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Individuals' intentions to engage in last chance tourism: applying the value-belief-norm model

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ABSTRACT

For tourism to be entirely sustainable, one cannot travel. This is impossible. This paradox is particularly evident within last chance tourism (LCT), where tourists, seeking experiences with vanishing animals and land/seascapes, can accelerate the decline of those very attractions. Though recent studies hint that those with the highest intentions to visit LCT destinations are also some of the most concerned with climate change, no study has assessed the psychological drivers that may help explain why individuals are increasingly engaging in this paradox. Drawing on the VBN model, this research examines a theoretical framework to assess the psychological drivers behind individuals' intention to engage in environmentally responsible behavior while traveling and, ultimately, their desire to participate in LCT. Results reveal that a set of environmentally referent cognitions (i.e., values, environmental worldview, awareness of consequences, and ascription of responsibility) lead to personal norms activation, which then influence tourists' intent to behave in pro-sustainable ways and, ultimately, individuals' intentions to engage in LCT. Findings are important as they further confirm the benefits of using VBN theory within an LCT context. For practitioners, this research strengthens the appeal of sustainable tourism operations to secure business and receive positive word-of-mouth from potential LCT tourists.

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VBN model; environmental worldview; ascription of responsibility; awareness of consequences; personal norms; eco-friendly travel behavior

Introduction

A wave of media coverage featuring natural landscapes (e.g., the Great Barrier Reef), keystone species (e.g., polar bears), or other popular tourist attractions (e.g., the Amazon Rainforest, glaciers, etc.) reportedly on the brink of vanishing due to climate change impacts has resulted in a paradoxical travel trend known as last chance tourism (hereafter, LCT). Lemelin et al. (2010) describe LCT as involving "tourists explicitly seeking vanishing landscapes and disappearing natural and/or social heritage" (p.478). The paradoxical dimension of LCT is that traveling typically produces a substantial amount of greenhouse gas (GHG) emissions, exacerbating the

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climate dynamics that threaten these same resources (Gössling & Scott, 2018; Lenzen et al., 2018). Decarbonization solutions and mitigation measures to reduce impacts on the environment call for significant emissions reductions (ETC, 2018; UNWTO., 2017; WTTC, 2015). However, tourism is expected to continue experiencing strong industry growth, with international tourist arrivals estimated to be 1.8 billion by 2030 (UNWTO., 2017). Sector trends of this magnitude will cause estimated GHG emissions from tourism-related activities to increase by 170% through 2050 (Gössling & Peeters, 2015).

Critics of LCT argue that an influx of tourism would result in a cycle of exploitation and excessive pressure on an already ecologically fragile area, thereby contributing to environmental degradation (Dawson et al., 2011; Lemieux & Eagles, 2012). While the concerns surrounding the impacts of LCT are legitimate considerations that need to be thoughtfully evaluated, the value of promoting ambassadorship through visitation and on-site interpretation should not be ignored. There is an argument to be made that individuals participating in LCT may be especially sympathetic to the cultural and environmental plights of the world (Piggott-McKellar & McNamara, 2017). LCT implies the opportunity to be among the last to witness and experience vanishing landscapes, given their inherent value Some scholars have found that LCT travelers display a particular ethic that opposes the reduction of an important cultural or natural site to being just a commodity to be consumed and discarded (Lemelin et al., 2010). LCT travelers, in essence, resemble other sustainable tourism market segments such as ecotourists and geotourists who desire to experience the unique natural and cultural features of destination in a manner where their visit brings a net positive environmental, economic, and socio-cultural impact (Boley & Nickerson, 2013). However, there seems to be a misalignment between LCT travelers' pro-environmental values and beliefs and their unsustainable behavior associated with visiting LCT destinations. Juvan and Dolnicar (2014) label this as an 'attitude-behavior gap,' and this misalignment of values and behavior is at the heart of the LCT phenomenon because previous research has shown LCT travelers to have a sustainable ethic (Lemelin et al., 2010; Piggott-McKellar & McNamara, 2017), yet also a large carbon footprint that can potentially further undermine the vulnerable places they are visiting (Dawson et al., 2010; Eijgelaar et al., 2010).

The majority of LCT research focuses on motivations for travel to a specific LCT destination (Dawson et al., 2010; Lemieux et al., 2018; Piggott-McKellar & McNamara, 2017) or perception of the area by visitors and stakeholders (Ahmad et al., 2014; Liggett et al., 2010; Vila et al., 2016). However, it is essential to investigate the psychological antecedents associated with the intent to engage in this type of travel, given the paradoxical nature of LCT and the potential 'psychological tension' associated with LCT travelers who have pro-environmental values and beliefs, yet still feel the urge to visit these LCT destinations.

Models that emphasize moral normative behavior, like Stern's value-belief-norm (VBN) theory (Stern et al., 1999), have been demonstrated to be one of the most appropriate methods of analysis of pro-environmental behavior among tourists (Landon et al., 2016; Landon et al., 2018; Raymond et al., 2011; Thogersen, 1996; van Riper & Kyle, 2014). However, no studies have been undertaken using the VBN theory to explain individuals' intentions to travel for LCT.

This study seeks to fill the current gaps in the literature to determine the psychological drivers behind individuals' intention to engage in environmentally responsible behavior while traveling and, ultimately, their desire to participate in LCT opportunities. Drawing on the VBN model (Stern et al., 1999) and extending the work of Landon et al. (2018), we hypothesize that a set of environmentally referent cognitions (i.e., values, environmental worldview, awareness of consequences, and ascription of responsibility) will lead to the activation of personal norms, which influence tourists' intent to behave in pro-sustainable ways (i.e., willingness to sacrifice, localism, and eco-behavior) and, ultimately, individuals' desire to engage in LCT. We postulate that an individual's intent to engage in LCT is fostered by the constructs included within the VBN model as well as pro-environmental behavioral intentions. As such, this study marks the first

time pro-environmental behavioral intentions along with other key psychological drivers (through a modified VBN model) are used to explain individuals' intentions to engage in LCT.

Literature review

Conceptual orientation: the value-belief-norm model

The value-belief-norm (VBN) framework developed out of three complementary theoretical approaches: Values Theory (Schwartz & Bilsky, 1987), Norm Activation Theory (Schwartz, 1977), and the theoretical model of environmental concern (incorporating the New Ecological Paradigm) (Stern et al., 1995). Values Theory purports that individuals' attitudes and behaviors are a function of deeply held "enduring, trans-situational beliefs about desired end states of social interaction" (Landon et al., 2018, p. 959). Appearing in various forms, values (e.g., achievement, conformity, power, security, self-direction, tradition, etc.) then, serve to inform our beliefs and attitudes about specific objects, as well as how we act in relation to such objects (Schwartz, 1994). Closely related, Schwartz (1977) is credited with developing the second theoretical framework, Norm Activation theory, which serves to explain individuals' altruistic behaviors (i.e., pro-social behaviors). Within his theoretical model, Schwartz (1977) included three precursors to engaging in environmentally friendly behaviors: awareness of consequences, ascription of responsibility, and personal norms. The third theoretical model established by Stern et al. (1995) highlights the linear relationships between key constructs: 1) position in social structure, institutional constraints, and incentive structure; 2) values; 3) general beliefs, worldview, and folk ecological theory; 4) specific beliefs and specific attitudes; 5) behavioral commitments and intentions; and 6) behavior.

