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Deposited in *Repositório ISCTE-IUL*: 2024-09-09

Deposited version: Accepted Version

# Peer-review status of attached file:

Peer-reviewed

# Citation for published item:

Brochado, A. (2019). Nature-based experiences in tree houses: Guests' online reviews. Tourism Review. 74 (3), 310-326

# Further information on publisher's website:

10.1108/TR-10-2017-0162

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Brochado, A. (2019), Nature-based experiences in tree houses: guests' online reviews. Tourism Review, 74 (3), 310-326

# **Tourism Review**

Nature-based experiences in tree houses: guests' online reviews

#### Abstract

Purpose – This study aims to examine nature-based tourists' experiences in tree houses using user- generated content in Web reviews. The research objectives were to identify the main dimensions of tree house experiences and test whether these dimensions vary according to different traveller-type market segments. Design/methodology/approach – A sample of 722 Web reviews was analysed using mixed content analysis methods. Leximancer software provided computer-assisted qualitative data analysis that identified the main themes, after which further qualitative analysis identified the key narratives associated with experiences. Findings – The results reveal that tourists are extremely satisfied with their stays in tree houses. The main themes that encompass the dominant narratives are tree house, Costa Rica, staff, morning, walk, wildlife, rainforest, opportunity to learn, trip, experience and recommendation. The narratives vary according to type of traveller. Originality/alue – The valuable insidats animed emphasise the advantaces of using user-agenerated content in

opportunity to learn, trip, experience and recommendation. The narratives vary according to type of traveller. Originality/value – The valuable insights gained emphasise the advantages of using user-generated content in tourism studies. The results also offer a better understanding of the key dimensions of this type of nature-based tourism, including a graphic representation of the main themes and concepts in guests' narratives. In addition, the findings emphasise that nature-based tourists are not a homogeneous group and that they can be segmented according to type of traveller.

Keywords Content analysis, Experience, User-generated content, Nature-based tourism, Tree house

Paper type Research paper

### Introduction

Nature-based tourism encompasses all types of tourism in which nature and the outdoors are the primary attractions (Buckley, 2009). Nature-based tourism is a large, heterogeneous product sector that is considered part of the experience economy. Nature-based tourists are mainly from urban areas, and these travellers Buckley, 2012).

Visitors' experiences and satisfaction in nature-based tourism contexts are essential to the long-term success of this type of product (Ban and Ramsaran, 2017) and the sustainable management of tourism destinations (Moyle *et al.*, 2017) and the sustainable management of tourism destinations (Moyle *et al.*, 2017). Previous studies of guest satisfaction in nature-based tourism have mainly been based on quantitative research, such as surveys (Ban and Ramsaran, 2017; Brochado and Pereira, 2017; O' Neill *et al.*, 2010) and qualitative studies based on interviews (Chan and Baum, 2007). These studies have employed existing scales or developed new tools to measure customer satisfaction in different nature-based tourism contexts. For instance, Khan (2003) developed ECOSERV, Ban and Ramsaran (2017) created ECOPERF and Brochado and Pereira (2017) developed the GlampingPerf scale.

The settings studied within nature-based tourism have involved different countries, languages and housing traditions (Coghlan and Buckley, 2012). For instance, Lu and Stepchenkova (2012) and Ban and Ramsaran (2017) studied ecolodges, while

Brochado and Pereira (2017) focussed on glamping properties. The present study adds to the existing research by focussing on another type of accommodation that traditionally falls under the glamping label (Coghlan and Buckley, 2012): tree houses. These facilities offer uniquely intensive experiences and a feeling of being one with nature, which can trigger nostalgia rooted in guests' childhood (Brochado and Pereira, 2017).

In another relevant line of research on nature-based tourism, Chen *et al.* (2016) concluded that types of traveller (i.e. travelling alone or with children, friends or partners) are efficient market segmentation variables useful to service providers targeting nature-based tourists. In previous studies (Brochado and Pereira, 2017; Moore *et al.*, 2015), researchers have called for more market segmentation studies in nature-based tourism contexts. The present research thus sought, as suggested by Brochado and Pereira (2017), to test whether the importance of nature-based experiences' main dimensions varies according to travellers' profile.

