow demand, disregarding transport mode and volume.

**Theoretical contribution**

In his review of sustainable tourism, Buckley (2012, p. 537) pointed to immediate priorities for future research. He indicated the issue of individuals’ reaction to “responsibility in light of global change” as one of the two most important and promising fields in this context (the other is land-use change). This study corresponds well with this call and suggests a
model that focuses on tourists’ reactions. Our model has three theoretical contributions. First, it presents a synthesis of theories to interrogate two behavioral gaps known from previous studies: the gap between awareness and attitudes and the gap in sustainability practices between everyday life and vacation circumstances. Second, the model indicates the desire for happiness as a potential cause for both gaps, influenced by motivations of novelty and change as well as the transport-infrastructure–policy–demand feedback loop causing distances traveled to increase over time. Third, it provides a theoretical basis for future empirical studies: the conceptual research described here is a necessary preliminary stage in the empirical and objective method (Xin et al., 2013). Further, the paper has three contributions to the discussion about the links between psychology and tourism. First, by addressing the issue of behavioral change in general, second, by providing an important bridge between psychology and sustainable tourism, and third, by focusing on emotions, whereas most previous studies in the field of tourism concentrated on more cognitive aspects, such as decision making processes, memory and awareness.

**Practical contribution**

Previous studies of behavioral change and tourism mobility highlighted the need for policies that relate to social change, because the industry will not improve itself (Antimova et al., 2012; Miller et al., 2010; Verbeek & Mommaas, 2008). These studies called for making the tourists the change agents, through their sense of responsibility (Miller et al., 2010), their guilty feelings (Cohen et al., 2011) and their patterns of political consumerism (Verbeek & Mommaas, 2008). This study questions these insights by placing the happiness of tourists, rather than their consciousness or rationality, at the center of its analysis. It shows that future solutions for the current unsustainable tourism mobility problem should address the happiness of tourists. This sheds new light on Buckley’s (2012, p. 535) remark: “People want holidays, and on holiday they act hedonistically. The most populous nations are richer, so more people travel . . . Amidst these pressures, large-scale voluntary improvements in sustainability are improbable, especially given low public pressure for sustainability and the particular ambivalence to tourism”.

In practical terms, tourism and transport policy makers may consider developing a “happiness scale” to test the implications of regulating leisure mobility. In this context, it is worth mentioning that soft measures, such as a “happiness scale”, are becoming more common. For example, the Human Development Index, which follows the traditional gross domestic product rankings and well-being scales, is utilized as an integral part of reports of the Organization of Economic Cooperation and Development.

In addition, future policies for breaking the speed–distance–demand loop may refer to tourists’ emotional state, particularly during the stages of on-site experience and recollection. Policy makers should keep in mind that the happiness of tourists is a fundamental condition for successful implementation of policies about leisure mobility.

**Study limitations**

Future studies based on the models presented here face two major limitations. The first limitation relates to the wide range of models and theories describing human behavior. The motivation theory that was taken as the base for our model is only one of many. However, the entire range of human behavior is beyond the scope of the current study, which focused on behavioral change and aimed to explain the two gaps in the leisure mobility literature: the awareness-attitude gap and the contextual gap. The second limitation
focuses on individual differences. The current model overlooked individual differences and suggested a homogenous model of happiness and motivations. Future studies may refer to this issue, further elaborating on the theory, and include other motivations, such as seeking personal meaning or relaxation. Uriely (2005) noted that conceptual theories about the “tourist experience” tend to be developed from an initial homogenous concept and expand later to portray interpersonal differences.

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