Building on this work, Stern (2000) and Stern et al. (1999) developed the widely employed current value-belief-norm (VBN) model, claiming that these theoretical frameworks explain the moral normative basis of "taking action with pro-environmental intent" (p. 441). Because the VBN was developed within the social psychology and environmental psychology literatures, research continues to advance models centered on pro-environmental behavioral intention (Han et al., 2018; Kiatkawsin & Han, 2017). Most recently, Landon et al. (2018) employed the VBN in the context of sustainable tourism and eco-friendly travel behavioral intentions, highlighting how psychological antecedents explained a high degree of variance in the outcome variables of willingness to sacrifice, localism, and eco-behavior. Such findings lend themselves well to the potential to apply the VBN within a context focused on last chance tourism, extending Landon et al. (2018) model.

Per Stern et al. (1999), the VBN theoretical model establishes a theoretical framework including psychological antecedents of one's likelihood to act in a certain manner. This chain originates with personal values (most often measured as egoistic, altruistic, and biospheric values) which influence an individual's environmental or eco-centric worldview (Schultz, 2001). Such a worldview explains an awareness of consequences for acting in a certain manner. This awareness of consequences then contributes to an ascription of responsibility. According to Landon et al. (2018), awareness of consequences and ascription of responsibility are not only prerequisites to the activation of moral (or personal) norms, but they "refer to beliefs that one's behaviors may influence valued-objects, and that mitigating those influences is within one's control" (p. 959). Norms ultimately influence the intentions a person has to engage in particular behaviors, such as pro-environmental behaviors. Throughout the last twenty years, many have confirmed the relationships among VBN constructs within similar models initially advanced by Stern (2000) and Stern et al. (1999).

As initially mentioned, the VBN theoretical model has been principally employed within research focusing on pro-environmental behaviors, especially centered on work concerning visitors to protected areas (Esfandiar et al., 2020; López-Mosquera & Sánchez, 2012; van Riper &

Kyle, 2014), consumers' decision making in selecting products or services (Jansson et al., 2011; Zepeda & Deal, 2009), energy efficiency and conservation (Fornara et al., 2016; van der Werff & Steg, 2016) and climate change perspectives (Nilsson et al., 2004; Sanderson & Curtis, 2016). Most recently, the VBN has gained traction within the sustainable tourism and hospitality literatures, focusing predominantly on pro-sustainable tourism behavioral intentions (Han et al., 2017; Han et al., 2018; Kiatkawsin & Han, 2017; Landon et al., 2018; Lind et al., 2015; Olya & Akhshik, 2019; Zhang et al., 2014) and the likelihood of selecting green lodging options (Choi et al., 2015; Han, 2015; Han et al., 2010; Rahman & Reynolds, 2016). A key finding that many of these works (e.g., Han et al., 2017; Han et al., 2018; Kiatkawsin & Han, 2017; Landon et al., 2018) have shown is that values (primarily either egoistic or altruistic) are not always significant predictors of subsequent constructs within the VBN model. On the other hand, norms (referred to as "personal," "moral," "pro-environmental personal," or "a sense of obligation to take pro-environmental action") were either the most salient (Choi et al., 2015; Han et al., 2017; Han et al., 2018; Kiatkawsin & Han, 2017; Landon et al., 2018) or second-most salient (Han, 2015) construct in explaining behavioral intentions.

Given the established track record of the VBN within the environmental psychology literature, it makes sense that the model would be attractive to tourism researchers in explaining pro-environmental behavioral intentions among tourists. That said, the tourism literature has yet to employ the VBN within the context of last chance tourism (LCT), often concluding the model with pro-sustainable tourism behavioral intentions in general. Therefore, this work aims (by extending the Landon et al., 2018 model) to consider how the numerous constructs within the VBN model may serve as potential antecedents to individuals' intentions to engage in LCT travel.

Last chance tourism research

As Lemelin et al. (2010) advances, LCT can be thought of as individuals' desire and pursuit of visiting landscapes and viewing key species whose existence is threatened or in jeopardy of disappearing. In line with this, Ballantyne et al. (2009) contend that LCT involves "tourists observing, photographing, and interacting with environments or individual species that may be endangered, threatened, or rare" (p. 151). Though the literature surrounding LCT is fairly current, it has largely focused on either individuals' motivations to visit particular destinations or perceptions of LCT among various stakeholders (see Lemelin & Whipp, 2019). Furthermore, most LCT studies are conducted in one-of-a-kind ecologically sensitive locations (Hindley & Font, 2018). Dawson et al. (2010) was among the first to ascertain LCT travelers' motivations for visiting a remote stretch of the Arctic, revealing that individuals were drawn to visit the park because of the vulnerability of polar bears to climate change. In a similar context, Lemieux et al. (2018) intercepted LCT visitors and found that feeling connected to a vanishing ecosystem with iconic features was the most salient rationale behind visiting. In addition to this, Lemieux et al. (2018) demonstrated a link between LCT motivations to visit and a desire to learn about climate change impacts, arguably calling into question whether such visitors acknowledge their contributions to climate change-induced impacts. Such a finding was echoed in the work by Piggott-McKellar and McNamara (2017), which highlighted that "those who were very or extremely motivated by a 'last chance to experience' had a significantly higher level of concern for the overall health of the Great Barrier Reef, than respondents who were not" (p. 410). This finding further highlights the paradox that those with the highest motivations to travel for LCT may also have a strong concern for climate change, yet they are inadvertently contributing to the root of the problem (Lemelin & Whipp, 2019).

The other principal area of LCT research centers on assessing various stakeholders' perceptions of LCT. One of the first studies to do this was undertaken by Dawson et al. (2007), which surveyed educators, park managers, and tour operators to assess perceptions of a Canadian LCT

destination. The authors concluded that most area stakeholders deny that LCT occurs there, believing that LCT marketing tactics were nothing more than media hype and a misrepresentation of the area. This is similar to what Olsen et al. (2012) found, reporting that no residents in their study were aware of, or familiar with, their place of residence being considered a LCT destination. Furthermore, Olsen et al. (2012) reported that nine of the eleven people they spoke with claimed marketing the town as a LCT destination was not beneficial. Liggett et al. (2010) demonstrated similar findings whereby stakeholders indicated that the rapid expansion of tourism (i.e., implementation of permanent infrastructure for tourism) was troubling and that environmental consequences and the implementation of stricter regulatory practices for tourism operators was of critical importance. From a tour operators' perspective in Malaysia, Ahmad et al. (2014) found that such individuals viewed LCT with great favor, considering it a new market niche. Much less promising results were found by Vila et al. (2016), who revealed that tour operators held little interest in environmental education or encouraging ambassadorship. As such, it is unclear whether tourists leave Antarctica with an increased ecological understanding of the continent.

A number of observations can be drawn from the extant LCT literature. First, the previous work focused on visitors largely neglects individuals' psychological antecedents to, or behavioral intentions of, engaging in LCT. Additionally, perceptions of LCT are mixed, with visitors tending to view it more positively than do local stakeholders. This, however, may be a function of researchers intercepting individuals who are already on-site, oftentimes motivated by LCT. Ahmad et al. (2014) also contend that many LCT studies are case-based and lack the potential to generalize to larger populations. Lemelin and Whipp (2019) call for further work that helps us explain what drives individuals to engage in LCT. As such, the VBN model (with its psychological antecedents and pro-environmental behavioral intentions) may serve to advance the ever-developing literature on LCT.

