EXPLORING INDIVIDUAL'S INTENTIONS TO ENGAGE IN LAST CHANCE TOURISM:

AN APPLICATION OF THE VALUE-BELIEF-NORM MODEL

by

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(Under the Direction of Kyle Maurice Woosnam)

ABSTRACT

Last chance tourism (LCT) is a rising phenomenon in the travel and tourism industry. LCT arises from tourists' explicitly seeking to visit and experience aspects of a destination before change or loss occurs, typically concerning vulnerable ecosystems and species. Understanding the mechanisms behind individuals' pro-sustainable travel behavior is vital to minimize negative impacts to the environment and to communities that support and depend on the industry. In this study, we sought to determine the psychological determinants of pro-environmental behaviors in potential visitors of LCT destinations using the value-belief-norm model. Data was sourced from a national panel survey (N=657) distributed through Amazon's Mechanical Turk. The hypothesized model was tested using structural equation modeling techniques. Results indicate that personal norms account for a significant amount of variance in tourists' intention to engage in environmentally-sustainable travel behavior. Three dimensions of pro-environmental behavioral intent were found to influence individuals' intention to engage in LCT.

INDEX WORDS: last chance tourism, value-belief-norm model, pro-environmental behavior, intentions, personal norms, national panel survey, structural equation modeling

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INTENTIONS USING THE VALUE-BELIEF-NORM MODEL

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DEDICATION

In loving memory of my grandfather. May this thesis be a testament to your hard work

and perseverance that will live on through your grandchildren.

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CHAPTER 1

INTRODUCTION

Rising temperatures, melting glaciers, coral bleaching, and vanishing flora and fauna are just a few emergent threats to human and natural systems (IPCC, 2018). As a result, tourists are scrambling to see some of the earth's most iconic destinations before it is "too late" (Fisher & Stewart, 2017). The most widely used and accepted term for this travel phenomenon is Last Chance Tourism (LCT) (Dawson, Stewart, Lemelin, & Scott, 2010; Lemelin, Dawson, & Stewart, 2013; Lemelin, Dawson, Stewart, Maher, & Lueck, 2010; Lemelin & Johnston, 2008). Other comparable names for LCT include catastrophe tourism, climate tourism, extinction tourism, climate change voyeurism, climate sightseeing, and doomsday tourism (Dawson et al., 2011). Fisher & Stewart (2017) describe LCT destinations as "location specific and include ecological, environmental, political, and social factors" (p. 514). Examples include witnessing lowland gorillas in the wild before they become extinct or hiking Mt. Kilimanjaro to see the vanishing ice-capped peak (Dawson, Stewart, Lemelin, & Scott, 2010). Whether a changing landscape or a vanishing keystone species, last chance tourism is burgeoning as a unique, special interest form of tourism.

We can attribute LCT's rise in popularity, in part, to the powerful influence of popular and social media. Media outlets use a variety of tactics to facilitate mass interest and consumption. Media outlets target places with popular mega-fauna and fragile environments, such as polar bears and the Arctic, and label them as "too far gone," "extinct," or "dying" (Griffin, 2016). The majority of media outlets do not explicitly suggest individuals travel to

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vanishing destinations; nevertheless, such labeling can stir in individuals a desire to catch a glimpse of what is soon to vanish (Lemelin et al., 2010). Countless publications and guides exist to direct attention to places a tourist should consider visiting before it is "too late." Examples include: 500 Places to See Before They Disappear Travel Guide (Hughes, 2011, p. 199); 15 destinations to cross off your bucket list before they disappear forever (Insider Travel, 2018); the popular book, radio series, and BBC documentary Last Chance to See (Adams & Carwardine, 1990); and TIME magazine's 10 Amazing Places to See Before They Vanish (Gibson, 2014). The uptick in visitation is occurring in places like the Great Barrier Reef in Australia, which many believe is due to the inundation of misleading media reports that describe the site as being critically threatened, even though UNESCO's World Heritage Committee has not placed the reef on its critically endangered list (2018). LCT has increased in popularity after reports like the one issued in 2007 from the Intergovernmental Panel on Climate Change and media coverage focusing on the impending demise of popular travel destinations (Eagle, 2018; Gomez-Martin, 2016).

Last chance tourism is often referred to as a controversial travel trend due to the many concerns surrounding the niche travel market. It is important to acknowledge the paradox presented by LCT. The tourism sector is undeniably responsible for the production of a disproportionate amount of greenhouse gas emissions along with other negative impacts (Dawson et al., 2011; Lemieux & Eagles, 2012). Critics of LCT argue that promoting tourism to a destination impacted by climate change is unethical considering the carbon emissions that are produced by traveling (Dawson et al., 2011) The literature has not established if individuals participating in LCT consider their own travel and activities as contributing to environmental degradation or if tourists justify their impacts or simply do not recognize themselves as a part of

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the problem (Piggott-McKellar & McNamara, 2016). Critics of LCT argue that a sudden influx of tourism to an already ecologically-fragile region could result in the expected irreversible collapse to occur even faster than initially thought. Publicizing, fundraising, and drawing public attention to the vulnerability of flora and fauna has traditionally been viewed as not only positive, but also a necessary effort to preserve and protect. Recent research challenges this widely-believed notion with findings that suggest the opposite effect for endangered destinations. What some argue leads to a 'call to action' (Garbutt, 2007; Burns & Bibbins, 2009; Dawson et al., 2010), others suggest they are contributing to exploitation and a faster path to extinction. Critics argue that media attention manipulates the perception of a rarity or scarcity in nature in such a way that the value of viewing the rarity increases. In turn, the pressure on the rarity also increases as more resources then become necessary to obtain or visit it (Courchamp et al., 2006). Hall et al. (2008) suggest that the disproportionate value consumers place on endangered species results in a cycle in which exploitation leads to the further decline in population size, which will ultimately lead to its extinction in the wild as it becomes rarer and more desired.

The research mentioned above (e.g., Hall et al., 2008) presents a compelling argument about the pressure and demand placed on LCT destinations and, consequently, their management. However, by focusing only on the tangible consequences of increased tourism, researchers overlook the broader problem of how to get the public to acknowledge their role in anthropogenic-induced climate change and increasing environmentally-responsible behaviors (Lemelin et al., 2012). Efforts to mitigate climate change will not be successful without public understanding and support. Tourism is also the primary source of economic support for many LCT destinations, therefore suggesting that tourism needs to be limited or discouraged is unrealistic and will likely be met with pushback. Consequently, LCT research must focus on

ways to understand and increase environmental stewardship. As research focused on LCT is still in its infancy, the extant literature is limited. As such, little is known about the psychosocial underpinnings of tourists' intentions to visit LCT destinations and engage in environmentally-responsible behaviors.

Fisher and Stewart (2017) postulate that an understanding of time is linked to tourists' perception of loss and is, therefore, a critical component in analyzing tourist motivation to visit LCT destinations. The authors argue that potential LCT tourists have to understand the possible consequences of loss, which includes regret. Fisher and Stewart (2017) assert that a sense of loss and the possibility of regret is a critical motivation underlying LCT. While Fisher and Stewart have addressed motivations for LCT, research addressing the behavioral intentions of tourists remains unexplored. There is still very little understanding and research on the socio-psychological aspects of LCT. Research on the subject is scarce and primarily focuses on the motivation of tourists to visit specific destinations.

Further, much work is centered on case study research, focusing on one specific destination. We need to understand better what drives individuals' desire to travel to LCT destinations. Current understanding is lacking a sense of how numerous measures such as values, environmental worldview, responsibility, perceived consequences, and norms can explain individuals' intent to engage in environmentally-responsible behavior and ultimately how that translates into willingness or desire to engage in LCT travel. A comprehensive model would provide a more holistic perspective of LCT and individuals' intentions to travel in pursuit of the niche form of tourism. The value-belief-norm theory, as developed by Stern, Dietz, Abel, Guagnano, and Kalof (1999), would undoubtedly help in this endeavor.

Problem Statement

Just as climate change threatens ecosystems today, the progression of capitalism has

ushered in a vastly changing natural landscape. In response to this, travelers have begun to seek

opportunities to view landscapes before they are forever altered or non-existent from

encroaching civilizations (Hvenegaard, 2012). Although not all travelers are 'sympathetic' to the

cultural and environmental plights of the world, many individuals desire the opportunity to be

among the last to witness and experience vanishing landscapes given their inherent value. In

other words, LCT travelers believe it is essential to document and record the disappearance of a

landscape that future generations will not be able to witness. Arguably, 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 (Smith, 2011). The value in LCT resides in its ability

to show tourists the tragedy of losing a particular place and inspire hope that it is not too late

(Lemelin et al., 2012, p. 198). While increased visitation rates result in increased levels of

disruption to local flora and fauna, they also present protected areas managers with opportunities

to develop educational programs that promote potential ecosystem consciousness and

stewardship among tourists. A recent study assessing visitation to parks within the U.S. National

Park Service and Canadian National Park Agency found that citizens who visited a national park

had a greater sense of stewardship towards the park and were subsequently more supportive of

using tax dollars to help maintain the park system (Shulitis & More, 2011). This study supports

the rationale that high visitation rates could have a positive benefit for LCT destinations.

However, the adaptive capacity of nature-based recreation areas, along with the ethical

considerations of marketing LCT, needs further investigation before being fully implemented.

Experts must also weigh the beneficial aspect of increased revenue from tourism spikes associated with LCT with their decisions regarding the conservation of the area. Balmford et al. (2015) demonstrate the economic significance of terrestrial protected areas (PAs) by creating a model from visitation rates; they estimate that $600 billion is generated directly from tourism expenditure across the globe. Lemieux & Eagles (2012) argue that user fees associated with LCT could be used to increase conservation funding and education efforts. As Coghlan (2012) points out, there has been an unprecedented allocation of funds directed toward the Great Barrier Reef, which could be related to the perceived vulnerability of the site. Increased education and outreach endeavors funded by increased revenue that some of these destinations would otherwise never have access to, could encourage visitors to become ambassadors (Ballantyne, Packer, & Sutherland, 2011, p. 775).

Another example is the highly publicized travelogue, radio show, and television series by Mark Carwardine and Stephen Fry (1990). Fry (2009) revisited the critically endangered species initially showcased in the '90s radio show and points out that many of the species documented have been downgraded from their critically endangered status by the IUCN. Fry maintains, "This example of showcasing and preserving vulnerable species reminds us of the importance of generating a call to action and the potential positive power of witnessing and experiencing vulnerable species and landscapes." (2009, p. 10).

As previously mentioned, LCT research is severely lacking in theoretical underpinnings. Examples of LCT in literature and academia typically have focused on perception and motivation and is limited to one particular region or species such as polar bears (Lemelin & Wiersma, 2007) or glacier viewing in Canada (Groulx, Lemieux, Dawson, Stewart, & Yudina, 2016). Currently, no work has been done to consider the psychological antecedents of tourist

intentions to visit LCT destinations. It is critical to recognize the psycho-sociological dimensions of LCT, and as such, more research needs to be done to increase our understanding. Exploring tourist intentions for visiting such destinations has lasting implications for managing such unique locations but also immediate implications for the development of marketing (or de-marketing) strategies regarding these destinations. As noted by Lamers et al. (2012), environmental ambassadorship demands further exploration as it is poorly understood, and further research is required to assess whether or not last chance tourists move towards a call to action. The goal of this current work is to fill the gap in the literature by examining the psycho-sociological antecedents of tourists' intentions to visit LCT destinations and determine what factors contribute most saliently to such intentions.

<p style="text-align:center">Purpose Statement</p>

The purpose of this study is to understand better what drives potential tourists' desires to engage in environmentally-responsible behavior, and, ultimately, their willingness or desire to travel to LCT destinations. In doing so, Stern's value-belief-norm (VBN) model (Stern et al., 1999; Stern, 2000) will be utilized as a framework for understanding individuals' behavioral intentions to engage in LCT. Despite the increasing occurrence of the phenomenon over the last decade, last chance tourism research is still in its infancy. Although a plethora of studies have been conducted to investigate social-psychological antecedents of behavioral intent within tourism and conservation literature, there are currently no studies undertaking a similar investigation in the context of LCT. This study will add to the growing body of LCT research in the hopes of moving beyond the current work, focusing mainly on motivations for travel to engage in this niche form of tourism.

A greater understanding of tourists' intention to engage in environmentally-responsible behavior and desire to travel to LCT destinations will likely have a robust impact on the field of travel and tourism. As such, the practical implications of this study will lead to increased understanding and guidance for local communities surrounding LCT destinations, park and land managers, tour operators, and other stakeholders. LCT offers stakeholders a unique opportunity to educate and potentially positively influence the behavior of tourists. Exploring cognitive measures contributing to behavioral intentions to engage in LCT will highlight the importance of maintaining ecosystem integrity while keeping the social and economic endeavors of the tourism industry prosperous. Additionally, this study could help stakeholders understand the educational opportunities within LCT. Considering a national panel of U.S. residents who have recently traveled, and following the VBN model, this study poses the following research questions:

<div align="center">Research Questions</div>

1) Do individuals' egoistic, altruistic, and biospheric values explain their environmental worldview?