Tourists share different content online such as photos, videos and texts (Hausmann *et al.*, 2018), which are referred to in the literature as "user-generated content" (Brochado *et al.*, 2017; Lupu *et al.*, 2017). Recent studies have highlighted the advantages of analysing this content, including travellers' ratings (Viglia *et al.*, 2016) and reviews (Zhang and Cole, 2016). In nature-based tourism contexts, Lu and Stepchenkova's (2012) research is a prime example of relying on user-generated content to study tourists' satisfaction with their travel experiences.

Notably, Hausmann *et al.* (2018) found that no significant differences exist between tourists' preferences regarding nature-based experiences shared in social media platforms versus preferences reported in surveys. According to Filieri and McLeay (2014), travel reviews' use and diffusion are constantly growing, while Akehurst (2009) reports that peer-to-peer content is often perceived as more credible than companies' traditional modes of communication. Researchers have also noted that social media data analysis is less expensive, allowing for more specific and extensive coverage across time (Wood *et al.*, 2013).

The present study's primary objective was, therefore, to identify the main themes and concepts in different types of travellers' reports about their nature-based experiences by using content analysis of data collected from a popular travel review website. The specific context this research targeted was tree houses in Costa Rica, as a prime example of nature-based tourism. The current study sought to answer the following research questions:

*RQ1.* What are the main themes in online narratives shared by nature-based tourists and, more specifically, those staying in tree houses?

*R02.* What are the main themes shared online by each type of traveller in this context?

To present the results as clearly as possible, this paper is structured as follows. The next section provides a literature review regarding nature-based tourism and tourists and a broad overview of service quality studies in this sector. The third section describes the data collection methodology and strategy used to perform a mixed content analysis of relevant Costa Rica Web reviews. A concept map is presented that identifies the main dimensions of tree house experiences. This paper ends with the study's theoretical and managerial implications for nature-based tourism, as well as limitations and avenues for future research.

#### Literature review

#### Nature-based tourism

Nature-based tourism is now recognised as an important and growing sector of the tourism industry. This category of tourism has grown in terms of economic significance on a global scale (O'Neill *et al.*, 2010), and several researchers (Balmford *et al.*, 2009) have emphasised that nature-based tourism contributes substantially to host economies.

Nature-based tourism has thus become one of the most significant areas of research in tourism studies.

This tourism sector has been defined in various ways (Lundberg and Fredman, 2012) that, in general, highlight tourists' enjoyment of what they understand to be a different and usually purer and more serene natural environment (0' Neill *et al.*, 2010). Nature-based tourism, therefore, is a quite broadly defined, comprehensive term that encompasses all forms of tourism in which natural environments form the primary attraction or setting (Buckley, 2009), particularly where nature is in an undisturbed or pristine state (Buckley, 2009).

This comprehensive construct includes many different subsectors with widely different histories and traditions (Coghlan and Buckley, 2012), ranging from adventurous, predatory and consumptive activities to non-consumptive contemplative, spiritual and protective activities. Thus, nature-based tourism reflects various elements of several alternative forms of tourism including ecotourism, conservation tourism, adventure tourism, sustainable tourism and even cultural tourism. In the broadest sense, this emerging form of tourism is consistent, according to 0' Neill *et al.* (2010, p. 143), with "natural, social and community values which allow both hosts and guests to enjoy positive and worthwhile interactions and shared experiences".

#### Nature-based tourists

Increasing numbers of tourists are driven to travel by a personal and interpersonal desire for escape, socialisation, freedom and discovery in natural contexts or by the allure of green, wide-open spaces and/or pristine environments. These visitors are also being pulled by nature-based product and service improvements (Brooker and Joppe, 2013; O' Neill *et al.*, 2010). Many travellers are thus turning to natural environments for their recreational pursuits (Akama and Kieti, 2003).

pursuits (Akama and Kieti, 2003). Just as nature-based tourism is a large, heterogeneous sector, nature-based tourists are also extremely diverse and varied in terms of their origins, interests, motivations and behaviours (Coghlan and Buckley, 2012; Mehmetoglu, 2007). The literature includes attempts to provide an empirical description of nature-based tourists' psychographics. For instance, Palacio and MoCool (1997) report that ecotourists in Belize look for benefits such as escapism, opportunities to learn about nature, health enhancement and cohesiveness. Meng *et al.* (2006) found that tourists in nature-based resorts are motivated by activities that include seeing nature and/or friends and novelty and/or romance. Luo and Deng's (2008) study, in turn, revealed that visitors of a national forest park look for knowledge, fitness, escape, novelty, self-development and/or a return to nature. Tian-Cole *et al.* (2002) identified visitors' experiences at wildlife refuges as driven by an appreciation of and/or opportunities to learn about nature, as well as achievement, introspection, nostalgia, escape, physical fitness and chances to meet new people.