Tourists' pro-environmental behavior

Research concerning pro-environmental behavioral intentions continues to grow within the tourism literature, as it is influenced by work from environmental psychology. Though much of this work has focused on antecedents of such intentions (see Dolnicar, 2010; Landon et al., 2018), some research has concentrated on outcomes. For instance, Oreg and Katz-Gerro (2006) highlighted how willingness to sacrifice explained individuals' behaviors centered on recycling, refraining from driving, and environmental citizenship. Similarly, Park and Ha (2012) indicated that purchasers of 'green products' exhibited significantly higher levels of recycling intentions. In examining university students' use of public transportation, Heath and Gifford (2002) found that pro-environmental behavioral intention was one of the most salient contributors in explaining their use of such transit. Though much of this work has utilized the theory of planned behavior or theory of reasoned action, reseach employing the VBN is growing in popularity (Ertz et al., 2016). This slight shift may be perpetuated by the acknowledgment that altruistic values (a key component of the VBN model) have been shown to significantly contribute to pro-environmental behavioral intentions (Landon et al., 2017; van Riper & Kyle, 2014).

Far less work has concentrated on outcomes of pro-environmental behavioral intentions in a tourism context. Considering ecotourists in Taiwan, Lee and Jan (2018) demonstrated that ecotourism behavioral intentions significantly explained roughly 50% of the variance in engaging in ecotourism behavior. Such findings were echoed by Cheng, Chiang, Yuan, and Huang (2018) who revealed that intentions of participating in green tourism was significantly related to environmentally responsible tourism behavior within their model. Somewhat similar, Hwang and Lee (2018) found that willingness to pay more for ecotourism significantly predicted individuals' degree of purchasing ecotourism services while at the destination. Of this research, few have

utilized the VBN model in their work (Lee & Jan, 2018). Furthermore, no research has reported the outcomes of pro-environmental behaviors on individuals' intentions to engage in LCT.

All told, we have much to learn about how pro-environmental behavioral intentions are connected to individuals' intentions to engage in LCT. The extant work on LCT highlights the conflicting perspectives (from various stakeholders) of this form of tourism as both sustainable (Lemieux et al., 2018; Piggott-McKellar & McNamara, 2017) and unsustainable (Ahmad et al., 2014; Dawson et al., 2007; Liggett et al., 2010; Olsen et al., 2012). Given the contradictions within the literature as to whether LCT is sustainable and the fact that no one has explicitly looked at pro-environmental behavioral intentions and how they may explain individuals' intentions to engage in LCT, we propose the need to explore this relationship further. Such work will undoubtedly serve to advance the body of work on LCT, for which Lemelin and Whipp (2019) suggest is crucial moving forward.

Hypotheses and hypothesized model

Based on previous work focusing on the VBN model (Landon et al., 2018; Stern, 2000; Stern et al., 1999), 12 hypotheses were proposed that reflect various psychological antecedents of individuals' intentions to engage in LCT travel. This work, which extends the model put forth by Landon et al. (2018), reflects an advancement of existing LCT research whereby behavioral intent to engage in this niche form of tourism is considered a function of a host of established psychological predictors (as established scales). In essence, a theoretical framework is examined in explaining this outcome variable (Chen, 2015; Sarkis, 2017; Stern et al., 1999). As such, items measuring individuals' intentions to engage in LCT travel were derived from the *Intention to Visit* scale (See & Goh, 2019; Han et al., 2010), worded in the context of LCT.

In keeping with the established VBN model, we hypothesize that egoistic values held by individuals will be negatively related to an environmental worldview (as measured through the *New Ecological Paradigm*, put forth by Dunlap et al., 2000) (Han et al., 2017; Stern, 2000; van Riper & Kyle, 2014). In contrast, we hypothesize that other personally held values (i.e., altruistic and biospheric) will be positively associated with individuals' perspectives of an environmental worldview (Han, 2015; Kiatkawsin & Han, 2017; Lee & Jan, 2018; van Riper & Kyle, 2014). As such, this worldview will significantly predict a person's awareness of the potential consequences (i.e., awareness of consequences) of travelling (Han, 2015; Han et al., 2017; Kiatkawsin & Han, 2017; Landon et al., 2018). Following this, we hypothesize that this awareness of the consequences of travelling will be positively related to an ascription of responsibility to alleviate potential harm to the environment (Han, 2015; Kiatkawsin & Han, 2017). Next, the ascription of responsibility in caring for the environment is hypothesized to positively affect an individual's personal norms regarding actions to care for the environment (Han, 2015; Kiatkawsin & Han, 2017). Such personal norms are then proposed to significantly explain one's perceptions of and intentions to act as an eco-friendly traveler (through willingness to sacrifice, championing localism, and demonstrating eco-behavior) (Kiatkawsin & Han, 2017; Landon et al., 2018). Finally, considering the exploratory nature of the relationship, we hypothesize that these three forms of eco-friendly travel behavior will be significantly related to individuals' intentions to engage in LCT travel based on previous findings that have shown LCT travelers to have a sustainable ethic (Lemelin et al., 2010; Lemelin & Whipp, 2019; Piggott-McKellar & McNamara, 2017) and that those willing to pay more for ecotourism (i.e., make financial sacrifices) were found to be more likely to purchase ecotourism services (Hwang & Lee, 2018). Ultimately, an extension of the VBN in this context serves as a response to the work by Lemelin and Whipp (2019) to provide a greater understanding of why individuals intend to select LCT considering psychological antecedents (beyond the work focusing on motivations). A visual summary of the VBN constructs and the corresponding relationships between each are summarized in Figure 1. Further, the 12 hypotheses are as follows:

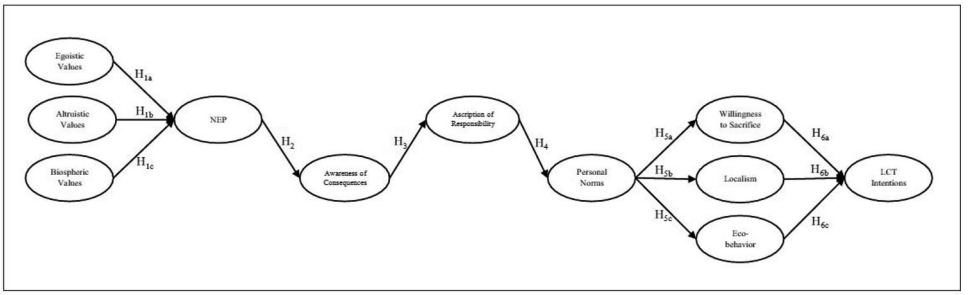

Figure 1. Proposed VBN model of psychological antecedents of intentions to engage in LCT travel.

H_{1a}: Egoistic values will be negatively related to environmental worldview (through NEP).

H_{1b}-H_{1c}: Altruistic values and biospheric values will be positively related to environmental worldview (through NEP).

H_2: Environmental worldview (through NEP) will be positively related to awareness of consequences.

H_3: Awareness of consequences will be positively related to ascription of responsibility.

H_4: Ascription of responsibility will be positively related to personal norms.

H_{5a}-H_{5c}: Personal norms will be positively related to eco-friendly travel behavior through: a) willingness to sacrifice; b) localism; and c) eco-behavior.

H_{6a}-H_{6c}: Eco-friendly travel behavior through a) willingness to sacrifice; b) localism; and c) eco-behavior will each be related to intentions to engage in LCT travel.