2) Do individuals' environmental worldview contribute to their awareness of consequences?

3) Do individuals' awareness of consequences explain their ascription of responsibility?

4) Do individuals' ascription of responsibility contribute to their activation of personal norms?

5) Do individuals' personal norms explain an intent to engage in environmentally-responsible behavior (i.e., willingness to sacrifice, localism, and eco-behavior)?

6) Do individuals' intent to engage in environmentally-responsible behavior (i.e., willingness to sacrifice, localism, and eco-behavior) contribute to their desire to engage in LCT?

CHAPTER 2

LITERATURE REVIEW

This section will review the extant literature on last chance tourism and the value-belief-norm (VBN) theory. The chapter begins with a discussion of last chance tourism in the context of this study, followed by a comprehensive review of all relevant LCT research, and the limitations and gaps of these studies. A review of the VBN literature will begin with a discussion of its creation and move into the research undertaken within the environmental conservation and tourism fields. Hypotheses are presented at the end of this section, followed by the proposed conceptual VBN model displaying the hypothesized relationships between model constructs.

Last Chance Tourism

Dawson et al. (2011) discuss the role of perceived "rarity, pristineness, and elusiveness" as the driving force behind LCT. Fisher and Stewart (2017) broadly define last chance tourism as "Tourism motivated by the belief that the things of interest (places, people, or objects) may either cease to exist, or may not be possible to visit, in the future, prompting a sense of loss" (p. 514). While this definition captures the time pressures and impending loss that the literature often describes, such a focus speaks to a narrowed definition of LCT. Lemelin et al. (2010) describe LCT in an eco-tourism context, by claiming it involves, "tourists explicitly seeking vanishing landscapes, and disappearing natural and/or social heritage" (p.478). Ballantyne, Packer, and Axelson (2009) describe further context for the definition of LCT within ecotourism by stating that the niche form of tourism includes "tourists observing, photographing, and interacting with environments or individual species that may be endangered, threatened, or rare"

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(p. 151). For this study, the definition provided by Lemelin et al. (2010) is the frame of reference for LCT used within this research.

One of the first locations that began to see an increase in tourism attributed to LCT is the polar regions, which are arguably the most vulnerable to climate change. Average temperatures are climbing at twice the rate of temperate and tropical regions, and this trend is expected to continue through 2050 (IPCC, 2018). The substantial loss of sea ice thickness, which is critical for the survival of Arctic wildlife, particularly polar bears, is attributed to climate change (AMAP, 2017). Dawson et al. (2010) attempted to determine the carbon emissions associated with polar bear viewing and tourist perception of climate change in Churchill, Canada. The authors considered a study area only accessible by train, ship, or air known for its polar viewing opportunities within the Wapusk National Park. Dawson et al. (2010) estimated the carbon footprint of each polar bear-viewing tourist to be between 1.54 to 8.61 tons of CO_2 per person, depending on travel distance, transportation method, accommodation, and length of stay. The average carbon footprint of a tourist traveling abroad is estimated to generate 0.25 tons of CO_2, according to UNWTO-UNEP-WMO (2008). Therefore, according to the results of this study, the average LCT trip to view polar bears in the Arctic could be one of the highest CO_2-generating travel experiences. Dawson et al.'s estimates of CO_2 are essential to consider the findings of the study. Survey work undertaken by the researchers indicated that a vast majority of the 334 tourists surveyed (88%) believed polar bears are in jeopardy due to anthropogenic-induced climate change. However, 30% of the respondents did not know or consider air transportation to be a significant contributor to climate change. A large percentage (70%) of visitors revealed that they would be willing to travel elsewhere if polar bear viewing in Churchill was not possible.

The authors conclude that a significant number of tourists are motivated to visit the park because of the vulnerability of polar bears to climate change (Dawson et al., 2010). Although Dawson et al. show evidence for the motivation to view polar bears in Churchill as an LCT activity, they did not establish the connection between LCT and tourist intention to visit the area. It is unclear if tourists truly intended to travel to the area specifically for polar bears and educational opportunities to learn more about the species and their threatened status.

In contrast to the findings by Dawson et al., a study was done by Stewart (2009) in the same area (though focusing on local stakeholders instead of tourists), unveiling a different perspective. Researchers surveyed educators, park managers, and tour operators to assess their perception of Churchill as an LCT destination for polar bear viewing. The study revealed mixed results as some stakeholders indicated they believed polar bears would always exist in the area. Others agreed that polar bear populations are already noticeably declining, and reports on the population could result in increased tourism as more people want the chance to see them in the wild. However, the authors point out that many respondents were hesitant to label or attribute tourism in the area to LCT. The authors conclude that most Churchill stakeholders deny LCT and any association with polar bear viewing. Therefore, LCT marketing tactics would not be supported, as many referred to LCT as media hype and a misrepresentation of the area (Stewart, 2009).

Similarily, Ligett (2010) conducted a study investigating the perceptions of local stakeholders in Antarctica. Concerns about the development of Antarctica tourism began to rise in the 1990s as the construction of blue-ice runways, which ease the landing of aircraft, made travel to the area easier. National Antarctic Programs began implementing semi-permanent camps to increase profit from adventure-seeking tourists. Investigators surveyed Antarctic

stakeholders to determine local perspectives regarding tourism in the Arctic. The results of the study revealed that the rapid expansion of tourism practice is troubling to stakeholders, as individuals were most concerned with the implementation of permanent infrastructure for tourism purposes. The majority of stakeholders cited environmental consequences and the implementation of stricter regulatory practices for tourism operators as critically important (Liggett, 2010). Unlike Stewart's study in Canada, Liggett did not ask respondents specifically about LCT or similar phrasing. Liggett implies that LCT contributed to increased tourism in Antarctica.

Ahmed et al. (2014) were also interested in local stakeholders and tour operators' perceptions of LCT in Malaysia, where local biodiversity is declining at unprecedented rates. The authors focused on tour operators to examine their perceived importance of promoting local biodiversity as an LCT product to promote conservation. Ahmed et al. found a strong positive correlation between LCT attributes and perceived importance among the surveyed tour operators as a majority of the operators perceived last chance tourism as a favorable new market niche. This study highlights the possibility that local tour operators view LCT in a positive light and are willing to pursue educational opportunities for tourists. However, this study's scope is relatively small, with a sample derived from one region of Malaysia. Therefore, the results of this study are arguably limited in generalization. The perception of local stakeholders is an essential aspect of LCT to explore, but it is equally necessary to determine the perceptions of tourists, especially in regards to their intended behaviors. The results of this study are promising and justify the need for more research across a broader area.

A study by Vila et al. (2014) also surveyed tour operators in Antarctica to determine if ambassadorship for the environment can arise from LCT. The results of the study were much less

promising than Ahmad et al.'s. (2014) findings with their survey of tour operators. They found that tour operators hold little interest in environmental education or encouraging ambassadorship. The authors state that because of this reason, it is unclear whether tourists leave Antarctica with an increased ecological understanding of the continent. The researchers emphasize the need for tourists to understand the ecosystem degradation that arises from their activities and the fact that tour operators need to focus on this relationship as the services they offer also depend on the continued health of the ecosystem (Vila et al., 2014). The stark differences between tour operators in Antarctica and Malaysia confirm the need for investigating the cognitive relationships involved in pro-environmental behavior across a variety of landscapes. As such, differences in stakeholder perceptions resulting from contrasting cultural or social underpinnings cannot be ruled out. A study by Olsen, Koster, & Youroukos (2012) surveyed stakeholders across destinations labeled as LCT by popular media publications. The purpose of the study was to determine stakeholders' perceptions of LCT, as well as determining if any of the destinations were using their LCT status as a marketing strategy. Olsen et al. found that none of the stakeholders from any of the destinations were aware of or familiar with any association of LCT and their destination. The majority of the stakeholders responded with negative associations upon learning about the LCT designation. Only two of eleven stakeholders believed LCT might be a beneficial marketing strategy.

The studies highlight the reluctance exhibited by stakeholders towards the use of LCT as a marketing or educational strategy. This perspective is particularly highlighted by Olsen et al. (2012) with the following statement from one respondent in their study, "I think people should visit this beautiful area to participate in its preservation, not attend its funeral" (p. 15). Recent literature confirms the legitimacy of the LCT phenomenon throughout recent literature, but it is

unclear if stakeholders are prepared to make the necessary adaptations for the influx of tourism or if they are even aware of the associated pros and cons of LCT. One such solution is to understand the behavioral intention of tourists, which could confirm the potential for ambassadorship and educational programs at LCT destinations for local stakeholders.

A study by Lemieux et al. (2017) attempted to determine if LCT motivations can be linked to communication strategies to determine if specific climate change education and adaption efforts could work to balance the adverse side effects of LCT. There is little research with no clear consensus as to what dimensions should constitute a model to determine LCT motivation. As such, the authors created a model that included measures for nature relatedness and sense of place. Researchers surveyed visitors to the Athabasca Glacier in Jasper National Park, Canada. Their findings suggest that tourists were explicitly motivated to visit the glacier based on reasoning associated with LCT. The authors also believe their results support a link between LCT motivation to visit and a desire to learn about climate change impacts leading to the implication of this study to support using LCT to promote climate change education and outreach efforts. There is still a need to test a more generalizable model explaining LCT travel behavior to address management concerns as LCT expands to include a range of travel destinations (Lemieux et al., 2017).

Similar to the plight of the polar bears, many experts believe birds are facing extinction due to climate change. Estimates suggest bird extinctions are happening 100 times faster than would occur without anthropogenic impacts on the environment, and about 12 percent of all bird species are currently listed as endangered or threatened by these impacts (Pimm *et al.,* 2006; BirdLife International 2008; Lebbin *et al.* 2010). As a result, bird watching tourism is facing a

decline in its target resource. Some researchers argue that bird watching is now a market for LCT opportunities because of the threats to the tourism sector by climate change (Hvenegaard, 2012).

As mentioned in the introduction, the Great Barrier Reef (GBR), as well as all other tropical reef systems, are seeing an increase in visitation as climate change and warming ocean temperatures are threatening the long-term survival of the ecosystem (Great Barrier Reef Marine Park Authority, 2014). Researchers found that almost 70% of tourists visiting the GBR were motivated to do so because of LCT (i.e., "to see the reef before it is too late"). The authors also found a strong positive correlation between tourists identified as LCT and those with the deepest concern for the reef's health (Piggott-McKellar & McNamara, 2016). This finding further highlights the paradox of individuals with the highest interest in climate change are most likely to travel to LCT destinations, thus inadvertently contributing to the root of the problem.

The research discussed above conveys a great deal about some of the factors involved in last chance tourism, but can these site-specific studies be generalized to all LCT destinations? It is also important to point out that none of these studies have attempted to explain individuals' intentions to act in an environmentally-responsible manner and how that translates to a desire to travel to one of these LCT destinations. Experts often take for granted that sustainable tourists' intention to limit environmentally-negative consequences is a result of deep-seated personal values. However, few have investigated this assumption (Wynveen, Connally, & Kyle, 2013; Landon, Woosnam, & Boley, 2018). Much work is needed to develop a framework that translates to numerous LCT sites using a general sample of tourists, just as it is imperative to identify such individuals' degree of intentions to travel to places facing extinction from climate change.

The Value-Belief-Norm Theory

The value-belief-norm (VBN) theory proposed by Stern et al. (1999), and further utilized by Stern (2000) to explain the social-psychological antecedents that lead to the formation of pro-environmental behavior. Stern extended the work of Schwartz (1977) and his widely regarded Norm-Activation Theory. Schwartz developed his theory as a general model of altruistic behavior, which hypothesized that altruism is the result of moral obligations or 'personal norms' to act on behalf of a valued object (Schwartz, 1977). Stern believed that personal norms could be translated accurately to environmentalism. Pro-environmental action is ultimately a result of personal norms that are activated in people who possess an awareness of consequences (AC) and an ascription of responsibility (AR) towards the environment, which is summarized as 'those who believe that environmental conditions pose threats to other people, other species, or the biosphere and that actions they initiate could avert those consequences' (1999, p. 85).

According to the VBN, personal norms directly affect the three bases or values relevant to environmentalism: self-interest (Egoistic Values), altruism towards others (Altruistic Values), and altruism towards the biosphere (Biospheric Values) (Stern, 1977; Stern & Dietz, 1994). Stern incorporated The New Ecological Paradigm (NEP) into the VBN, which is a scale created by Dunlap et al. (2000) to measure a shifting worldview focused on environmentalism. The worldview described by Dunlap and his colleagues is the awareness of the potential adverse effects on the biosphere caused by humans. It is important to note that worldviews are different from values; the latter represents the beliefs about the way things should be, while the former speaks to reality and the beliefs relating to the way things are. The five variables detailed above (personal norms, AC, AR, NEP, and values) form a causal chain, where each variable directly affects the next (Stern, 1999), and ultimately explains intent to behave in a particular manner in

support of the environment. The decision to utilize the VBN model for this study is based on the framework's comprehensive model structure and the potential to explain individuals' intent to engage in environmentally responsible behavior and, ultimately, how that translates into a desire to engage in LCT travel.