The relationship between travel motivations and activities has been investigated empirically on a more general level in tourism and recreation studies. For example, Mehmetoglu and Normann (2013) examined the link between travel motivations, such as novelty, prestige and physical activity, and participation in activities, such as going on whale safaris, fishing and hiking, respectively. Various authors have also segmented the demand-side of naturebased tourism using values, demographics, activities, motivations and psychographic characteristics. For instance, Moscardo (2005) identified four lifestyle segments among the visitors to a wet tropics world heritage site in Australia, based on travel interests, activities and desired experiences.

In addition, Tangeland (2011) identified four main travel motivations in Norwegian outdoor recreation: new activities, social needs, skill development and quality improvement. The

cited author extracted five distinct visitor clusters based on these four motivations. Tangeland (2011) then profiled the five segments in terms of their consumption of a large number of activities such as hiking, climbing and rafting.

Using a somewhat different approach, Arnegger *et al.* (2010) created a matrix of travel service arrangements and travel motivations in order to characterise nature-based tourists. The cited researchers categorised service arrangements as standardised, customised, a la carte or independent and travel motivations as sports and adventure, hedonism, nature experience and nature protection. This approach resulted in a "pick and mix" model (Coghlan and Buckley, 2012) in which tourists can select different levels of engagement with nature.

Moyle *et al.* (2017) specifically studied preferences for different nature-based experiences in protected areas. The cited authors concluded that visitors prefer passive and/or low- intensity scenarios including waterfalls, picnics, views and short walks. Chen *et al.* (2016) also found that the activity preferences of nature-based tourists can be grouped according to seasons and vary according to traveller type, namely, travelling alone or with partners, children or friends.

#### Service quality in nature-based tourism

Service quality and satisfaction have received extensive attention in leisure, recreation and tourism research and, more recently, in nature-based tourism studies (Rivera and Croes, 2010; Weaver and Lawton, 2011). The evidence to date suggests that both service quality and satisfaction are important to understanding and managing visitors and enhancing their loyalty (O' Neill *et al.*, 2010). In addition, Jalilvand *et al.*'s (2017) study revealed that perceived corporate social responsibility (i.e. social, economic and environmental) has a positive impact on customers' trust in hotels.

Success in the provision of nature-based tourism is ultimately dependent upon levels of environmental quality and suitable levels of customer service. Various studies have attempted to identify the general dimensions of nature-based tourism experiences in different research contexts. An overview of a selection of these studies is provided below.

Backman *et al.* (2000) measured the service quality of nature-based tourism businesses in the state of South Carolina in the USA. The cited authors used five dimensions of service quality from SERVQUAL (i.e. tangibles, empathy, assurance, responsiveness and reliability) and an additional programme dimension. In contrast, Akama and Kieti (2003) applied all seven dimensions of SERVQUAL (i.e. price, empathy, assurance, tangibles, reliability, responsiveness and perceived value) and 29 attributes of tourists' expectations and perceptions in order to measure the quality of services. The cited study assessed visitors' overall satisfaction with the tourism products and services of a national park in Kenya. Akama and Kieti (2003) also added extra attributes to measure specific park quality-related attributes such as an adequate transport system, "uncrowded" and "unspoiled" park conditions and the convenient location of park facilities.

Khan (2003), in turn, developed an adapted version of SERVQUAL named ECOSERV to investigate the service quality expectations of ecotourists who are members of the Ecotourism Society and who live in the US. This scale comprises six service dimensions: empathy, assurance, reliability, responsiveness, tangibles and ecotangibles (i.e. sustainable and appropriate facilities and equipment). In addition, Moscardo (2005) measured perceived quality for rainforest tourists in Australia using a survey of eight features. These are overall rainforest environment, visitors' facilities, management of visitor impacts, rainforest interpretation, range of activities available, cleanliness of sites, ease of access to relevant information and usefulness of available information. Chan and Baum (2007) further identified expressive dimensions that describe the quality of ecotourism experiences in Sukau, Malaysia. These dimensions are ecotourism activities in which visitors physically engage with sites (e.g. wildlife observation, riverboat cruises and jungle walks), the natural environment in which they are located, interactions with site service staff, socialisation with other ecotourists and information acquired during visits. Both functional elements - provided by service suppliers - and affective and/or emotional elements - contributed by the ecotourists themselves - appear to be involved in evaluations of experiences' quality.