Methods

Data collection and sampling

The target population for the study was Americans 18 years and older who had traveled within the last 12 months, and who lived in households earning a minimum annual amount of US$50,000. This threshold was necessary to ensure the sample was reflective of the U.S. travel market (Yesawich, 2019), whereby individuals would have the necessary disposable income to travel to remote, international destinations, like those where LCT locations are found. This study utilized a panel sample by which study participant selection occurred through a non-probability sampling strategy, following a convenience sampling approach. Utilizing a sampling approach of this nature through an online panel is acceptable so long as inclusion coverage is wide (i.e., employing a national panel) with well-detailed criterion (Vehovar et al., 2016) and the sample size is considered robust (Babbie, 2016). Such an approach is gaining traction within the field of travel and tourism research due to the ease of recruitment and minimal cost associated with data collection (Atzori et al., 2018; Tasci & Milman, 2019). In fact, a similar panel sampling strategy has been employed most recently to test VBN models within the tourism field (e.g., Han & Hwang, 2017; Han et al., 2010; Landon et al., 2018).

Data were collected using Amazon's Mechanical Turk (MTurk). Using MTurk for data collection has been tested by multiple sources which has shown to yield as representative samples across various populations as traditional methods such as mail-based and telephone-based survey work (Buhrmester, Kwang, & Gosling, 2011; Chambers & Nimon, 2018). A study by Kees et al. (2017) used a five-sample between-subjects experiment to test the strengths and weaknesses of MTurk compared to student samples and other professional panels, including Qualtrics and Lightspeed. The authors found that MTurk participants outperformed the other four samples in a test designed to measure attention.

In our study, MTurk panel participants were self-selected and underwent a lengthy registration process before being allowed to participate in any surveys. The data were collected using an online questionnaire hosted through Qualtrics, following the work by Tasci and Milman (2019). Similar to other collection methods, an incentive to complete the questionnaire was offered in the form of monetary payment for burden of time. Participants received $1 as compensation for completing the questionnaire. The sample included 436 individuals who completed the online survey. Cases were removed from analysis if participants either took less than six minutes (given the minimum completion time was gauged to be approximately six minutes) to finish the questionnaire or provided straight-line responses, in order to ensure the integrity of the data. Ultimately, 30 cases were removed from subsequent data analysis, yielding 406 useable questionnaires for analysis. It should be noted as well that participants were required to complete each question before moving on to subsequent questions as suggested by other researchers (Chambers & Nimon, 2018; Tasci & Milman, 2019). The forced-answer requirement not only helped to ensure full completion but also removed the necessity to address missing data.

Measures

All items used to measure constructs within the proposed VBN model are based on measures from prior research. Egoistic (three items), altruistic (three items), and biospheric (three items) values (along with their corresponding items) were adopted from the work of van Riper and Kyle (2014) and Landon et al. (2018). These nine items were measured on a 7-point Likert scale (1 = *not all important* and 7 = *very important*). Environmental worldview was measured employing six items from the *New Ecological Paradigm* Scale (Dunlap et al., 2000) in accordance with the work of Landon et al. (2018). These items were presented on a 7-point Likert scale (1 = *strongly disagree*; 7 = *strongly agree*).

Five items were adopted from the work of van Riper and Kyle (2014), Raymond et al. (2011), and Landon et al. (2018) to measure awareness of consequences. These items were presented using a 7-point Likert scale (1 = *strongly disagree it is a problem*; 7 = *strongly agree it is a problem*), using the stem, "to what extent do you feel each of the following are problems created by travel and tourism." Ascription of responsibility was measured using three items on a 7-point Likert scale (1 = *strongly disagree* and 7 = *strongly agree*), adopted from Steg and Groot (2010) and Landon et al. (2018). Personal norms were measured using five items from the work of Landon et al. (2018), with items presented on a 7-point Likert scale (1 = *strongly disagree* and 7 = *strongly agree*).

Intentions to engage in eco-friendly travel behavior were measured using three dimensions across 14 items (adapted from Boley et al., 2011; Doran & Larsen, 2016; and Stern et al., 1999), adopted from Landon et al. (2018). Those three dimensions were willingness to sacrifice (five items measured on a 7-point Likert scale, where 1 = *strongly disagree* and 7 = *strongly agree*), localism (five items measured on a 7-point Likert scale, where 1 = *highly unlikely* and 7 = *highly likely*), and eco-behavior (four items measured on a 7-point Likert scale, where 1 = *highly unlikely* and 7 = *highly likely*). Finally, items measuring individuals' intention to engage in LCT (four items) were adapted from the *Intention to Visit* scale (See & Goh, 2019; Han et al., 2010).

Prior to participants responding to these items, they were presented with a definition of LCT as well as examples of LCT sites (e.g., visiting the Great Barrier Reef National Park in Australia to see the reef before it dies; visiting the Maldives in the Indian Ocean before rising sea levels submerge the island nation; visiting Glacier National Park in Montana to see the glaciers before they melt). Respondents were asked to indicate their agreement with items pertaining to their intention to engage in LCT. Items measuring LCT intentions were recorded on a 7-point Likert scale (1 = *strongly disagree* and 7 = *strongly agree*).

Data analysis

A two-step structural modeling approach was employed in undertaking analysis and, ultimately, examining each of the 12 hypotheses proposed in the model (Anderson & Gerbing, 1988). Initially, a measurement model (employing confirmatory factor analysis, or CFA) was formulated to confirm the factor structures for all seven constructs included in the proposed model, as well as examine psychometrics (i.e., reliability and validity estimates). Following this, a structural path model was developed to test each of the model hypotheses. CFA and structural equation modeling (or SEM) were undertaken using MPlus v.8.4.

To assess psychometrics for each factor within the model, composite reliabilities were assessed to ensure that the estimates exceeded the threshold of 0.70, along with average variance extracted (AVE) estimates greater than 0.50, per Hair et al. (2018) recommendations. Three forms of validity (i.e., convergent validity, discriminant validity, and nomological validity) were also assessed. Convergent validity is present when standardized factor loadings are in excess of 0.50, corresponding *t* values are significant, AVEs are greater than 0.50, and composite reliabilities are 0.70 or higher (Hair et al., 2018). Discriminant validity is established if the factor correlations are less than the square root of the AVEs (Hair et al., 2018). Finally, nomological validity was assessed through the testing of construct relationships within the model.

Model fit of the measurement model and structural path model was assessed through the examination of incremental model (i.e., Tucker-Lewis Index, or TLI and comparative fit index, or CFI) and absolute model (i.e., root mean square error of approximation or RMSEA and standardized root mean square residual or SRMR) fit indices. Fit is deemed 'good' if TLI and CFI are $\geq$ 0.90 and RMSEA and SRMR are $\leq$ 0.07 (Hu & Bentler, 1999).

Results

Participant profile

Roughly six out of 10 participants indicated they were females (Table 1). The sample ($M = 40$ years of age) was split relatively equally between those under 40 years of age (53.4%) and those 40 years of age or older (46.6%). A preponderance of participants was either married (65.9%) or single (28.6%). In terms of highest level of education, nearly three out of four (72.4%) participants had at least an undergraduate degree. Most individuals indicated they were Caucasian (81.5%), followed by African American (8.9%) and Asian (8.1%). Further, only 6.2% claimed to be Hispanic (of any race). The median annual household income was between US$75,000 and US$99,999. All participants had traveled within the U.S. in the last 12 months (given that was part of the criteria for sample selection), with 57.3% claiming to have traveled abroad during the same time period.