<div align="center">Value-Belief-Norm Theory in Environmental Conservation</div>

A large body of work exists in environmental conservation literature that has used or adapted the VBN theory. A recent work by van Riper and Kyle (2014) yielded results that support the claims of Stern at al. (1999). The authors found personal moral norms to be strongly correlated to respondents' biospheric-altruistic values and personal responsibility for mitigating climate change. The study is essential when considering the constructs of the VBN. Van Riper and Kyle present substantial evidence for the inclusion of ascribed responsibility (AR) in the VBN model, as opposed to others that have excluded the construct in their VBN adaptations. Formara et al. (2014) also found the VBN theory to be a useful tool for explaining the adoption of renewable and energy-efficient behavior. AR was also included in the model as claims were made that show the indirect effect the construct has on personal moral norms. Both of these studies indicate that enhancing awareness of responsibility will result in moral obligation and pro-environmental behaviors.

Sarkis et al. (2016) also explored the VBN in conjunction with energy conservation behaviors. The authors tested the VBN against the Theory of Planned Behavior (TPB) to determine if one model offered a better fit than the other for understanding residential energy use. The VBN was found to be superior to the TPB for understanding a broader range of pro-environmental behaviors specifically for the greater public good. The authors attribute this to the VBN's causal chain of relationships as opposed to TPB, which is structured with attitudinal

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constructs that fail to encapsulate support for environmental action (Sarkis et al. 2016). The results of Sarkis et al. are in contrast to previous work undertaken by Kaiser et al. (2005). While Kaiser et al. acknowledged the superior structure of the VBN compared to TPB, they ultimately found TPB to be more accurate in explaining conservation behavior. It is also necessary to point out that the more recent study from Sarkis et al. (2016) was a practical application and test of both models' validity, while the Kaiser et al. (2005) study was a theoretical exploration of the predictability of each theory.

Support of the use of models emphasizing cognitive processes, like the VBN, is growing in the field of environmental conservation. Research surrounding behavioral models and conservation has typically centered on local environmental issues within a particular community. The VBN model was used by researchers in Taiwan to explain local pro-environmental behaviors. The results corroborated the causal sequence of VBN variables and their mediating effects on Taiwanese residents' pro-environmental behavior (Chen, 2015). Researchers assessed the participation of landowners in local biodiversity programs and found that they were more aware of consequences, ascribed more responsibility toward themselves, and expressed moral values of obligation toward biodiversity than landowners who did not participate (Johansson, Rahm, & Gyllin, 2013). A study by Berenguer, Corraliza, and Martin (2005) found a close link to personal norms and environmentally-friendly behaviors among rural and urban citizens. A recent study analyzing energy conservation among citizens found that personal norms were the most influential mediators of engagement in eco-friendly energy production (Yeboah & Kaplowitz, 2016). Wynween, Wynveen, and Sutton (2015) used the VBN theory to analyze the behavioral intentions of local stakeholders in marine protected areas (MPAs). The authors found a strong relationship between personal norms and behavioral intention, and they recommended

that MPA staff should work on strengthening the relationship between the two through public commitments towards a specific behavior. This study adds support to the usefulness of the VBN in MPAs, and it also shows how the results can be used to guide management decisions. However, more research is needed to explore the framework amidst a range of ecosystems.

Studies have also demonstrated the usefulness of the VBN among student populations. Most recently, researchers have used the VBN theory to explain the pro-environmental behaviors of college students in China (Liu, Zou, & Wu, 2018). Results showed a positive correlation between altruistic values and pro-environmental behaviors. A limitation pointed out by the authors was that the study only considered students' pro-sustainable behaviors around the local environment. Another study using a sample of Turkish high school students found similar relationships between personal norms and students' intentions related to local biodiversity (Bilir & Ozbas, 2017). Again, research needs to show the scope of pro-environmental behaviors in a wide range of contexts outside of respondents' local communities.

These studies show the importance of understanding the cognitive processes associated with intentions to engage in pro-environmental behaviors. Additionally, they also support the validity of the VBN model in the context of intentions to engage in pro-environmental behaviors. However, many of the studies only assess the intention of residents within their home country. Few studies evaluate the intention to behave pro-environmentally outside of local environments and in a global sustainability context. With this in mind, it is crucial to assess pro-environmental behaviors in the context of tourism, more specifically, LCT.

<center>The Value-Belief-Norm Theory in Tourism</center>

A growing body of work has been undertaken within the tourism literature that attempts to explain the behaviors of environmentally-friendly tourists. However, few studies have been

successful in explaining the cognitive processes that influence altruistic behaviors. Some work has begun to acknowledge this gap in theoretical underpinnings of environmentally-responsible behaviors. Recent studies have shown that altruistic values are the basis for adopting normative moral behavior and, thus, environmentally-friendly behavior. Models that emphasize moral normative behavior, like the VBN, are proven to be the most appropriate method of analysis of pro-environmental behavior among tourists (Landon, Kyle, & Kaiser, 2017; Landon et al., 2018; Raymond et al., 2011; Thorgensen, 1996; van Riper & Kyle, 2014). However, no studies have been undertaken using the VBN theory to explain individuals' intentions to engage in LCT.

Recent tourism literature demonstrates the relationship between moral obligations and tourists' environmentally-responsible behaviors. Doran and Larsen (2016) argue that personal norms show the most influential association in predicting tourists' willingness to choose eco-friendly travel options. Similarly, a study by Mehmetoglu (2010) found personal norms, described as a moral obligation, to be the most crucial component in determining willingness to engage in pro-environmental behavior while traveling. Another study had similar findings, showing personal norms to be the most critical factor in the cognitive process of tourists choosing to engage in environmentally-friendly behaviors in ecologically protected areas (Brown et al., 2010). Ong and Musa (2011) add further support for the role of personal norms in their study analyzing the responsible behaviors of scuba divers. They found personal norms to be of paramount importance in the cognitive process, explaining divers' behavior underwater. Dolnicar (2010) found that personal norms were the most significant predictors among tourists demonstrating environmentally-friendly behavior. The authors also point out that a barrier to tourists choosing such behavior is income and the infrastructure provided while traveling. At

home, people can adapt and create their infrastructure in ways that easily allow for environmentalism (Dolnicar, 2010).

Along with personal norms, several studies have identified tourists' ascription of responsibility and awareness of consequence as indicators of pro-environmental behavior (PEB). Tourists expressing higher values of personal responsibility engage in less behavior associated with adverse environmental consequences than those with lower values of personal responsibility, as found by Alessa et al. (2003). Experts believe tourists are more likely to exhibit PEBs if they consider themselves to be a part of the problem (Eden, 1993; Kaiser & Shimoda, 1999; Roggenbuck & Manfredo, 1990; Vining & Ebreo, 1992). Blackstock et al. (2008) argue that problem awareness is the antecedent to PEBs as they found a strong positive association between responsibility and sustainability in tourists visiting Cairngorms National Park in Scotland. Furthermore, studies have found that tourists with a better understanding of the negative impacts associated with tourism have a higher perception of personal responsibility (Brown, 1999; Miller et al., 2010). A questionnaire-based study conducted in two UNESCO World Natural Heritage Sites in China found that tourists' knowledge of negative impacts of tourism was positively associated with the ascription of responsibility, which directly influenced tourists' personal feelings of responsibility. The researchers conceded this relationship to be critical to fostering PEBs (Gao, Huang, & Zhang, 2017). Researchers surveyed self-described eco-tourists across South Korea and found the New Ecological Paradigm (NEP) as essential in the facilitation of tourists' PEBs during the critical decision-making process. Furthermore, the researchers found evidence of a robust positive relationship between the NEP, ascription of responsibility, and pro-environmental behavioral intention (Park et al., 2018).

It is essential to point out that while all of these studies found a positive association between values, AR, AC, and the NEP on environmentally-friendly behavior, few studies have identified a comprehensive framework that incorporates cognitive processes, like the VBN, to explain behaviors and intentions of tourists. Furthermore, there have been no studies that have incorporated a comprehensive model like the VBN to explore the behaviors and intentions of LCT tourists.

Several studies have used a framework adapted from the VBN model to explore the learning outcomes and propose techniques geared toward nurturing environmental citizenship in study-abroad students (Tarrant, 2010; Wynveen, Kyle, & Tarrant, 2012). One study attributed the relationship between the values, beliefs, norms, and behavior, as measured by the VBN, with an increase in the adoption of pro-environmental behaviors (Wynveen, Kyle, & Tarrant, 2012). However, most of these studies only partially use the VBN to analyze the learning outcomes of students and construct a separate outcome variable the researcher's term as "environmental citizenship." Han (2015) and Kiatkawsin and Han (2017) merged the VBN model with variables from other models. The results revealed that personal values, the NEP, awareness of consequences, the ascription of responsibility, and personal norms from the VBN theory all showed a positive association with tourists' intentions to choose eco-friendly options.

Similarly, Choi, Jang, and Kandampully (2015) implemented a version of the VBN in a study of tourists' intent to stay at eco-friendly accommodations. In a panel study of cruise ship tourists, Han, Hwang, and Lee (2017a) used the VBN to explain behavior while traveling at sea. They found that personal norms predicted cruise ship passengers' willingness to sacrifice and intention to purchase eco-friendly and locally-sourced commodities (2017a).

While these studies have added to the growing body of work exploring the VBN and normative behavior, such work has only assessed behavioral intent in the context of choosing a specific eco-friendly service, including choosing an eco-friendly hotel. Additionally, many of these studies have included variables from different theories or disciplines to increase explanatory power without much success. It is vital to address behaviors from sustainable tourism using a much broader scope. As Landon et al. (2018) point out, the majority of previous work is empirical, and no one study alone can advance theory. There have been few studies to use the VBN as a stand-alone model in explaining multiple dimensions of tourists' pro-sustainable intentions. Currently, no studies have been undertaken considering LCT through the utilization of the VBN framework.

It is crucial to consider the VBN in an effort to gain insight on variables that have the potential to explain intentions to behave pro-environmentally, and ultimately, intentional engagement in LCT. The current work aims to demonstrate the usefulness of applying the VBN model to understand the values, beliefs, and norms of LCT tourists in this study. As highlighted above, empirical support for the VBN theory is influential in previous studies. This study postulates that tourists' intentions to engage in LCT are fostered by the constructs included within the VBN model as well as pro-environmental behavioral intentions (Figure 1). The implications of the study proposed within this study could aid in conservation across a variety of settings in critically-threatened areas where LCT exists.

<p align="center">Hypotheses</p>

Based on the Value-Belief-Norm Theory (Stern, 2000; Stern et al., 1999 and explored further by Landon et al. 2018), the following hypotheses form the basis of a causal chain of environmentally-referent cognitions (i.e., values, environmental worldview, awareness of

consequences, and ascription of responsibility). The cognitions lead to the activation of personal norms, which influence tourists' intent to behave in pro-sustainable ways, and ultimately individuals' desire to engage in LCT. Based on the review of the literature, the formulated hypotheses are outlined below. Hypotheses are included in the conceptual model, which depicts the graphical summary of the proposed relationships between model constructs (Figure 1).

H_{1a}: Tourists' egoistic values will significantly explain their environmental worldview (as measured through the New Ecological Paradigm).

H_{1b}: Tourists' altruistic values will significantly explain their environmental worldview (as measured through the New Ecological Paradigm).

H_{1c}: Tourists' biospheric values will significantly explain their environmental worldview (as measured through the New Ecological Paradigm).

H_2: Tourists' environmental worldview (as measured through the New Ecological Paradigm) will significantly predict awareness of consequences in regards to their pro-sustainable choices as a consumer while traveling.

H_3: Tourists' awareness of consequences in regards to their pro-sustainable choices as a consumer while traveling will significantly predict the ascription of responsibility to the self to mitigate potential harm to the environment.

H_4: Tourists' ascription of responsibility as a tourist will significantly predict the activation of personal norms regarding one's intention to behave in an environmentally-sustainable manner as a tourist.

H_{5a}: Tourists' personal norms for engaging in sustainable travel will significantly explain the willingness to sacrifice (as a dimension of intention to engage in environmentally-sustainable travel behavior).

H_{5b}: Tourists' personal norms for engaging in sustainable travel will significantly explain

localism (as a dimension of intention to engage in environmentally-sustainable travel

behavior).

H_{5c}: Tourists' personal norms for engaging in sustainable travel will significantly explain

eco-behavior (as a dimension of intention to engage in environmentally-sustainable

travel behavior).

H_{6a}: Tourists' willingness to sacrifice (as a dimension of intention to engage in

environmentally-sustainable travel behavior) will significantly predict individuals'

intentions to engage in LCT.

H_{6b}: Tourists' localism (as a dimension of intention to engage in environmentally-

sustainable travel behavior) will significantly predict individuals' intentions to

engage in LCT.