O' Neill *et al.* (2010) used another measurement instrument to assess camping visitors' satisfaction, which was developed for the particular service setting in question (i.e. outdoor camping environments in Alabama state parks, in the USA based on a survey. The cited authors' factor analysis revealed four components of service quality. These include people (i.e. softer and more personal people-oriented aspects of camping experiences), services (i.e. more process-oriented elements of service delivery), tangibles (i.e. more physically oriented aspects of camping experiences) and bathrooms (i.e. washrooms' availability and cleanliness).

In turn, Bastic and Gojcic (2012) developed and tested a scale for measuring the eco- components of hotel service quality - based on guests' ecological expectations of hotels with an eco-label in Austria and Slovenia. The findings reveal four dimensions of eco- components: bio-food, hotel staff's ecobehaviour, healthy and environmentally friendly equipment and an efficient use of energy and water.

Lu and Stepchenkova (2012) also identified 26 attributes that influence ecotourists' satisfaction with their ecolodge stays and aggregated the attributes into seven categories. The first two are ecolodge settings (i.e. noise, lodge amenities, other guests, ambiance, ecofriendliness and grounds and/or surroundings) and rooms (i.e. insect problems, room amenities, room and bathroom facilities and room and bathroom decor and layout). The third category is nature (i.e. weather, natural attractions and nature-based activities), while the fourth is services (i.e. extra services, restaurant services, customer service, tours and tour guide services, reservation processes and management policies). The final three categories are food (i.e. food quality), location (i.e. closeness to town, closeness to attractions and accessibility) and value for money (i.e. room rates, food and drink prices and other prices). The cited authors further classified these attributes as satisfiers, dissatisfiers, criticals and neutrals.

In addition, Ban and Ramsaran (2017) developed the ECOPERF scale to target service quality in ecolodges. This new tool extends SERQUAL and SERVPERF by adding three dimensions. These are eco-friendly practices (e.g. sustainable means to reduce energy and water consumption), eco-activities (e.g. nature-based, leisure, recreational and adventure activities) and eco-learning (e.g. ecological and/or environmental and cultural knowledge). Brochado and Pereira (2017) also developed a new measurement tool - GlampingExp - to assess glamping experiences. The cited study's exploratory factor analysis resulted in five service quality dimensions: tangibles, staff, nature-based experiences, food and activities.

The majority of these studies used surveys and factor analysis methods to identify or confirm dimensions of overall experiences (Ban and Ramsaran, 2017; Brochado and Pereira, 2017; Khan, 2003; Moscardo, 2005; O' Neill *et al.*, 2010). Among the exceptions are Chan and Baum's research (2007), which employed an exploratory qualitative method based on in-depth interviews, as well as Lu and Stepchenkova's (2012) study.

Notably, Moore *et al.* (2015) report that measurement issues in nature-based sector research continue to vex scholars. While service quality attributes have been examined in previous studies, various authors have suggested that the numerous identified dimensions still need to be validated in different settings (Moore *et al.*, 2015; 0' Neill *et al.*, 2010). More recently, researchers have also highlighted the role of user-generated content in service

quality studies. This content is a form of electronic word of mouth that is a particularly appropriate source of accessible, reliable, credible and readily available information for both consumers and researchers (Lu and Stepchenkova, 2012). User-generated content can thus be used to study consumer experiences, particularly as it has increased in volume in various tourism areas (Zhang and Cole, 2016). For instance, researchers have analysed online travel reviews in order to identify service attributes that are determinants of customer satisfaction, which can be used to improve service design (Zhang and Cole, 2016).

The present study, therefore, focussed on user-generated content on glamping accommodations (Brooker and Joppe, 2013), more specifically targeting tree houses. In addition, the current research followed Brochado and Pereira's (2017) recommendation and investigated whether the importance of the key dimensions of nature-based experiences varies according to nature-based travellers' profiles.