Measurement model

Prior to undertaking the CFA, common method variance (CMV) was assessed using the Harman's single-factor test since data for all constructs were collected using a single instrument (Podsakoff et al., 2003). In doing so, all items were subjected to a single exploratory factor analysis and the results indicated that one-factor model explained 31% of the variance. The results of the 11-factor model demonstrated that 72% of the variance was explained by the underlying 11 factors. Therefore, common method bias was not a pervasive issue in this study. In addition, as presented in Table 2, we assessed the normality of the data by analyzing the values of both skewness and kurtosis that are known to influence the analysis of variances and covariances underlying SEM. A rescaled value higher than 2 for skewness and higher than 7 for kurtosis indicate a departure from normality (Curran et al., 1996; Ribeiro et al., 2018). Results provided by

Table 1. Participant profile.

Socio-demographic variable	*n*	%
Gender ($n = 406$)		
Female	247	60.8
Male	155	38.2
Prefer not to answer	4	1.0
Age ($n = 401$; $M = 40.33$)		
18-29	60	15.0
30-39	154	38.4
40-49	109	27.2
50-59	51	12.7
$\geq$ 60	27	6.7
Marital status ($n = 405$)		
Single	116	28.6
Married	267	65.9
Divorced/Separated	20	4.9
Widowed	2	0.5
Education level ($n = 405$; *Median* = Bachelor's degree)		
Less than high school	1	0.2
High school graduate	13	3.2
Some college	55	13.6
Technical/vocational/junior college graduate	43	10.6
Bachelor's degree	210	51.9
Graduate degree	83	20.5
Race ($n = 406$)		
American Indian/Alaska Native	4	1.0
Asian	33	8.1
Black or African American	36	8.9
Native Hawaiian or Pacific Islander	2	0.5
White or Caucasian	331	81.5
Hispanic ($n = 406$)		
Not Hispanic	381	93.8
Hispanic	25	6.2
Annual household income ($n = 406$; Median = US$75,000-99,999)		
US$50,000-74,999	178	43.8
US$75,000-99,999	119	29.3
US$100,000-199,999	101	24.9
US$200,000 or more	8	2.0
Travelled within the U.S. in the last 12 months ($n = 405$)		
No	0	0.0
Yes	405	100.0
Travelled outside of the U.S. in the last 12 months ($n = 405$)		
No	173	42.7
Yes	232	57.3

Mplus output indicated that no items presented a skewness and kurtosis values greater 2 and 7 respectively, showing that the data used in this study are normally distributed and meet the condition underlying the maximum likelihood estimation of SEM.

Based on the established 11-factor model from extant findings, a two-step analysis involving CFA and SEM was undertaken in accord with Anderson and Gerbing (1988). The CFA served two unique purposes: 1) to establish a sound measurement model for subsequent SEM analysis and 2) to provide a factor structure whereby psychometric assessment could be made. As such, CFA was undertaken on the 406 responses, using MPlus v.8.4. The analysis (see Table 2) began by adding each of the 11 factors (and their corresponding items) one-by-one into the model to establish an 'ideal model,' reflecting all cross-loaders and error covariances.

So as to trim this 'ideal model,' problematic items were purged from the model if their standardized factor loadings fell below 0.50 (Hair et al., 2018) or if they loaded onto incorrect factors (Woosnam et al., 2018). Using such criteria, six items (from the initial 46 items included in the CFA) were removed: two items from the NEP (i.e., "we are approaching the limit of the number of people the earth can support" and "humans were meant to rule over the rest of nature"); one item from willingness to sacrifice (i.e., "separate recycling from waste"); and three

Table 2. Measurement model results.

Factor and corresponding items	*M*(SD)	Skewness	Kurtosis	β	*t-value*
Egoistic values[a]	**3.93(1.34)**	**-0.05**	**-0.62**		
Social power: Control over others, dominance	3.15(1.58)	0.53	−0.40	0.83	17.01***
Authority: The right to lead or command	4.06(1.71)	−0.20	−1.05	0.78	12.68***
Influence: Having an impact on people and events	4.56(1.52)	−0.49	−0.40	0.61	11.03***
Altruistic values[a]	**5.80(1.11)**	**-1.16**	**1.08**		
Equality: Equal opportunity for all	5.88(1.32)	−1.21	0.96	0.84	20.75***
Social justice: Correcting injustice, care for others	5.70(1.39)	−1.27	1.50	0.77	20.10***
A world at peace: A world free of war and conflict	5.82(1.19)	−1.11	1.20	0.73	14.97***
Biospheric values[a]	**5.58(1.16)**	**-0.96**	**0.68**		
Protecting the environment: Preserving nature	5.71(1.27)	−1.03	1.03	0.94	27.61***
Unity with nature: Fitting into nature	5.44(1.39)	−0.89	0.36	0.82	19.53***
A world of beauty: Beauty of nature and the arts	5.59(1.30)	−0.95	0.66	0.7	17.54***
Environmental worldview (New Ecological Paradigm)[b]	**5.41(1.15)**	**-1.03**	**0.57**		
When humans interfere with nature, it often produces disastrous results	5.52(1.37)	−0.97	0.47	0.78	11.82***
The balance of nature is very delicate and easily upset	5.47(1.39)	−0.81	−0.02	0.72	19.14***
Plants and animals have as much right to exist as humans	5.80(1.37)	−1.30	1.25	0.70	17.17***
The earth is like a spaceship with very limited room and resources	4.86(1.70)	−0.64	−0.46	0.62	15.27***
Awareness of consequences[c]	**5.21(1.19)**	**-0.83**	**0.25**		
Waste (trash, sewage, etc.) coming from tourists	5.45(1.36)	−0.90	0.39	0.92	23.70***
Carbon emissions from transportation (airplanes, cars, etc.)	5.37(1.40)	−1.10	1.02	0.91	22.92***
Destruction of native species' habitats	5.20(1.45)	−0.79	−0.02	0.9	24.99***
Pollution of local environments	5.20(1.45)	−0.91	0.47	0.88	15.30***
Water scarcity and overuse	4.73(1.58)	−0.45	−0.61	0.77	21.73***
Ascription of responsibility[b]	**5.54(1.07)**	**-1.11**	**1.60**		
Minimizing my impacts on the environment is in part my responsibility	5.75(1.15)	−1.24	2.33	0.88	16.32***
It is my responsibility to minimize my impacts on the environment as a tourist	5.75(1.11)	−1.27	2.28	0.83	15.63***
I feel jointly responsible for tourism impacts on the environment	5.12(1.44)	−0.83	0.2	0.70	13.44***
Personal norms[b]	**5.85(0.96)**	**-1.37**	**2.08**		
I am obligated to do my part to reduce my impact on the environment as a tourist	5.75(1.08)	−1.20	2.62	0.89	31.52***
People like me should do what they can to minimize their impact on the environment when travelling	5.85(1.09)	−1.25	2.42	0.87	29.86***
Minimizing my impact on the environment is the right thing to do	6.07(1.06)	−1.81	1.85	0.84	25.40***
As a tourist, I feel morally obligated to do whatever I can to minimize my environmental impact	5.55(1.22)	−1.08	1.39	0.83	24.95***
I would feel guilty if I were responsible for damage to the environment as a tourist	6.04(1.10)	−1.53	2.11	0.78	24.68***
Willingness to sacrifice[b]	**4.76(1.37)**	**-0.67**	**-0.11**		
I am willing to pay more to stay at environmentally-friendly accommodations	4.68(1.53)	−0.54	−0.31	0.92	30.08***
I am willing to use environmentally-friendly means of transport though this may be more expensive	4.68(1.53)			0.91	26.06***
I am willing to purchase environmentally-friendly tourism products though they may be more costly	4.82(1.54)	−0.74	−0.03	0.90	35.78***
I am willing to pay more for travel if it helps the environment	4.59(1.51)			0.88	26.59***
I am willing to use environmentally-friendly means of transport though this may take more time	5.02(1.50)	−0.73	0.01	0.77	20.15***
Localism[d]	**5.89(0.96)**	**-1.25**	**1.96**		
Purchase locally-produced crafts and goods	5.87(1.16)	−1.33	1.98	0.72	10.49***
Eat locally-sourced foods	5.92(1.06)	−1.16	1.94	0.71	10.49***

(*continued*)

Table 2. Continued.