H_{6c}: Tourists' eco-behavior (as a dimension of intention to engage in environmentally-

sustainable travel behavior) will significantly predict individuals' intentions to

engage in LCT.
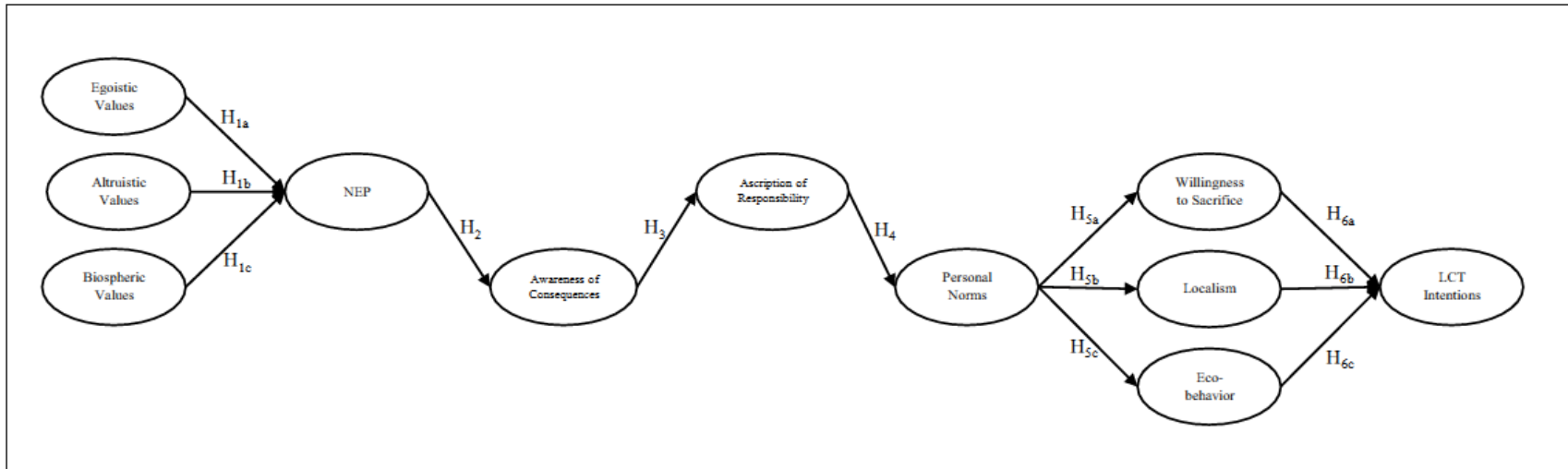
Figure 1. Value-Belief-Norm Model as adapted from Landon et al. (2018)

CHAPTER 3

METHODS

This chapter discusses the methods used for this research. The study context and the design of the study will initially be covered. Data collection and sampling, survey instrument and measurement, specific measures, and statistical analysis procedures used to analyze the data will each be addressed in turn.

Following the University of Georgia's Human Research Protection Program's guidelines, a proposal of this study was submitted for evaluation by the Institutional Review Board (IRB). IRB approved the study before any collection procedures took place. The approval number for this project is #STUDY00000535.

<u>Study Context</u>

The target population for the study was Americans 18 years and older who had traveled extensively within the recent past (i.e., 12 months). An additional study parameter was a minimum household income of at least $50,000 to participate. This threshold was necessary to ensure the sample was reflective of the U.S. travel market, 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 (discussed further below) in which study participant selection occurs through a non-probability sampling strategy, following a convenience sampling approach. As Atzori, Iera, and Morabito (2016) contend, such a sampling approach using a panel is growing within the social sciences due to the ease of recruitment and

minimal cost for data collection. More specifically, it is gaining stride within the field of travel and tourism research as well (Suess et al., 2018).

The proposed sample size for this study was at least 600 respondents to capture as much variability in data collection across all study constructs. Such a sample size ensures an adequate number of cases to undertake confirmatory factor analysis and structural equation modeling, as Kline (2015) suggests. All participation in the study was voluntary, and the anonymity of all participants was guaranteed. As indicated within the information sheet supplied to IRB and participants, the survey instrument was designed to ensure no negative consequences resulted from participating in the study following the ethics guidelines of Babbie (2015).

<u>Data Collection</u>

Data for this study was collected using Amazon's Mechanical Turk (MTurk) Panel participants who 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 & Milman, 2019). Similar to other collection methods, an incentive to complete the questionnaire was offered in the form of monetary payment for their time. As such, participants received $1 as compensation for completing the questionnaire.

Critics of using MTurk cite that participation rates could be affected by the length of the task and the amount of compensation promised (Landers & Behrend, 2015). However, multiple studies have dispelled the concerns as results have shown that the quality of data was not negatively affected by a reasonable compensation rate. In addition, response quality using such means of data collection tends to be high when using such professional panels (Atzori, Iera, & Morabito, 2016). The advantages of using MTurk include a fast recruitment time and data turn

around rate, as well as being inexpensive and less time-consuming than other collection methods. Using MTurk for data collection has been tested by multiple sources and proven as effective as traditional methods such as mail-based and telephone-based survey work (Buhrmester, Kwang, & Gosling, 2011; Wang, 2017).

The use of MTurk has been critically examined in the literature. 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. The results of their study found MTurk to be a viable alternative to student and professional panel samples. MTurk was also critically evaluated by Buhrmester, Talaifer, and Gosling (2018), who deemed the platform highly useful and practical for social science research. The authors detailed a list of potential issues that could arise, and best practices for preventing any pitfalls, such as attention checks and speeding traps. This study employed the recommendations set forth by MTurk evaluators in the design and implementation of data collection.

The study sample was secured by a series of qualifying steps to ensure participants met the study requirements (as indicated above). In addition to the questions about the main variables of interest, participants responded to a series of questions regarding their sociodemographic and socioeconomic status (e.g., age, gender, education, ethnicity, income, etc.). The registration process required for participation in any MTurk survey includes qualifying criteria used to target the desired sample criteria. As mentioned above, the qualifying criteria for sample inclusion were: individuals at least 18 years of age who had reported travelling within the last 12 months.

The sample included 687 individuals who had completed the Qualtrics online questionnaire through Amazon MTurk. This number exceeded the desired sample size provided to MTurk. All cases were removed from analysis among participants who 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. This was necessary to ensure the integrity of the data. Ultimately, 30 cases were removed from subsequent data analysis, yielding 657 useable questionnaires for analysis. It should be noted as well that participants were required to complete each question before moving on to subsequent questions. The forced-answer requirement not only helped to ensure full completion but also removed the necessity to address missing data.

<div align="center">Survey Instrument and Measurement</div>

As indicated above, an online survey was used to collect data for this study. A self-administered questionnaire was initially built through Qualtrics and distributed by Amazon MTurk. Numerous advantages exist for web-based surveying, which include the elimination of survey administrators, reduced expenses, increased efficiency, and the ability to reach a broad audience with a rapid response rate (Cook, Heath, & Thompson, 2000; Dillman, Smyth, & Christian, 2014; Dolnicar, Laesser, & Matus, 2009). Online panels from reputable market research firms like Amazon MTurk have been found to produce reliable data with low occurrences of response bias within a diverse sample (Boley et al., 2018). This study used a quantitative approach to employ antecedent measures of engaging in environmentally-friendly travel, intentions to engage in such travel, and ultimately, intentions to travel for LCT. The items used in this study have been modified to fit the study in the context of the six research questions posed in Chapter 1. In addition to questions about the main variables of interest, respondents

were asked about previous travel experiences, as well as questions relating to their socio-demographic and economic status (e.g., age, gender, education, marital status, race, and ethnicity, annual household income, etc.). The following discussion describes the main variables of interest utilized for this study.

<div align="center">Measures</div>

Items used to measure the VBN model constructs have been adapted from previous work. Landon et al. (2018) established a model based on the previous work by Stern (2000) and Stern et al. (1999). Landon et al. created the model using constructs adapted from previous work to analyze the psychological antecedents to pro-sustainable tourist behavior (2018). This study used the same theoretical model to evaluate individuals' pro-environmental behavioral intent to visit visiting LCT destinations. Items chosen for inclusion were limited to those that were most closely related to tourism specifically, so that it aligns with issues that are under the potential control of the individual while engaging in the activity, as opposed to all eco-friendly activities the respondent could choose to participate in while not traveling.

The model's first measure concerned individuals' values toward the environment. Following the work of van Riper and Kyle (2014), nine items (measured on a 7-point Likert scale, where 1 = not at all important and 7 = extremely important) were employed to gauge egoistic, altruistic, and biospheric values (three items per dimension) of individuals toward the environment. The stem, "how important are each of the following statements as guiding principles in your life?" was used to collect data regarding such values. The New Ecological Paradigm (or NEP) was employed to assess (on a 7-point Likert scale of agreement) a shortened six-item version of individuals' environmental worldview (Landon et al., 2018; van Riper & Kyle, 2014).

Awareness of consequence was measured with five items adapted from van Riper and

Kyle (2014), Raymond et al. (2011), and Landon et al. (2018). Items were measured on a 7-point

Likert-type scale where 1 = not at all a problem and 7 = a very serious problem, following the

stem, "to what extent do you feel the following are problems created by travel and tourism?"

Ascription of responsibility (three items) and personal norms (5 items) were measured on a 7-

point Likert-type scale, where 1 = strongly disagree and 7 = strongly agree following the prompt,

"please indicate your agreement with each of the following" (Steg & de Groot, 2010).

Intentions to engage in environmentally-friendly travel were measured using three

dimensions across 14 items (Boley, Nickerson, & Bosak, 2011; Doran and Larsen, 2016; Landon

et al., 2018, and Stern et al., 1999). Those three dimensions were willingness to sacrifice (five

items measured on a 7-point of agreement), localism (five items measured on a 7-point of

likelihood), and eco-behavior (four items measured on a 7-point of likelihood).

Items measuring individuals' intention to engage in LCT (four items) were adapted from

the Intention to Visit scale (Guat-Tham See & Yen-Nee Goh, 2019; Han et al., 2010). Prior to

participants responding to these items, they were given a definition for LCT as well as the

following examples of last chance tourism sites: 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, Visiting the Congo Basin in Africa to see the endangered lowland

mountain gorillas before they are extinct, Visiting the Dead Sea in Israel before it evaporates.

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 of

agreement (where 1 = strongly disagree and 7 = strongly agree).

Table 1. Value-Belief-Norm Theory Construct and Items

Constructs

Values
    Egoistic values
        Authority: the right to lead or command
        Social power: control over others dominance
        Influential: having an impact on people and events
    Altruistic values
        A world at peace: a world free of war and conflict
        Equality: equal opportunity for all
        Social justice: correcting injustice, care for others
    Biospheric values
        Unity with nature: fitting into nature
        Protecting the environment: preserving nature
        A world of beauty: the beauty of nature and the arts

Environmental worldview (New Ecological Paradigm)
        We are approaching the limit of the number of people the Earth can support
    When humans interfere with nature it often produces disastrous consequences
    Plants and animals have as much right to exist as humans
    The Earth is like a spaceship with very limited room and resources
    The balance of nature is very delicate and easily upset
    Humans were meant to rule over the rest of nature

Awareness of consequence
    Carbon emissions from transportation (airplanes, cars, etc.)
    Pollution of local environments
    Destruction of native species' habitats
    Waste (trash, sewage, etc.) coming from tourists
    Water scarcity and overuse

Ascription of responsibility
    It is my responsibility to minimize my impacts on the environment as a tourist
    I feel jointly responsible for tourism impacts on the environment
    Minimizing my impacts on the environment is in part my responsibility

Personal norms

As a tourist, I feel morally obligated to do whatever I can to minimize my environmental impact

I would feel guilty if I were responsible for damage to the environment as a tourist

Minimizing my impact on the environment is the right thing to do

I am obligated to do my part to reduce my impact on the environment as a tourist

People like me should do what they can to minimize their impact on the environment when traveling

Eco-friendly travel behavior

Willingness to sacrifice

I am willing to pay more for travel if it helps the environment

I am willing to purchase environmentally-friendly tourism products even if they may be more expensive

I am willing to use environmentally-friendly means of transportation although this might take more time

I am willing to pay more to stay at environmentally-friendly accommodations

I am willing to use environmentally-friendly means of transportation although this may be more expensive

Localism

Stay at locally owned accommodations

Eat locally sourced food

Hire local guide services/tour operators

Purchase locally produced crafts and goods

Purchase locally made alcohol

Eco-behavior

Separate recycling from waste

Reuse bath linens during consecutive days stayed at accommodations

Use eco-friendly tour operators

Use reusable shopping bags

LCT intentions

I intend to travel for last chance tourism in the foreseeable future.

I plan to visit to a last chance tourism destination in the near future.

There is a high likelihood that I will visit a LCT destination within the foreseeable future.

I will visit a LCT destination within the next 12 months

Data Analysis

Before any analysis was conducted, data were screened and cleaned for potential outliers. Because all constructs within the model were scale-based (from 1-7 as indicated above), this was not an issue with data-bound between the seven response categories. As a precautionary measure, univariate screening took the form of transforming data based on *z*-scores using IBM SPSS v25 to ensure responses fell within the $\pm$ 3.29 range, as indicated by Tabachnick and Fidell (2019). All responses across the constructs fell within this range. No missing data were present within the data set given parameters were put in place in Qualtrics that individuals had to complete each question before moving on to subsequent questions on the questionnaire. As mentioned, questionnaires that were completed in less than six minutes or those that contained straight-line responses (*n* = 30) were removed from analysis, yielding in 657 useable questionnaires and responses.