#### Methodology

#### Research context

The Central American country of Costa Rica covers only 0.03 per cent of the Earth's surface, but this nation shelters 5 per cent of the total existing biodiversity. Around 25 per cent of Costa Rica also encompasses conservation and protected natural areas (Honey, 1999). Thus, this country has one of the highest profiles worldwide as an ecotourism destination (Lai and Shafer, 2005).

Costa Rica's tourism industry has recently responded to a renewed interest in tree houses, which offer not only opportunities to experience a different lodging alternative but also a chance for visitors who care about forest conservation to sleep out in nature. The present study thus focussed on three tree house facilities located in Costa Rica: Finca Bellavista, the Tree House Lodge and the Tree House Hotel. The three tree houses selected were listed in the Google search engine's non-sponsored results.

According to its official website, Finca Bellavista is located in the province of Puntarenas, and the property encompasses over 500 acres, including an entire peninsula of rainforest mountain, frontage on two whitewater rivers, large trees, organic gardens and plentiful Costa Rican wildlife. This getaway in the tropics resulted from a desire to save the trees on the property by creating a treehouse village within them and promoting sustainable living. It has since become an off-grid paradise where people can live in the treetops and enjoy an out-of-the-ordinary life.

Amenities at the site include meals, farm-fresh produce, yoga classes, movie or relaxation nights and a network of zip lines and platforms that allow residents and visitors a unique, adventurous view of life in the rainforest. In addition, Finca Bellavista offers a variety of scenic ground trails and routes for owners and guests to access different parts of the community and enjoy the rainforest ambiance. The main facility is available year-round for guests to cook or buy meals, which are available in the community centre with advanced notice.

The second accommodations selected for study is the Tree House Lodge complex, which is located on a 10-acre oceanfront property with private beach access and a 300-meter beach front on the famous Punta Uva Beach, just south of Puerto Viejo in the province of Limon. The complex is a private, tranquil and relaxed place. Activities available on site include playing beach volleyball, kayaking and taking botanic garden walks and yoga classes, as well as sightseeing and going on adventure tours with partner companies and the Iguana Conservation Tour.

The lodge is committed to preserving the environment, and it has a Certificate for Sustainable Tourism at the five leaves level (i.e. the highest standard), so this tourism company's operations are a model of sustainability (The Tree House Lodge, 2016). The

Tree House Lodge also has a Certificate of Excellence from TripAdvisor, which has categorised the lodge as a platinum level GreenLeader (TripAdvisor, 2016a, 2016b).

The third facility selected was the Tree Houses Hotel, a bed and breakfast hotel in which all rooms are individual tree houses spread across 10 acres. The trees are a part of the rooms and high up in the Costa Rican rainforest, surrounded by a 70-acre wildlife refuge with a waterfall, a beautiful river and small dipping pools in which to swim. The hotel is located in the province of Alajuela, in the La Fortuna area. The property allows visitors to go birdwatching and enjoy wildlife (Tree Houses Hotel Costa Rica, 2016).

### Data collection and sample

The guests' Web reviews were collected from the website TripAdvisor, which is well known for its large number of reviews. Independent travel websites are considered more trustworthy by consumers, who have specifically reported that they consider TripAdvisor a neutral source of information (Filieri, 2016). The data were copied to an Excel file comprising the following columns: tree house property, data from review, title of review, review, quantitative rating (i.e. from 1 to 5) and client type (i.e. friends, couple or family). A total of 722 Web reviews were collected comprising 170,709 words. The sample includes all the reviews written in English about the three facilities selected, from January 2014 to June 2016 (Table I).

Most guests are couples (42.5 per cent) or families (34.1 per cent). Friends represent 13.2 per cent of the sample. The guests were extremely satisfied with their experiences, so 83.8 per cent rated them with a 5 out of 5 and 95.6 per cent rated them as a 4 or 5.

### Data treatment

The data were processed using mixed content analysis carried out with Leximancer. Leximancer is a relatively simple, flexible and comprehensive tool that does both natural language processing and text-mining, helping the researcher to analyse, visualise and interpret the content of the textual documents collected (Campbell *et al.*, 2011; Smith and Humphreys, 2006).