Factor and corresponding items	*M*(SD)	Skewness	Kurtosis	β	*t-value*
Eco-behavior[d]	**5.50(1.13)**	**-0.90**	**0.40**		
Reuse bath linens during consecutive days stayed at accommodations	5.84(1.47)	−1.18	0.88	0.81	13.91***
Use reusable shopping bags	5.63(1.46)	−0.97	0.17	0.77	12.56***
Use eco-friendly tour operators	5.04(1.42)	−0.54	0.15	0.68	9.63***
Intentions to engage in LCT travel[d]	**3.75(1.60)**	**0.04**	**-0.93**		
I intend to travel for last chance tourism in the foreseeable future	3.95(1.66)	−0.14	−0.95	0.96	57.91***
I plan to visit a last chance tourism destination in the near future	3.86(1.70)	−0.04	−0.98	0.95	41.41***
There is a high likelihood that I will visit a last chance tourism destination within the foreseeable future	3.94(1.80)	−0.05	−1.09	0.94	51.49***
I will visit a last chance tourism destination within the next 12 months	3.26(1.68)	0.37	−0.71	0.82	28.82***

[a]Items measured on scale of 1-7 (1 = *not at all important*; 7 = *very important*).
[b]Items measured on scale of 1-7 (1 = *strongly disagree*; 7 = *strongly agree*).
[c]Items measured on scale of 1-7 (1 = *not at all a problem*; 7 = *a very serious problem*).
[d]Items measured on scale of 1-7 (1 = *very unlikely*; 7 = *very likely*).
Note: *M*(SD): mean (standard deviation); β: standardized factor loading; *t*: value of corresponding factor loading;.
***indicates significant at $p < 0.001$ level.

items from localism (i.e., "stay at locally owned accommodations," "hire local guide services/tour operators," and "purchase locally-made alcohol").

The final measurement model contained 40 items: egoistic values (three items); altruistic values (three items); biospheric values (three items); NEP (four items); awareness of consequences (five items); ascription of responsibility (three items); personal norms (five items); willingness to sacrifice (five items); localism (two items); eco-behavior (three items); and intentions to engage in LCT travel (four items). Only three of the 40 items had a β falling between 0.61 and 0.69. The model (Table 3) yielded a $\chi^2(df) = 1323.32(674)$, $\chi^2/df = 1.96$, with the following fit indices: comparative fit index (CFI) = 0.94; Tucker Lewis index (TLI) = 0.94; root mean square error of approximation (RMSEA) = 0.05; and standardized root mean square residual (SRMR) = 0.05. According to Browne and Cudeck (1993), a TLI and CFI of at least 0.90, indicates an acceptable incremental fit of the data. Also, an RMSEA and SRMR value below 0.07 is considered a good absolute fit of the data (Hu & Bentler, 1999).

Psychometrics

Ten of the 11 factors in the model indicated a good internal consistency according to their composite reliability estimates in excess of 0.70 (Hair et al., 2018). The only exception to this was localism, which revealed a composite reliability estimate of 0.68. Construct validity was assessed through examining convergent and discriminant validity estimates. Convergent validity was demonstrated by three criteria: 1) β for each item greater than 0.50; 2) average variance extracted (AVE) in excess of 0.50; and 3) significant *t*-values ($p < 0.001$) for each factor loading (Hair et al., 2018) (see Tables 2 and 4).

Discriminant validity was examined by comparing the square root of the AVE for any two factors with inter-factor correlations. In 54 of the 55 instances, the former exceeded the latter (see Table 4). The only exception to this was the correlation between localism and eco-behavior ($r = 0.72$) being equal to the square root of the AVE for localism (i.e., 0.72). Given that this occurred within the same construct and that the square root of the AVE for eco-behavior was higher than the correlation (i.e., 0.76), it was deemed to be a minor concern. Overall, discriminant validity for each of the 11 factors within the model was established (Fornell & Larcker, 1981).

Table 3. Fit indices of measurement and structural models.

Fit indices	χ^2	*df*	χ^2/df	*p*	TLI	CFI	RMSEA	SRMR
Measurement model	1323.32	676	1.963	0.000	0.94	0.94	0.049	0.052
Structural model	1724.49	792	2.177	0.000	0.92	0.92	0.054	0.070

Note: TLI: Tucker-Lewis index; CFI: Comparative fit index; RMSEA: Root mean square error of approximation; SRMR: standardised root mean square residual.

Table 4. Discriminant validity.

Factors	CR	AVE	1	2	3	4	5	6	7	8	9	10	11
1. Egoistic values	0.79	0.56	**0.75**										
2. Altruistic values	0.82	0.61	−0.04	**0.78**									
3. Biospheric values	0.85	0.66	−0.03	0.67	**0.81**								
4. Environmental worldview (NEP)	0.80	0.50	−0.04	0.56	0.66	**0.71**							
5. Awareness of consequences	0.89	0.61	0.02	0.41	0.45	0.63	**0.78**						
6. Ascription of responsibility	0.85	0.65	−0.02	0.57	0.71	0.68	0.51	**0.81**					
7. Personal norms	0.92	0.69	−0.10	0.54	0.68	0.66	0.47	0.64	**0.83**				
8. Willingness to sacrifice	0.94	0.77	0.02	0.49	0.62	0.56	0.45	0.65	0.59	**0.88**			
9. Localism	0.68	0.51	0.01	0.57	0.53	0.41	0.35	0.53	0.57	0.44	**0.72**		
10. Eco-behavior	0.80	0.57	0.09	0.53	0.66	0.52	0.40	0.67	0.65	0.70	0.72	**0.76**	
11. Intentions to engage in LCT travel	0.96	0.85	0.33	0.18	0.14	0.11	0.00	0.06	0.06	0.25	0.25	0.3	**0.92**

Note: CR: composite reliability; AVE: Average variance extracted; Bolded diagonal estimates are square root of AVE; off-diagonal estimates are factor correlations.
All correlations are significant at the $p < 0.001$ level.

Structural path model to examine hypothesized relationships

Following the establishment of the measurement model, each of the relationships between model constructs (see Figure 1) was examined through structural equation modeling (SEM) using MPlus v.8.4. The structural model yielded a $\chi^2(df) = 1724.49(792)$, $\chi^2/df = 2.18$, with the following fit indices: CFI = 0.92; TLI = 0.92; RMSEA = 0.05; and SRMR = 0.07 (Table 3). Of the 12 proposed relationships, only one (i.e., egoistic values → environmental worldview) was not significant ($p > 0.05$). While unique effect sizes of variance explained in each outcome variable can be surmised from Table 5, it is important to point out that personal norms explained a significant degree of variance in each of the eco-friendly travel behavioral intentions: willingness to sacrifice ($R^2 = 0.42$ or 42% of the variance); localism ($R^2 = 0.34$ or 34% of the variance); eco-behavior ($R^2 = 0.50$ or 50% of the variance). These three then in turn explained 36% of the variance ($R^2 = 0.36$) in individuals' intentions to engage in LCT travel.