Once data screening was finished, frequency and percentage counts for each variable were undertaken using IBM SPSS v25. This allowed for descriptive analysis of socio-demographic questions (e.g., gender, age, marital status, education level, ethnicity, race, and household income) as well as recent travel experience (e.g., travelled within U.S. in last 12 months and travelled outside the U.S. in the last 12 months) so as to present a holistic picture of the respondents' demographic and travel profile. The results of these profiles are presented in the following chapter.

A two-step analysis sequence (i.e., confirmatory factor analysis or CFA and structural equation modeling or SEM) assessed relationships in the conceptual model. The CFA and SEM approach followed for this study's statistical analysis was put forth by Anderson and Gerbing

(1988) and carried out with MPlus v.8.3. Initially, the CFA was performed to examine whether

the factor structure of each construct within the model was confirmed (based on extant findings

from the literature). From the CFA, psychometric properties (i.e., various forms of reliability and

validity) were assessed. Once the measurement model was confirmed through the CFA, SEM

technique looked at each of the 11 hypotheses and sub-hypotheses within the model. SEM

determined the variance explained within each of the model outcome constructs. Results from

the analysis are presented in the following chapter.

CHAPTER 4

RESULTS

The following chapter begins with a descriptive analysis of the demographic profile of respondents, along with their recent travel history. Data were cleaned in preparation for further analysis of constructs within the model. Results of the confirmatory factor analysis (to establish a measurement model), psychometric properties of each construct (to assess reliability and validity estimates), and structural equation modeling (to examine each hypothesis within the proposed model) are described, and the corresponding tables are presented. The chapter concludes with a summary of the findings and a description of the hypothesized and observed relationships between constructs from the proposed model.

<u>Participant Sample Profile</u>

Table 2 is presented below to summarize the profile of participants, considering demographics and recent travel experience. In the way of gender, a higher percentage of survey participants identified as female (61.3%) compared to participants identifying as male (37.9%). All age groups were represented, with ages 60 years and older being the least sampled age group at 6.8%. The median age was 39.32 years of age, with over 57% respondents being under age 40. Over half (53.1%) of the participants reported being married, followed by 33.5% of the sample who reported being single, and either never married or living with a significant other. Respondents who reported to be widowed, divorced or separated accounted for 0.8%, 5.6%, and 1.4%, respectively. A majority of respondents had at least some college, with 63% of respondents holding a bachelor's degree or higher. The median household income ranged from

$50,000-$74,999. Less than half (38.2%) of participants reported a household income of less than $50,000. Participants with an income greater than $200,000 made up only 1.2% of the sample. The racial/ethnicity profile of respondents was predominantly white (79.1%), with the majority (92.1%) of the sample identifying as non-Hispanic. Black or African American respondents made up only 11.3% of the sample. Less than 10% of respondents were Asian. Less than 2% reported being of American Indian or Alaskan Native heritage, and 0.3% of respondents identified themselves as a Native Hawaiian or Pacific Islander.

Respondents were also asked about their travel within and outside of the United States. Over half (54.7%) of participants traveled outside of the U.S. in the past year. Most participants (98.6%) indicated they had traveled within the U.S. in the last 12 months.

Table 2. Socio-Demographic Sample Characteristics

Variable	*n*	(%)
Gender		
Female	403	61.3
Male	249	37.9
Age (*M* = 39.32)		
18-29	129	19.9
30-39	242	37.3
40-49	154	23.8
50-59	79	12.2
≥ 60	44	6.8
Marital status		
Married	348	53.1
Widowed	5	0.8
Divorced	37	5.6
Separated	9	1.4
In a domestic partnership	37	5.6
Single, but cohabitating with significant other	64	9.8
Single, never married	155	23.7

Education (*M* = Bachelor's degree)

Less than high school	3	0.5
High school graduate	33	5.0
Some college	133	20.3
Technical/vocational school/junior college	71	10.8
Bachelor's degree	308	47.0
Graduate degree	108	16.5

Race/ethnicity

American Indian or Alaska Native	12	1.8
Asian	49	7.5
Black or African American	74	11.3
Native Hawaiian or Pacific Islander	2	0.3
White	520	79.1

Hispanic/Latino

Not Hispanic	605	92.1
Hispanic	52	7.9

Household income (*M* = $50,000-$74,999)

< $25k	71	10.8
$25k - $49,999	180	27.4
$50k - $74,999	178	27.1
$75k - $99,999	119	18.1
$100k - $199,999	101	15.4
$200k+	8	1.2

Traveled within the U.S. in the last 12 months

Yes	647	98.6
No	9	1.4

Traveled outside the U.S. in the last 12 months

Yes	359	54.7
No	297	45.3

Confirmatory Factor Analysis

The study utilized a two-step, confirmatory factor analysis (CFA)-structural equation modeling (SEM) sequence (Anderson & Gerbing, 1988). CFA was performed (using MPlus v.8.3) on the model constructs to establish a measurement model and to assess psychometric estimates for each resulting factor within corresponding constructs. The analysis incorporated a

total of 657 useable survey responses. Missing data was not a concern as respondents were required to complete each question before moving on to subsequent questions.

The CFA began with the addition of each factor (and corresponding items) one after another to develop an ideal model. The model was trimmed to remove error terms to arrive at the final, acceptable measurement model (Woosnam et al., 2018a; Woosnam et al., 2018b). Items were removed from the model if the standardized factor loading was below 0.50 (Hair, Black, Babbin, & Anderson, 2010). This procedure revealed the presence of cross-loading items through an inspection of the modification indices for the factor loadings. The following items were removed from the model: two items from the *New Ecological Paradigm* ("*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* ("*Separate recycling from waste*")*,* and three items from *Localism* ("*Stay at locally owned accommodations,*" "*Hire local guide services/tour operators,*" and "*Purchase locally made alcohol (wine, beer, etc.)*"). As shown in Table 3, the standardized factor loadings ranged from 0.62 to 0.96. As such, a majority of the items within the measurement model had factor loadings over 0.70 (as recommended by Fornell & Larker, 1981).

The model yielded a $\chi^2(df) = 1452.53(674)$, with the following fit indices: comparative fit index (CFI) = 0.96; Tucker Lewis index (TLI) = 0.95; and root mean square error of approximation (RMSEA) = 0.04 (See Table 3). A TLI and CFI at 0.95, or in excess, indicates a good incremental fit of the data (Hu & Bentler, 1999). An RMSEA value below 0.07 is considered a good absolute fit of the data among experts in the field (Hooper, Caughlan, & Mullen, 2008; Hu and Bentler, 1999; Steiger, 2007). Psychometric properties were assessed following this examination of the factor structure.

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Table 3. Confirmatory Factor Analysis

Scale and item description	MEAN	Std. β	t-value	AVE	CR
Egoistic Values[a]	**3.82**			**0.58**	**0.80**
Authority: the right to lead or command	3.91	.83			
Social Power: control over others and dominance	3.09	.81	17.01***		
Influential: having an impact on people and events	4.46	.62	14.69***		
Altruistic Values[a]	**5.81**			**0.66**	**0.86**
A world at peace: a world free of war and conflict	5.82	.74			
Equality: equal opportunity for all	5.88	.87	20.75***		
Social justice: correcting injustice, care for others	5.68	.83	20.10***		
Biospheric Values[a]	**5.65**			**0.68**	**0.86**
Unity with nature: fitting into nature	5.51	.82			
Protecting the environment: preserving nature	5.77	.94	27.61***		
A world of beauty: the beauty of nature and the arts	5.66	.70	19.54***		
New Ecological Paradigm[b]	**5.44**			**0.52**	**0.81**
When humans interfere with nature, it often produces disastrous results	5.57	.82			
The Earth is like a spaceship with very limited room and resources	4.88	.62	15.27***		
Plants and animals have as much right to exist as humans	5.81	.68	17.17***		
The balance of nature is very delicate and easily upset	5.52	.74	19.14***		
Awareness of Consequences[c]	**5.27**			**0.63**	**0.90**
Pollution of local environments	5.24	.87			
Destruction of native species' habitats	5.33	.81	24.99***		
Water scarcity and overuse	4.78	.74	21.73***		
Waste (trash, sewage, etc.) coming from tourists	5.56	.78	23.70***		
Carbon emissions from transportation (airplanes, cars, etc.)	5.44	.77	22.92***		
Ascription of Responsibility[b]	**5.53**			**0.66**	**0.85**
It is my responsibility to minimize my impacts on the environment as a tourist	5.74	.86			
I feel jointly responsible for tourism impacts on the environment	5.12	.67	19.44***		
Minimizing my impacts on the environment is in part my responsibility	5.73	.89	30.35***		

	Mean	Loading	t-value	AVE	CR
Personal Norms[b]	**5.85**			0.73	0.93
As a tourist, I feel morally obligated to do whatever I can to minimize my environmental impact	5.54	.87			
I would feel guilty if I were responsible for damage to the environment as a tourist	6.02	.79	24.68***		
Minimizing my impact on the environment is the right thing to do	6.05	.83	25.40***		
I am obligated to do my part to reduce my impact on the environment as a tourist	5.76	.89	31.52***		
People like me should do what they can to minimize their impact on the environment when traveling	5.87	.88	29.86***		
Willingness to Sacrifice[b]	**4.77**			0.78	0.94
I am willing to pay more for travel if it helps the environment	4.60	.89			
I am willing to purchase environmentally friendly tourism products even if they may be more expensive	4.80	.92	36.78***		
I am willing to use environmentally friendly means of transportation although this might take more time	5.06	.75	24.18***		
I am willing to pay more to stay at environmentally friendly accommodations	4.72	.91	35.13***		
I am willing to use environmentally friendly means of transportation although this may be more expensive	4.69	.92	36.89***		
Localism[d]	**5.86**			0.52	0.68
Eat locally sourced food	5.90	.72			
Purchase locally produced crafts and goods	5.81	.72	13.30***		
Eco-behavior[d]	**5.48**			0.50	0.72
Reuse bath linens during consecutive days stayed at accommodations	5.82	.62			
Use eco-friendly tour operators	4.94	.73	13.91***		
Use reusable shopping bags	5.69	.68	13.28***		
Intentions to Engage in Last Chance Tourism[b]	**3.68**			0.84	0.95
I plan to visit to a last chance tourism destination in the near future	3.80	.96			
There is a high likelihood that I will visit a LCT destination within the foreseeable future	3.87	.94	51.49***		
I intend to travel for last chance tourism in the foreseeable future	3.87	.96	57.91***		
I will visit a LCT destination within the next 12 months.	3.22	.79	28.82***		

[a]1 = Not at all important to 7 = Very important
[b]1 = Strongly disagree to 7 = Strongly agree
[c]1 = Strongly disagree it is a problem to 7 = Strongly agree it is a problem
[d]1 = Highly unlikely to 7 = Highly likely
Note. ***$p < 0.001$ level (two-tailed)
Note. Model fit indices: $\chi^2 = 1452.53$; $df = 674$; $\chi^2/df = 2.16$; TLI = 0.95; CFI = 0.96; RMSEA = 0.04; SRMR = 0.05
Note. CR = composite reliability; AVE = average variance extracted

2

Psychometric properties for each factor within the constructs of the model were evaluated with different reliability and validity estimates. Construct validity was tested considering convergent and discriminant validity. Items that converge or have a high proportion of variance in common to measure a specific construct indicate convergent validity (Hair et al., 2010). There are three aspects to be considered for convergent validity, which are factor loadings, average variance extracted (AVE), and composite reliability (CR). Factor loadings should be at least 0.50 to be consistent with convergent validity. Values of composite reliability (CR) above 0.70 indicate internal consistency, which shows that all items are consistently measuring the same latent construct (Hair et al., 2010).

Composite reliabilities were calculated to measure internal consistency or reliability. The following equation was used to calculate composite reliabilities:

$$\textit{Composite reliability} = \frac{(\Sigma L_i)^2}{(\Sigma L_i)^2 + \Sigma \, Var \, (E_i)}$$

Where: L_i = standard factor loadings for that factor
$Var \, (E_i)$ = error variance associated with the individual item

All factors in the model indicated good internal consistency according to their composite reliability values above 0.70 (Hair et al., 2010). Composite reliability results for the model factors were the following: Egoistic Values (0.80); altruistic values (0.86), biospheric values (0.86); environmental worldview using NEP (0.81); awareness of consequences (0.90); ascription of responsibility (0.85); personal norms (0.93); willingness to sacrifice (0.94);

localism (0.68); eco-behavior (0.72); and intentions to engage in last chance tourism (0.95) (Table 3).

Discriminant validity indicates the extent to which a construct is discriminately different from other constructs. Testing for discriminant validity compared the square root of the average variance extracted (AVE) for any two factors to the correlation between two factors. The AVE value should be over 50% as an indication that the items within a scale explain more variance than left unexplained (Hair et al., 2010). The scale's AVE was calculated using Fornell and Larcker's (1981) equation:

$$AVE = \frac{\Sigma L_i{}^2}{n}$$

Where:
$L_i{}^2$ = item reliability (calculated as the square of the standardized factor loading for the item)
n = number of items for that factor

The scale's AVE values for each factor in the model were all greater than 0.50, as shown in Table 3 above. In addition, the square root of AVEs exceeded the correlation between factors in most instances (as presented in Table 4). Two exceptions to this are the correlations between ascription of responsibility and personal norms as well as localism and eco-behavior; in both instances, the factor correlations exceeded the square root of the AVE in question

Table 4. Construct Correlations and Squared Correlations

	EV	AV	BI	NEP	AC	AR	PN	WS	LOC	ECO	LCT
Egoistic Values (EV)	**0.76**										
Altruistic Values (AV)	0.01	**0.82**									
Biospheric Values (BI)	0.04	0.66	**0.83**								
New Ecological Paradigm (NEP)	-0.03	0.54	0.67	**0.72**							
Awareness of Consequences (AC)	-0.04	0.41	0.47	0.62	**0.80**						
Ascription of Responsibility (AR)	-0.01	0.52	0.67	0.63	0.50	**0.81**					
Personal Norms (PN)	-0.06	0.51	0.64	0.64	0.48	0.94	**0.85**				
Willingness to Sacrifice (WS)	0.05	0.45	0.60	0.54	0.43	0.64	0.62	**0.88**			
Localism (LOC)	0.00	0.48	0.45	0.39	0.34	0.54	0.59	0.43	**0.72**		
Eco-behavior (ECO)	0.09	0.47	0.61	0.48	0.44	0.68	0.69	0.67	0.74	**0.71**	
Last Chance Tourism (LCT)	0.32	0.12	0.13	0.10	-0.01	0.03	0.05	0.18	0.27	0.26	**0.92**

Note: The bold diagonal elements are the square root of the average variance extracted for each construct;
Inter-construct correlations are shown below diagonal elements.
Note: All correlations are significant at the $p < 0.001$ level

Structural equation modeling was used to examine the antecedents of tourists'
intentions to engage in LCT. This study measured the model fit based on CFI, TLI, RMSEA,
and SRMR. As Bryne (2016) suggests, RMSEA and SRMR values less than 0.05, along with
CFI and TLI values greater than 0.95, indicate a good fit according to Bryne (2016). RMSEA
and SRMR values between 0.05 and 0.08 are indicative of a fair or adequate fit (Brown and
Cudeck, 1993). CFI and TLI values of 0.90 to 0.95 are considered good (Hu & Bentler, 1999).
The structural model yielded the following model fit indices $\chi^2(df) = 2161.48(792)$; CFI =
0.93; TLI = 0.92; RMSEA = 0.05; and SRMR = 0.06. Fit indices fell within either the good or
fair categories for the four indices. The results of the structural equation model can be found in
Table 5.

All but one of the 11 pathways (represented through hypotheses) were significant ($p <$
0.05). H_{1a} stated that tourists' egoistic values would be significantly related to an
environmental worldview (i.e., New Ecological Paradigm). This was the only hypothesis of
the 11 that was not supported ($p > 0.05$). H_{1b-c} stated that tourists' altruistic and biospheric
values will be significantly related to an environmental worldview as well, which was
supported (H_{1b}: $\beta = 0.174$, $p < 0.01$; H_{1c}: $\beta = 0.575$, $p < 0.001$). Tourists' environmental
worldview significantly predicted awareness of consequences in regards to their pro-
sustainable choices as a consumer while traveling (H_2: $\beta = 0.663$, $p < 0.001$). Tourists'
awareness of consequences in regards to their pro-sustainable choices as a consumer while
traveling significantly predicted their ascription of responsibility to the self to mitigate
potential harms to the environment (H_3: $\beta = 0.555$, $p < 0.001$). Tourists' ascription of

responsibility significantly predicted the activation of personal norms regarding their intention to behave in an environmentally-sustainable manner while traveling (H_4: $\beta = 0.957$, $p < 0.001$).

In the way of eco-friendly travel behavior, tourists' personal norms significantly explained their (a) willingness to sacrifice (H_{5a}: $\beta = 0.649$, $p < 0.001$), (b) localism (H_{5b}: $\beta = 0.736$, $p < 0.001$), and (c) eco-behavior (H_{5c}: $\beta = 0.574$, $p < 0.001$). Finally, tourists' intentions to engage in last chance tourism was significantly predicted by (a) willingness to sacrifice (H_{6a}: $\beta = 0.310$, $p < 0.001$), (b) localism (H_{6b}: $\beta = 0.180$, $p < 0.001$), and (c) eco-behavior (H_{6c}: $\beta = 0.212$, $p < 0.01$). While unique effect sizes of variance explained in each outcome variable can be surmised from the table, it is important to point out that personal norms explained a significant degree of variance in each of the eco-friendly behaviors: willingness to sacrifice ($R^2 = 0.41$ or 41% of the variance); localism ($R^2 = 0.31$ or 31% of the variance); eco-behavior ($R^2 = 0.51$ or 51% of the variance). These three eco-friendly travel behaviors then in turn explained 34% of the variance ($R^2 = 0.34$) in individuals' intentions to engage in LCT.

Table 5 – Hypothesized relationship between constructs and observed relationship from the structural model

Standardized hypothesized relationship	β	*t-value*	Results
H_{1a}: EV → NEP	-.059^{ns}	-1.580	Not Supported
H_{1b}: AV → NEP	.174**	3.219	Supported
H_{1c}: BI → NEP	.575***	10.195	Supported
H_2: NEP → AC	.663***	15.089	Supported
H_3: AC → AR	.555***	13.520	Supported
H_4: AR → PN	.957***	27.510	Supported
H_{5a}: PN → WS	.649***	17.397	Supported
H_{5b}: PN → LOC	.736***	14.434	Supported
H_{5c}: PN → ECO	.574***	7.818	Supported
H_{6a}: WS → LCT	.310***	4.476	Supported
H_{6b}: LOC → LCT	.180***	3.308	Supported
H_{6c}: ECO → LCT	.212**	2.642	Supported

$^{**}p < 0.01$; $^{***}p < 0.001$.

Note: ns = not significant

Note. Model fit indices: $\chi^2 = 2161.48$, $df = 792$; $\chi^2/df = 2.73$; CFI = 0.93; TLI = 0.92; RMSEA = 0.05; SRMR = 0.06

Variance explained:

$R^2_{NEP} = 0.49$

$R^2_{AC} = 0.44$

$R^2_{AR} = 0.31$

$R^2_{PN} = 0.92$

$R^2_{WS} = 0.41$

$R^2_{LOC} = 0.31$

$R^2_{ECO} = 0.51$

$R^2_{LCT} = 0.34$

CHAPTER 5

CONCLUSION

This chapter contains a summary of the study's findings and a discussion of the results in the context of extant literature focusing on predictors of tourists' intent to engage in pro-environmental behaviors. Theoretical and practical implications of the results are discussed, followed by the limitations and recommendations for future research.

<u>Summary of Findings</u>

This study sought to explore tourists' intention to behave pro-environmentally, and ultimately, their intent to engage in last chance tourism. In so doing, the traditional VBN model, as developed by Stern, et al. (1999) and Stern 2000, was amended to include intentions to engage in last chance tourism as the ultimate dependent variable. The work mirrored very closely to the model proposed in Landon et al. (2018). Of the 12 proposed hypotheses in the current study, 11 were supported through the results of structural equation modeling.

Each of the hypotheses was tested using data secured from an online questionnaire distributed through Amazon's Mechanical Turk to a panel of individuals who reported traveling either within or outside of the U.S. over the last 12 months. The data revealed numerous findings concerning the relationships among VBN constructs, most noticeably focusing on how such psychological antecedents predicted tourists' intentions to engage in LCT. Key findings and their interpretations are discussed in detail below and presented in Table 6. The following discussion about the summary of findings focuses on a logical grouping of hypotheses from the theoretical model in Figure 1.

The first set of hypotheses concerned tourists' personal values and environmental worldview as measured through the New Ecological Paradigm or NEP.

H_{1a}: Tourists' egoistic values will significantly explain their environmental worldview (as measured through the New Ecological Paradigm).

H_{1b}: Tourists' altruistic values will significantly explain their environmental worldview (as measured through the New Ecological Paradigm).

H_{1c}: Tourists' biospheric values will significantly explain their environmental worldview (as measured through the New Ecological Paradigm).

Though egoistic values were expected to be associated with the NEP, as the ego-centric traits conflict with (as demonstrated through a negative relationship) an eco-centric worldview, results did not demonstrate a significant relationship between the two constructs, failing to support H_{1a}. Interestingly enough, of the 12 hypotheses from Figure 1, this was the only one not supported. In contrast to egoistic values, the results did reveal that altruistic values were significantly related to an environmental worldview (as measured through the NEP). Similarly, tourists' biospheric values were also significantly related to an environmental worldview (as measured through the NEP). Each of these relationships was in a positive direction.

The second hypothesis also concerned tourists' environmental worldview (as measured through the NEP) in regards to their awareness of consequences.

H_2: Tourists' environmental worldview (as measured through the NEP) will significantly predict awareness of consequences in regards to their pro-sustainable choices as a consumer while traveling.

Once more, the hypothesis was supported, as shown through the positive relationship (demonstrated through the β coefficient). The third hypothesis connected tourists' awareness of the consequences of travel to their ascription of responsibility as a tourist.

H3: Tourists' awareness of consequences in regards to their pro-sustainable choices as a consumer while traveling will significantly predict the ascription of responsibility to the self to mitigate potential harm to the environment.

The results revealed that H3 was supported by the data, reflecting a positive relationship between the constructs. The fourth hypothesis concerned tourists' ascription of responsibility as a tourist and their moral obligations to behave in an environmentally–friendly manner during travel.

H4: Tourists' ascription of responsibility as a tourist will significantly predict the activation of personal norms regarding one's intention to behave in an environmentally-sustainable manner as a tourist.

The results showed H4 was supported, as higher values for ascription of responsibility led to higher values measuring tourists' moral obligation in regards to their intent to behave in an environmentally-friendly manner. In other words, tourists' ascription of responsibility significantly predicted the activation of tourists' personal norms (moral obligation) in a positive direction.

The penultimate set of hypotheses concerned tourists' moral obligations (i.e., personal norms) regarding three dimensions of intent to engage in environmentally-sustainable travel behavior.

H$_{5a}$: Tourists' personal norms for engaging in sustainable travel will significantly explain

their willingness to sacrifice (as a dimension of intention to engage in

environmentally-sustainable travel behavior).

H$_{5b}$: Tourists' personal norms for engaging in sustainable travel will significantly explain

localism (as a dimension of intention to engage in environmentally-sustainable travel

behavior).

H$_{5c}$: Tourists' personal norms for engaging in sustainable travel will significantly explain

eco-behavior (as a dimension of intention to engage in environmentally-sustainable

travel behavior).

Higher levels of moral obligation (i.e., personal norms) reported by the respondents in the dataset revealed that the three dimensions of intent to behave in an environmentally-friendly manner as a tourist was also high. Therefore, the results of this study showed that personal norms significantly predicted all three dimensions of intention to engage in environmentally-sustainable tourist behavior (i.e., willingness to sacrifice, localism, and eco-behavior) in a positive direction.

The final set of hypotheses concerned the three dimensions of tourists' intent to engage in pro-environmental behavior and their intentions to engage in last chance tourism.

H$_{6a}$: Tourists' willingness to sacrifice (as a dimension of intention to engage in

environmentally-sustainable travel behavior) will significantly predict individuals'

intentions to engage in LCT.

H$_{6b}$: Tourists' localism (as a dimension of intention to engage in environmentally-

sustainable travel behavior) will significantly predict individuals' intentions to

engage in LCT.

H_{6c}: Tourists' eco-behavior (as a dimension of intention to engage in environmentally-sustainable travel behavior) will significantly predict individuals' intentions to engage in LCT.

Each of these three sub-hypotheses were supported by the analysis. Further, the relationship was significant and positive, with higher values for the three dimensions of intent to engage in pro-environmental behaviors (i.e., willingness to sacrifice, localism, and eco-behavior), resulting in a higher degree of intent to engage in LCT travel. Once more to reiterate, 11 of the 12 proposed hypotheses were supported through the two-step analysis of CFA-SEM as put forth by Anderson and Gerbing (1988) (Table 6).