Discussion and implications

Our study employed the VBN framework to assess the psychological drivers behind individuals' intention to engage in environmentally responsible behavior while traveling and, ultimately, their desire to participate in LCT. Studies concerning visitors' intentions to take LCT trips to fragile environments to observe individual species or one-of-a-kind cultural heritage attractions are of increasing interests among tourism scholars (i.e., Ballantyne et al., 2009; Groulx et al., 2016; 2019; Dawson et al., 2010; Fisher & Stewart, 2017; Lemelin et al., 2010) due to the paradoxical nature of LCT and the need to better understand LCT travelers and why they are attracted to these vulnerable destinations. Our study was in line with such a call, aiming to understand potential visitors' intentions to engage in LCT trips through the lens of the VBN framework. Credence was given to the VBN framework for its ability to model self-perceptions of pro-environmental behavioral intentions. Previous research has shown LCT to have a high carbon footprint (e.g., Dawson et al., 2010; Eijgelaar et al., 2010), yet this study was interested in the paradoxical

Table 5. Results of structural model (standardized).

Relationship	β		*t* Results
H_{1a}: Egoistic values → Environmental worldview (NEP)	−0.02 ^{ns}	−0.67	Not supported
H_{1b}: Altruistic values →Environmental worldview (NEP)	0.17**	3.21	Supported
H_{1c}: Biospheric values → Environmental worldview (NEP)	0.56***	8.79	Supported
H_2: Environmental worldview (NEP) → Awareness of consequences	0.64***	11.09	Supported
H_3: Awareness of consequences → Ascription of responsibility	0.56***	9.07	Supported
H_4: Ascription of responsibility → Personal norms	0.95***	20.09	Supported
H_{5a}: Personal norms → Willingness to sacrifice	0.66***	13.55	Supported
H_{5b}: Personal norms → Localism	0.72***	11.07	Supported
H_{5c}: Personal norms → Eco-behavior	0.59***	5.81	Supported
H_{6a}: Willingness to sacrifice → Intentions to engage in LCT travel	0.25***	3.66	Supported
H_{6b}: Localism → Intentions to engage in LCT travel	0.18***	2.02	Supported
H_{6c}: Eco-behavior → Intentions to engage in LCT travel	0.21**	2.11	Supported

Note: ns = not significant; $^{**}p < 0.01$; $^{***}p < 0.001$.
$R^2_{NEP} = 0.48$.
$R^2_{Awareness\ of\ consequences} = 0.46$.
$R^2_{Ascription\ of\ responsibility} = 0.31$.
$R^2_{Personal\ norms} = 0.93$.
$R^2_{Willingness\ to\ sacrifice} = 0.42$.
$R^2_{Localism} = 0.34$.
$R^2_{Eco\text{-}behavior} = 0.50$.
$R^2_{Intention\ to\ engage\ in\ LCT\ travel} = 0.36$.

intentions of potential LCT tourists and how their values, beliefs, and norms would influence intentions to engage in pro-environmental behaviors and interest in undertaking an LCT trip.

Our proposed model comprised twelve hypotheses, eleven of which were supported. However, the effect of egoistic values on environmental worldview was not found to be significant. This finding is consistent with previous studies, which have been unable to establish a significant negative relationship between egoistic values and environmental worldview (i.e., Landon et al., 2018; Stern & Dietz, 1994). Conversely, we found support for the effects of altruistic values and biospheric values on the new environmental paradigm belief as hypothesized. The sequential effect of new environmental paradigm on awareness of consequences, ascriptions of responsibility and personal norms were also significant. The effects of personal norms on willingness to sacrifice, localism and eco-behavior were also found to be significant as found in previous studies (i.e., Han, 2015; Han et al., 2017; Landon et al., 2018), demonstrating the usefulness of the VBN model dimensions as determinants of tourists' intentions to engage in pro-environmental behavior. Finally, our study found that the three last dimensions of the VBN model (i.e., willingness to sacrifice, localism and eco-behavior) significantly predicted tourists' intentions to engage in LCT. Taken together, these findings further validated our theoretical account by demonstrating how the numerous psychological antecedents within the VBN model serve as significant antecedents of individuals' engaging in LCT. These findings also confirm the paradoxical nature of LCT where travelers with pro-environmental values and beliefs are inclined to engage in LCT despite their greenhouse gas footprints resulting in important theoretical and practical implications for academics and practitioners alike.

Theoretical and practical implications

Theoretically speaking, findings from this study further confirm the benefits of using the VBN theory in modeling the psychological antecedents contributing to individuals' intentions to engage in travel. . As with previous studies such as Landon et al. (2018), significant relationships were demonstrated from values to norms and, ultimately, to the outcome variables of willingness to sacrifice, localism, and eco-behavior. While many previous studies in the literature have depicted LCT as unsustainable due to its GHG intensity and pressure on already vulnerable resources (Dawson et al., 2011; Lemieux & Eagles, 2012), the results of the study suggest that

LCT travelers share similar values and possess intentions to behave much in the same way as other sustainable tourism market segments, such as ecotourists and geotourists (Boley & Nickerson, 2013). This paradoxical finding can be taken as either good or bad news by academics studying sustainable tourism.

The good news is that those who are likely to engage in LCT have strong pro-environmental values which can be exploited to increase sustainable travel behavior in such a way that travelers' positive environmental, economic, and socio-cultural impacts can be maximized. On the other hand, these findings could be further evidence that a large attitude-behavior gap exists, whereby LCT travelers have strong environmental values and personal environmental norms (Higham et al., 2016; Juvan & Dolnicar, 2014), yet these are not activated in a way that elicits the question of whether it is more sustainable to forego traveling. This type of 'psychological tension' between tourists with pro-environmental beliefs and unsustainable travel behavior is explored by Juvan et al. (2016), who identify three tourist segments who justify their unsustainable travel behavior by blaming the government (i.e., government blamers), neglecting the negative impacts of their vacation (i.e., impact neglecters) or those wrestling with potential negative impacts of their trip while not having the control to reduce their negative impacts (i.e., struggle seekers). It is unclear if LCT travelers are making the connection between their LCT trips and the feedback loop between their GHG intense travel and climate change undermining the very destination they are visiting. As such, these individuals may be well-intentioned tourists seeking to bring positive economic, environmental, and socio-cultural impacts to these LCT destinations. They could also be "impact neglecters" trying to separate themselves from the harm they cause.

These paradoxical findings highlight how little is known about the mindset and behavior of those who engage in LCT. It would be of specific interest to look at the symbolic and social aspects of traveling to LCT destinations. Perhaps, the social stigma of traveling to LCT destinations is not present and the anticipated 'social return' of traveling to these LCT destinations from sharing these experience on social media compensates for the 'psychological tension' of these tourists damaging the very resource they are visiting (Boley et al., 2018). Unfortunately, the VBN model only accounts for personal norms. Social norms and its various manifestations in the constructs of self-concept and social return may aid in the understanding of the 'attitude-behavior' gap associated with LCT.

For those within the tourism industry, LCT presents a dilemma that has been plaguing the tourism industry for many years: how do you promote tourism to your destination in a way that brings real benefits across the triple bottom line (economic, environmental, and sociocultural sustainability), without creating a tourism disaster (Tourtellot, 1999)? However, this dilemma is more pronounced with LCT destinations since their attractive natural and cultural resources are the very resources under seige from both climatic factors as well as from visitation.