Table 6. Support for Hypothesized Relationships from the Structural Model

Hypothesized Relationship	Supported?
H1$_a$: Egoistic Values → New Ecological Paradigm	No
H1$_b$: Altruistic Values → New Ecological Paradigm	Yes
H1$_c$: Bio-Spheric Values → New Ecological Paradigm	Yes
H2: New Ecological Paradigm → Ascription of Consequences	Yes
H3: Ascription of Consequences → Ascription of Responsibility	Yes
H4: Ascription of Responsibility → Personal Norms	Yes
H5$_a$: Personal Norms → Willingness to Sacrifice	Yes
H5$_b$: Personal Norms → Localism	Yes
H5$_c$: Personal Norms → Eco-Behavior	Yes
H6$_a$: Willingness to Sacrifice → Intentions to engage in Last Chance Tourism	Yes
H6$_b$: Localism → Intentions to engage in Last Chance Tourism	Yes
H6$_c$: Eco-Behavior → Intentions to engage in Last Chance Tourism	Yes

Current literature exploring last chance tourism primarily focuses on tourists' motivations to visit (i.e., Dawson, 2010; Lemieux et al., 2017; Piggott-McKellar & McNamara, 2016) or their perception of specific features and destinations at LCT sites (i.e., Ahmed et al., 2014; Ligett, 2010; Stewart, 2009). This study sought to contribute to the LCT literature by considering a values-beliefs-norms (VBN) model to examine the role psychological antecedents play in explaining individuals' intentions to engage in LCT travel. The findings presented in this study are an essential step in extending a psycho-social behavioral model to the newly-emerging area of last chance tourism research. The results of this study confirmed that the VBN model explains a significant amount of variance in tourists' intentions to engage in environmentally-friendly behaviors ($R^2_{\text{willingness to sacrifice}} = 0.41$; $R^2_{\text{localism}} = 0.31$; $R^2_{\text{eco-behavior}} = 0.51$), and ultimately their intentions to engage in LCT travel ($R^2_{\text{intentions to engage in LCT}} = 0.34$). The findings supported 11 of the 12 hypothesized relationships presented in this study, which further solidifies the VBN model as a useful tool in predicting intentions to engage in environmentally-sustainable tourism behaviors.

This study's findings are consistent with several other studies utilizing the VBN in the field of sustainable tourism. Following the work of Landon et al. (2018), this study incorporated three dimensions of pro-sustainable behavior as a consideration of tourists' intent to spend more money on eco-friendly products and services (i.e., willingness to sacrifice), consume local food and purchase locally-sourced crafts and souvenirs (i.e., localism), and participate in individual eco-friendly practices (i.e., eco-behavior). The results of this study add further support to Landon et al. 's (2018) findings that all three of these dimensions are necessary as they are distinctly and independently related to tourists' personal norms. This study also determined the three

dimensions of pro-sustainable behavior to be significant predictors of intent to engage in LCT. Han, Hwang, and Lee (2017a) also expanded their VBN model to include willingness to sacrifice, which found that cruise ship travelers' personal norms predicted their willingness to source green alternatives. In terms of spending more time and money on goods and services that are considered more sustainable, willingness to sacrifice is the variable shown to have the most significant relationship with LCT intention. Landon's study found the construct of localism to have a low AVE (0.40), indicating the need for potential scale expansion. This study's results showed a slightly increased AVE of 0.52, although the constructs of localism and eco behavior lacked discriminant validity in this model. However, this study provides a strong starting point for the addition of items to both scales, which could reveal different determinants of local and eco-behavior (Landon et al., 2018).

A crucial finding from this study is the high proportion of explained variance in personal norms. The data shows that ascription of responsibility accounts for a total of 92% variance in personal norms. The proportion of explained variance in personal norms is markedly higher in this study compared to prior studies. Han et al. (2018) reported that ascription of responsibility only accounted for 24% variance explained in the moral norms of museum vacationers within their VBN model. Multiple studies have found higher proportions of explained variance in personal norms when attributed to multiple predictors (Klockner, 2013; van Riper & Kyle, 2014; Han, 2015; Fornara et al., 2016; van der Werff & Steg, 2016). For example, in their model utilizing the VBN to assess the antecedents of behavioral engagement in a national park context, van Riper and Kyle (2014) found 82% of the explained variance in personal norms was attributed to the direct effects of two variables, ascription of responsibility and biospheric-altruistic values. Formara et al. (2016) added several other predictors from social theory to their

VBN model. They reported that ascription of responsibility, awareness of consequence, biospheric value, injunctive norm, and descriptive norm explained 57% of the variance in personal norms (Formara et al., 2016). The present study's remarkably high percentage of variance explained in personal norms provides strong evidence for the usefulness of the model's sequential framework in generating behavioral intention. Han et al. (2015) emphasized that through the VBN's original framework, "researchers should understand the efficacy of this sequential mediating framework for variables when developing a theory to explain a pro-environmental decision-making process or behavior" (174). This study echoes such sentiments.

In addition to the points discussed above, the explained variance in personal norms is essential, considering that this study's findings suggest that personal norms play a critical role in affecting the pro-environmental behaviors of tourists. As this study's model demonstrates, personal norms directly influence all three pro-environmental behaviors: willingness to sacrifice, localism, and eco-behavior. The three eco-friendly travel behaviors are shown to be significant predictors in tourists' intentions to engage in LCT. This finding indicates that the activation of personal norms indirectly affects tourists' LCT intentions. This is the first study to consider intention to engage in LCT, however, a significant body of work points to personal norms as having the most significant impact on eco-friendly intentions in the travel and tourism context (Choi et al., 2015; Han et al., 2017, 2018; Kiatkawsin & Han, 2018; Kim & Kim, 2018; Landon et al., 2018). Previous work shows the contribution of personal norms to environmentally-responsible behavior is evident in tourists' decision-making process while traveling (Han et al., 2018), attending food festivals (Kim & Kim, 2018), and choosing to stay at green hotels (Choi et al., 2015).

The only hypothesized relationship not supported by the data was between tourists' egoistic values and the NEP (H_{1a}). Although, this finding is similar to several other studies (Landon et al., 2018; Kiatkawasin & Han, 2017; Han et al., 2017a; van Riper & Kyle, 2014) utilizing the VBN, which also did not observe a significant relationship between egoistic values and the NEP. A recent study by Landon et al. (2018) did not observe a significant relationship between egoistic or altruistic values and the NEP in their study that used the VBN to explore pro-sustainable behavior in tourists. Similar to this study's findings, Kiatkawasin and Han (2017), van Riper and Kyle (2014), and Han et al. (2017a) also failed to confirm a hypothesized relationship between egoistic values and the NEP. As an explanation for the lack of a significant relationship, Landon et al. (2018) suggests that egoistic values may not be directly related to an individual's environmental worldview as first hypothesized by Stern et al. (1999), but could instead be linked to an alternative set of beliefs that may or may not influence pro-environmental behaviors. Other factors, such as extrinsic life goals (as opposed to intrinsic goals) may conflict with the ideology consistent with an environmental worldview and be a better predictor of environmental behavior, as reported by Unanue et al. (2016).

<div align="center">Implications</div>

The theoretical implications of this research make significant contributions to the field of travel and tourism. This study demonstrates the VBN theory's effectiveness in a previously unexplored context. There are few studies in travel and tourism that utilize the VBN framework as a stand-alone model to measure pro-environmental behavior among tourists. Based on the statistical analysis, the theoretical model presented in this paper adds insight into the relationships between variables included in the VBN framework and further solidifies their effectiveness to explain the antecedents of behavioral intention.

<div align="center">58</div>

This study builds on the work of Landon et al. (2018) and incorporates an additional dependent variable in the model, intentions to engage in LCT. With the addition of the items used to measure intentions to engage in LCT, this study's results demonstrate the validity of extending the VBN theory and applying the model to understand the values, beliefs, and norms of tourists in the context of LCT, and ultimately our understanding of the complex internal attributes that determine pro-environmental behaviors. Additionally, the present study adds to the current body of LCT literature and makes several significant contributions to the field. Firstly, this study fills a gap in current LCT literature. Existing studies surrounding LCT have focused on motivations for travel to a specific LCT destination (Dawson, 2010; Lemieux et al., 2017; Piggott-McKellar & McNamara, 2016) or perceptions of LCT destinations by visitors and stakeholders (Ahmed et al., 2014; Ligett, 2010; Stewart, 2009). This study advances LCT research beyond motivations and perceptions to investigate more advanced theoretical underpinnings associated with behavioral intent to engage in such travel. No studies in the literature have investigated the behavioral intent of individuals to engage in this niche form of tourism. The results show that the VBN framework alone is a highly appropriate tool for sustainable tourism that extends to the context of LCT.

This research explores tourists' desire to engage in LCT and provides evidence for the travel trend as a potential opportunity to facilitate pro-environmental behaviors in tourists. The results indicate that tourists expressing pro-environmental behaviors also have higher intent to engage in LCT, which is critical insight when considering the LCT paradox. Critics argue that LCT should be discouraged as it creates additional stress on the already vulnerable landscape (Eijgelaar et al., 2010; Lemieux & Eagles, 2012). While the concerns surrounding the impacts of LCT are legitimate considerations that need to be thoughtfully evaluated, the value of

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promoting ambassadorship through visitation and on-site interpretation should not be ignored. The results of this study indicate that the impacts of tourism could be mitigated by the opportunity to educate visitors and shift behaviors through the activation of personal norms.

This study also demonstrates the concept of LCT over a broader and more general destination context. A great deal of additional research is, however, needed to adequately understand the determinants of intention to engage in LCT and its role in creating climate change ambassadors. This study is the first to steer LCT research away from perceptions and motivations, which lead to misconceptions and criticism for its potential as a responsible and ethical form of tourism (Dawson et al., 2011). The insight gained from this study opens additional doorways for future research and theoretical advancement, which will ultimately lead to real-world changes.

The theoretical model presented in this study increases our knowledge and understanding of intent, which directly precedes the adoption of behavior. The theoretical contributions of this work suggest the psycho-social parameters that could facilitate sustainable tourism. With the help of this model, the field can begin to generate a working knowledge of precursors to pro-environmental behavior among tourists (Han, 2015). The generation of this knowledge will eventually lead to the development of strategies that encourages sustainable behavior among tourists not only at LCT sites but in other contexts of sustainable tourism.

The practical implications of this study will lead to increased understanding and guidance for local communities surrounding LCT destinations, park and land managers, tour operators, and other stakeholders. LCT offers stakeholders a unique opportunity to educate and potentially positively influence the behavior of tourists. Exploring cognitive measures contributing to behavioral intentions to engage in LCT will highlight the importance of maintaining ecosystem

integrity while keeping the social and economic endeavors of the tourism industry prosperous. As Wilson, Espiner, Stewart, and Purdie (2014) point out, the ability to continue to attract visitors is vital to destination survival and economic stability for many countries that depend on tourism as their primary source of revenue. However, managing visitor expectations is becoming increasingly difficult with rapidly changing and deteriorating conditions. LCT sites managers face unique and significant challenges associated with maintaining appropriate access, visitor safety, and operational costs (Wilson, Espiner, Stewart, & Purdie, 2014).

Additionally, this study's findings can help stakeholders understand the educational opportunities within LCT (Dawson et al., 2011). Findings corroborate results from previous studies that personal norms play a critical role in affecting pro-environmental intentions (Han et al., 2017, 2018; Kiatkawsin & Han, 2018; Kim & Kim, 2018; Landon et al., 2018). Site managers for LCT destination can look at the models' variables and subsequent findings as a guide to steer tourists' intention in a manner that will maximize sustainable behaviors. Further evidence for site managers and policymakers is the finding that awareness of consequences leads to ascribed responsibility, which influences the activation of personal norms. This result further illustrates that parks and land managers should highlight the pressing need to conserve the environment and reduce the adverse consequences caused by unsustainable behavior.

As previously described in the first chapter, popular media is the dominating force behind most LCT marketing. The majority of media outlets seek to sensationalize the loss and degradation occurring as opposed to highlighting ways to mitigate impacts (Lemelin et al., 2010). The results of this study provide a basis for marketing LCT in a way that is both ethical and educational for the visitor. Land managers can accomplish this by targeting internal drivers (e.g. personal norms) of behavioral change as opposed to external drivers (e.g. signage, fines,

societal pressure) (Landon et al., 2019). Persuasive communication techniques that target personal norms could result in individual beliefs about personal responsibility and consequences to shift, thus initiating a change in behavior (Martin, Weiler, Reis, Dimmock, & Scherrer, 2017).

This study indicates emphasizing that individuals are responsible for protecting and conserving the environment, which activates personal norms and directly precedes behavioral intention. Stakeholders at LCT destinations could find this method especially useful, given our model indicates that individuals intending to behave in an environmentally-friendly manner are more likely to engage in LCT. Han & Hyun (2018) suggest a potential avenue for triggering personal norms in regards to conserving water is implementing signage conveying a moral norm message such as, "Saving water is the right thing to do" (p. 1448). Previous research by de Groot, Abrahase, and Jones (2013) supports the potential benefits of utilizing personal normative messaging in reducing shoppers' use of free plastic bags. Stakeholders could use a similar tactic in the context of LCT. For example, site managers could employ the use of moral norm triggering statements on signage to prompt visitors similarly. Highlighting the specific sustainable action to combat especially concerning threats to the local ecosystem (e.g., pollution, invasive species, habitat loss) may prove useful in regards to LCT. Managers could narrow the focus of the message to the specific LCT destination (e.g., "reduce your impact by recycling" or "save the sea turtles by reducing plastic waste").

<u>Limitations and Future Research</u>

This study is not without its limitations. As such, these limitations need addressing along with potential areas for future research. With such a perspective in mind, the research surrounding LCT can continue to grow and prosper. A commonly criticized limitation of the VBN model is that it falls short of predicting actual behavior (Landon et al., 2016; Lind,

Nordfjarn, Jorgensen, & Rundmo, 2015). This study advances the theoretical underpinnings of the model's variables; however, it lacks the ability to demonstrate a time-frame between behavioral intent and the occurrence of behavioral-action.