For managers within LCT destinations faced with this dilemma, the findings of this study speak to the importance of sustainably managing operations in such a way that reduces environmental impacts and has the potential to economically empower local residents. Those interested in LCT may be agnostic to the climatic impacts of their travel, but they suggest they are willing to sacrifice money and comfort to make their travel more sustainable. Service providers within LCT destinations can use these findings to support efforts at making their operations more sustainable with the comfort of knowing that there is a market willing to support their efforts and the increased costs associated with reducing their carbon footprint.

While it seems that LCT travelers are choosing these destinations because of the potential fear of missing out on seeing some type of vulnerable natural phenomena, as already mentioned, the LCT traveler does not see his or her trips to these vulnerable destinations as problematic. Previous research shows that operators act in a similar manner by not emphasizing the negative impacts of LCT. As one of Olsen et al. (2012) respondents mentioned, "I think people should visit this beautiful area to participate in its preservation, not attend its funeral" (p. 15). It is likely that these operators do not want to deal with the same 'psychological tension' of

thinking their livelihoods are in jeopardy and that they are somehow exacerbating the problem. With this agnostic approach to the negative impacts of LCT in mind, perhaps a primary area of focus should be on harnessing this powerful market segment to bring real economic, environmental, and socio-cultural benefits to these vulnerable destinations. These benefits could be leveraged to provide strong political support for in-country policies to protect the resource in danger and/or reduce the GHG footprint of the host country. Another option would be to tackle the apparent hypocrisy of LCT and their 'psychological tension' by emphasizing the amount of GHG associated with LCT trips and encouraging LCT travelers to either offset the emissions from their trips or live a more environmentally friendly lifestyle back home. There has been research showing that tourists are much more environmentally friendly in their daily lives than while traveling, and that focusing more on one's daily lifestyle may be more effective than trying to change their behavior within the destination (Dolnicar & Leisch, 2008).

Destination managers could also demarket their destination and employ anti-tourism policy measures to reduce tourism. However, this seems far-fetched because convincing individuals to forego a LCT trip may be extremely difficult to accomplish, and those whose livelihoods depend on the LCT industry will not be in favor of jeopardizing their livelihoods as the quote from Olsen et al. (2012) indicates. Having destinations and operators take the initiative on leading the effort to reduce or offset carbon emissions is more feasible and would likely reduce the guilt of LCT vacation and help relieve this tension because as Juvan et al. (2016) recognize, many tourists justify their trips by either blaming the government for not doing enough, not perceiving they have the control to make a difference or being ignorant of their impacts. Based on the previous research showing how hard it is to get tourists to behave in an environmentally friendly manner, there may not be another solution other than the industry stepping up and taking the lead. Actionable suggestions could include the destination focusing on being carbon neutral (Gössling, 2009), individual operators seeking to update infrastructure and facilities to be more efficient, and/or allocating a percent of lodging tax or sales towards carbon offsetting. The newly introduced (from October 2019) International Visitor Conservation and Tourism Levy in New Zealand is one example of a destination taking the lead in tourism management. The $35 charge to international tourists will be invested in sustainable tourism and conservation projects helping to create productive, sustainable and inclusive tourism growth that protects and supports its environment (New Zealand Government, 2020). The findings of the paper suggest that these types of industry-lead initiatives would be favorably received by LCT travelers because they have strong pro-environmental values that lead to pro-environmental behavioral intentions of willingness to sacrifice, localism and eco-behavior. However, paradoxically, the one thing they are not willing to sacrifice is the trip itself.

Limitations and future research

This study is not without limitations. As it was our intent to sample individuals throughout the entire United States, we felt it most appropriate to utilize a national panel. That said, we acknowledge shortcomings in this approach. For instance, individuals must have a pre-existing profile with Amazon MTurk in order to participate in a study such as ours. The self-selection process of joining Amazon MTurk (as well as other marketing companies such as Qualtrics or Surveymonkey) and participating in online surveys raises concerns about the representativeness of the sample. Participating in online surveys requires access to an internet-enabled device. Therefore, individuals who are older or with lower incomes or those living in more remote parts of the country may not be adequately represented in this survey (Smith et al., 2016).

The quality of the data collected could be biased, as well. The respondents are monetarily compensated for their participation, which has led to concerns about the existence of professional survey takers who may be falsely presenting themselves to qualify for more surveys

(Chambers & Nimon, 2018). To address this, future research could incorporate multiple forms of data collection currently. This could take the form of using internet-based and on-site questionnaires where individuals are contacted directly by researchers, along with panel-based data collection methods to capture a more representative sample of individuals to determine intentions to engage in LCT tourism.

While results demonstrate the psychological drivers behind individuals' intention to engage in environmentally responsible behavior while traveling and, ultimately, their desire to participate in LCT, the variance explained ($R^2 = 0.36$) in intentions to engage in LCT has the potential for improvement. Recognizing the limited variables included within this study, future research could expand upon this study by including nature relatedness and place identity, each of which have been previously correlated with motivations for engaging in LCT (Groulx et al., 2016). Another limitation of this research is that while it has identified that LCT travelers share similar values and behave much in the same way as other sustainable tourism market segments, such as ecotourists and geotourists (Boley & Nickerson, 2013), demographics were not included in the analysis. Future research could build upon this study's baseline, by including moderating variables such as level of income, gender and ethnicity, to deepen current understandings.

Similar to other work employing the VBN model within a tourism context (Han, 2015; Kiatkawsin & Han, 2017; Landon et al., 2018), our work does not explain individuals' actual behavior of engaging in LCT. Given the cross-sectional nature of our work, it was not possible to ascertain behavioral intentions and behavior concurrently. Future work will need to bridge that gap using sequential data collection methods. Though some work has demonstrated some significant relationships between behavioral intentions and actual behavior (Oreg & Katz-Gerro, 2006; Nigbur et al., 2010; Whitley et al., 2018), others have suggested that explaining behaviors from behavioral intent is not always possible (Sheeran & Webb, 2016). As such, researchers should be aware of the potential for encountering the latter. Though to help allay any potential concerns, self-efficacy may be considered in tandem with these behavioral intentions to further explain behavior (Sheeran et al., 2014). The perceived ability of an individual to engage in LCT will most certainly help to explain whether they follow through with traveling. In any event, research undertaken that seeks to connect individuals' behavioral intentions to engage in LCT with actual behavior will a further step forward in advancing research on this developing area of tourism. There also exists potential to examine how engaging in LCT influences norms related to conservation and environmentally responsible behavior, potentially implying a more complex analysis of the environmental costs and benefits associated with LCT.

Results provide further evidence that a large attitude-behavior gap exists (Hindley & Font, 2018). Future research is needed to determine why LCT travelers' strong environmental values and personal environmental norms (Higham et al., 2016; Juvan & Dolnicar, 2014) are not activated in a way that elicits the question of whether it is more sustainable to forego traveling. More specifically, additional research could investigate the fear of missing out as a potential motivator for individuals' engagement in LCT travel. Kahneman and Tversky (1982) explains losses have more significance than gains as losing something is more dissatisfying than the satisfaction gained from acquiring that thing. In an LCT context, the sense of loss is the utility that visiting a last chance destination provides to the tourist. In the psychological literature, loss aversion is the term used to demonstrate that losses hurt more than gains (Kahneman & Tversky, 1982). A greater understanding of this aspect of LCT is important to consider as the implications of increased visitation in the short-term from increased demand can lead to exacerbated long-term impacts from increased visitation and associated impacts.

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