Ideally, a longitudinal study would be performed to assess actual behavior. To accomplish this study objective, data from the model's variables would have to be collected at different points in time, once before traveling to an LCT destination and at least once after visiting. Few studies in the fields of environmental conservation and travel and tourism have attempted this type of methodology, presumably due to the challenges involved with a longitudinal survey. It is vital to extend cross-sectional data longitudinally as the tenability of the VBN theory can only be tested and known over time through longitudinal research (van Riper & Kyle, 2014).

Future LCT research could follow the work of (Unanue, Vignoles, Dittmar, and Vansteenkiste, 2016). The researchers utilized a longitudinal design to assess the determinants of environmental behavior. Former university graduates were asked to complete a survey once yearly for three years. Over time, their findings revealed a measure of respondents' life goals was a better predictor of environmental behaviors than environmental worldviews. The authors' incorporated the NEP in their study along with measures for extrinsic life goals and environmental identification; however, they did not factor in values, beliefs, or personal norms. A longitudinal study incorporating the variables from the VBN to assess self-reported environmental behaviors after visiting an LCT destination would be an essential contribution to the field and solidify its practical applications for policymakers.

This study considered the relationship between intentions to behave in an environmentally-sustainable manner as a traveler and intentions to engage in LCT tourism

utilizing the variables in Stern's value-belief-norm model (Stern et al., 1999; Stern, 2000). While the statistical analysis indicated significant relationships between model constructs, we would be remiss if we did not include mention of other potential variables that could be added to the existing model to explain even more variance in individuals' intentions to engage in LCT. Critics of the VBN contend that the model relies too heavily on environmental considerations; therefore, factors like societal pressure, convenience, and other factors that are not psychological are not captured by the VBN (Yeboah & Kaplowitz, 2016; Ibtissem, 2010; Abrahamse, 2007; Diekmann & Preisendörfer, 2003). According to Prud'homme and Raymond (2013), socio-demographic factors could factor in pro-environmental behaviors. The authors assert that individuals with higher incomes and educational backgrounds are more likely to participate in sustainable tourism. Our data showed the median income and education of respondents to be $50,000 to $74,999 and a baccalaureate degree, respectively. Future research could explore if these socio-economic factors provide further insight for modeling intention to engage in LCT, which could help stakeholders tailor promotional and educational efforts.

There is some evidence that the VBN may not be able to fully capture all forms of environmental conservation, such as behaviors specific to energy conservation. Researchers utilizing the VBN framework for energy conservation behaviors reported a lower predicting power. Yeboah and Kaplowitz (2016) found a negative relationship between NEP and respondents' self-reported energy conservation behaviors. The authors suggest the VBN's attitudinal constructs result in an attenuated effect on energy conservation (2016).

To address concerns about VBN constructs and to potentially increase predictive power, future research should incorporate constructs from comparable behavioral theoretical models. Utilizing the sequential framework of the VBN with the addition of TPB variables to capture

attitudes toward behaviors and perceived behavioral control could help eliminate some of the limitations associated with employing the VBN by itself. Some existing work may help to set a precedent for this, therefore integrating the VBN theory with the Theory of Planned Behavior (TPB) (Azjen, 1991) could be an area of further exploration for LCT research. Several studies in environmental conservation and tourism literature have successfully merged the two models demonstrating increased predictive power in regards to environmental behavior and intention (Klöckner & Blöbaum, 2010; López-Mosquera & Sánchez, 2012; Klöckner, 2013; Han, 2015; Wan et al., 2017; Wittenberg et al., 2018; Gkargkavouzi, Halkos, & Matsiori, 2019). Han (2015) integrated the VBN and TPB to assess pro-environmental behavioral intentions among tourists, finding that significant interrelationships existed between variables in both models that lead to the activation of tourists' moral obligation to choose a green hotel. Similarly, Wittenberg et al. (2018) found that subjective norms activated personal norms, and perceived behavioral control directly predicted energy conservation behavior.

Another limitation of this work pertains to some issues with discriminant validity among constructs within the measurement model. In two instances, construct correlations exceeded the square root of the average variance extracted for constructs. For example, the correlation between ascription of responsibility and personal norms was higher than the square root of the AVE for ascription of responsibility. This may be explained by the strong relationship that exists between the constructs within the literature (Han, 2015; Kiatkawsin & Han, 2017), so much so, that often the most significant effect size reported within the model is demonstrated by ascription of responsibility explaining the variance in personal norms. The correlation between two of the environmentally-sustainable travel behaviors (e.g., eco-behavior and localism) exceeded the square root of the AVE for localism. This makes some intuitive sense given the two constructs

are measuring similar behavioral phenomena, and we would expect a stronger relationship between such constructs than with others in the model (Hair et al., 2010). Of the 55 possibilities (i.e., 55 distinct correlations between constructs as demonstrated within Table 4.) of running into these concerns, only twice was it problematic. However, future research should monitor these correlations between constructs to determine if such relationships persist. If they do, researchers may need to consider if particular items are contributing to the concern and potentially remove them.

Limitations also exist from using national panel surveys like the one used in this study. 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, Roster, Golden, & Albaum, 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 (Golden & Brockett, 2009). 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. Further research would enhance our findings and be beneficial not only to LCT research and the

travel and tourism sector, but also other fields that could potentially adapt the model to their work.

This study intended to determine what drives potential LCT tourists' desires to engage in environmentally-responsible behavior, and, ultimately, their willingness or desire to travel to LCT destinations. The results of our study show the utility of using the VBN model to explore tourists' intentions to engage in pro-environmental behaviors. Understanding the antecedents to such intentions in the context of LCT could help cultivate more positive attitudes between LCT tourists, local communities, and other notable stakeholder groups. However, the success of LCT as an avenue for educational outreach and increased revenue for local businesses greatly depends on tourists' ability to engage in sustainable, eco-friendly behaviors while traveling. The present study successfully demonstrates a practical approach to explicate tourists' pro-sustainable behavior and intent to engage in LCT. As the model suggests, the key to fostering pro-environmental behaviors is focusing on the normative moral precursors of behavior.

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Appendix A

2019 U.S. Traveler Survey

1. Have you traveled **within** the United States (spending at least one night away from home in a hotel, motel, etc.) in the last 12 months? *(please check* ✓ *one)*　☐ Yes　☐ No

2. Have you traveled **outside of** the United States in the last 12 months? *(please check* ✓ *one)*　☐ Yes　☐ No

3. How important are each of the following statements as guiding principles in your life? (1 = *Not at all important* and 7 = *Very important*).

	Not at all important	Unimportant	Somewhat unimportant	Neither important or unimportant	Somewhat important	Important	Very important
Authority: the right to lead or command	1	2	3	4	5	6	7
Social Power: control over others and dominance	1	2	3	4	5	6	7
Influential: having an impact on people and events	1	2	3	4	5	6	7
A world at peace: a world free of war and conflict	1	2	3	4	5	6	7
Equality: equal opportunity for all	1	2	3	4	5	6	7
Social justice: correcting injustice, care for others	1	2	3	4	5	6	7
Unity with nature: fitting into nature	1	2	3	4	5	6	7
Protecting the environment: preserving nature	1	2	3	4	5	6	7
A world of beauty: beauty of nature and the arts	1	2	3	4	5	6	7

4. Please indicate your level of agreement with each of the following statements. (1 = *strongly disagree* and 7 = *strongly agree*).

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly agree
We are approaching the limit of the number of people the Earth can support	1	2	3	4	5	6	7
When humans interfere with nature in often produces	1	2	3	4	5	6	7
The Earth is like a spaceship with very limited room and resources	1	2	3	4	5	6	7
Plants and animals have as much right to exist as humans	1	2	3	4	5	6	7
The balance of nature is very delicate and easily upset	1	2	3	4	5	6	7
Humans were meant to rule over the rest of nature	1	2	3	4	5	6	7

5. To what extent do you agree that each of the following are problems created by travel and tourism?
(1 = *strongly disagree it is a problem* and 7 = *strongly agree it is a problem*).

	Strongly Disagree it is a problem	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree it is a problem
Carbon emissions from transportation (airplanes, cars, etc.)	1	2	3	4	5	6	7
Pollution of local environments	1	2	3	4	5	6	7
Destruction of native species' habitats	1	2	3	4	5	6	7
Waste (trash, sewage, etc.) coming from tourists	1	2	3	4	5	6	7
Water scarcity and overuse	1	2	3	4	5	6	7

6. Please indicate your agreement with each of the following statements.
(1 = *strongly disagree* and 7 = *strongly agree*).

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly Agree
It is my responsibility to minimize my impacts on the environment as a tourist	1	2	3	4	5	6	7
I feel jointly responsible for tourism impacts on the environment	1	2	3	4	5	6	7
Minimizing my impacts on the environment is in part my responsibility	1	2	3	4	5	6	7

As a tourist, I feel morally obligated to do whatever I can to minimize my environmental impact	1	2	3	4	5	6	7
I would feel guilty if I were responsible for damage to the environment as a tourist	1	2	3	4	5	6	7
Minimizing my impact on the environment is the right thing to do	1	2	3	4	5	6	7
I am obligated to do my part to reduce my impact on the environment as a tourist	1	2	3	4	5	6	7
People like me should do what they can to minimize their impact on the environment when traveling	1	2	3	4	5	6	7

7. Please indicate your agreement with each of the following statements measuring your willingness to choose sustainable tourism options. (1 = *strongly disagree* and 7 = *strongly agree*).

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly agree
I am willing to pay more for travel if it helps the environment	1	2	3	4	5	6	7
I am willing to purchase environmentally friendly tourism products even if they may be more expensive	1	2	3	4	5	6	7
I am willing to use environmentally friendly means of transportation although this might take more time	1	2	3	4	5	6	7
I am willing to pay more to stay at environmentally friendly accommodations	1	2	3	4	5	6	7
I am willing to use environmentally friendly means of transportation although this may be more expensive	1	2	3	4	5	6	7

8. The next time you travel, how likely are you to do the following? (1 = *Not at all likely* and 7 = *Very likely*).

	Highly unlikely	Unlikely	Somewhat unlikely	Neither likely or unlikely	Somewhat likely	Likely	Highly likely
Stay at locally owned accommodations	1	2	3	4	5	6	7
Eat locally sourced food	1	2	3	4	5	6	7
Hire local guide services/tour operators	1	2	3	4	5	6	7
Purchase locally produced crafts and goods	1	2	3	4	5	6	7
Separate recycling from waste	1	2	3	4	5	6	7
Purchase locally made alcohol	1	2	3	4	5	6	7
Reuse bath linens during consecutive days stayed at accommodations	1	2	3	4	5	6	7
Use eco-friendly tour operators	1	2	3	4	5	6	7

Use reusable shopping bags	1	2	3	4	5	6	7

Please consider the following definition of last chance tourism while answering question 9:

Last chance tourism describes tourists who are motivated to visit a particular

place of interest to observe, photograph, or interact with environments or

individual species that may be endangered or threatened because of the

belief that it will either cease to exist, or may not be possible to visit in the future.

Examples of last chance tourism destinations include *but are not limited* to the following:

Great Barrier Reef National Park, Australia; Amazon Rainforest, Brazil;

Everglades National Park, Florida; Congo Basin, Congo; Glacier National Park, Montana;

Galapagos Islands, Ecuador; Patagonian Ice Fields, Argentina; Athabasca Glacier, Canada;

Mt. Kilimanjaro, Tanzania; Choquequirao Archaeological Park, Peru

9. Please indicate your agreement with the following statements regarding **your intention to visit** a last chance tourism destination. (1 = *strongly disagree* and 7 = *strongly agree*).

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Agree	Strongly agree
I intend to travel for last chance tourism in the foreseeable future.	1	2	3	4	5	6	7
I plan to visit to a last chance tourism destination in the near future.	1	2	3	4	5	6	7
There is a high likelihood that I will visit a LCT destination within the foreseeable future.	1	2	3	4	5	6	7
I will visit a LCT destination within the next 12 months.	1	2	3	4	5	6	7

10. What is your gender? *(please check ✓ one)* ☐ Female ☐ Male ☐ Other ☐ Prefer not to answer

11. In what year were you born? _____ *(Please write in year of birth)*

12. Which of the following best describes your current relationship status? *(please check ✓ one)*
    ☐ Married ☐ Widowed ☐ Divorced ☐ Separated ☐ In a domestic partnership

    ☐ Single, but cohabiting with a significant other ☐ Single, never married

13. What is the highest level of education you have completed? *(please check ✓ one)*
    ☐ Less than high school ☐ High school ☐ Technical/vocational school/junior college ☐ Undergrad

    ☐ Graduate

14. What is your race/ethnicity? (*Please check all that apply*)
    ☐ American Indian or Alaska Native ☐ Asian ☐ Black or African American

    ☐ Native Hawaiian or Pacific Islander ☐ White

15. Would you consider yourself Hispanic/Latino? *(Please select one)* ☐ Yes ☐ No

16. What is your combined household income? *(please check ✓ one)*
    ☐ < $25k ☐ $25k - ☐ $50k - ☐ $75k - $99,999 ☐ $100k - ☐ $200k+

    $49,999 $74,999 $199,999

Thank you for completing the questionnaire!