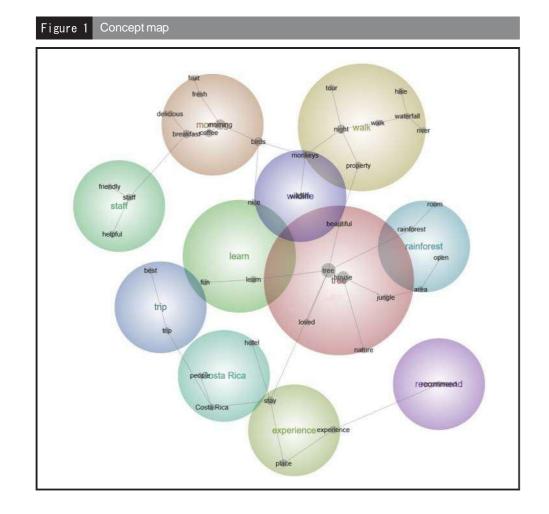
Other content analysis approaches have been quite successfully used to describe tourists' experiences, highlighting top word occurrences and co-occurrence by using text data mining algorithms (Siering *et al.*, 2018). In addition, previous studies have used factor analysis, such as CATPAC, WORDER and SPSS software in Stepchenkova and Morrison (2006) and Zhang and Cole's (2016) research. However, Leximancer software provides an inductive identification of themes with minimal manual intervention by the researcher, as compared with other content analysis techniques that require the researcher to develop a list of codes and rules before analysis (Tkaczynski *et al.*, 2015).

| Table I Sample profile |            |                      |        |                      |        |                       |        |                 |        |
|------------------------|------------|----------------------|--------|----------------------|--------|-----------------------|--------|-----------------|--------|
| Variable               | Tree house | Finca bellavista (%) |        | Tree house lodge (%) |        | Tree houses hotel (%) |        | Grand total (%) |        |
| Overall                | 1          | 1                    | 0. 6   | 3                    | 3. 6   | 2                     | 0.4    | 6               | 0.8    |
| satisfaction           |            |                      |        |                      |        |                       |        |                 |        |
|                        | 2          | 2                    | 1.2    | 4                    | 4.8    | 5                     | 1.0    | 11              | 1.5    |
|                        | 3          | 2                    | 1.2    | 4                    | 4.8    | 9                     | 1.9    | 15              | 2.1    |
|                        | 4          | 14                   | 8.7    | 16                   | 19.3   | 55                    | 11.5   | 85              | 11.8   |
|                        | 5          | 142                  | 88.2   | 56                   | 67.5   | 407                   | 85. 1  | 605             | 83.8   |
| Guest profile          | Couple     | 79                   | 49.1   | 39                   | 47.0   | 189                   | 39.5   | 307             | 42.5   |
|                        | Family     | 28                   | 17.4   | 26                   | 31.3   | 194                   | 40.6   | 246             | 34.1   |
|                        | Friends    | 27                   | 16.8   | 13                   | 15.7   | 55                    | 11.5   | 95              | 13. 2  |
|                        | Missing    | 27                   | 0.6    | 5                    | 0.6    | 40                    | 0.6    | 74              | 0.6    |
| Total                  |            | 161                  | 100. 0 | 83                   | 100. 0 | 478                   | 100. 0 | 722             | 100. 0 |

More specifically, Leximancer software for text analysis transforms lexical cooccurrence information from natural language texts in an electronic format into semantic patterns (Wu *et al.*, 2014). This software uses word association information to identify concepts automatically. These are then developed into a thesaurus via a learning process and grouped into themes based on how often they appear together in a block of text (Tkaczynski *et al.*, 2015; Wu *et al.*, 2014).

To facilitate this process, the present study conducted a spelling analysis before starting the main software-facilitated analysis and selected the Leximancer option "merge word variants". The following concepts were thus removed from the initial list provided by this software: down, everything, sure, take, thinks, time and sure.

Leximancer also provides a diagrammatic view of the data (i.e. a concept map), visually demonstrating how different concepts and themes are related and showing the relationships between them (Figure 1). This helps the researcher to gain insights and a fuller understanding of the data more efficiently through the processes of identifying key concepts and themes, viewing data in a graphical format and analysing the concepts whilst exploring the text for deeper contextual associations (Wu *et al.*, 2014). Larger circles represent the strongest and most frequently used concepts, which generally are also the most highly interconnected. Circles are overlaid to capture clusters of concepts that represent major themes in the content, and darker circles on the map indicate the increased importance of those themes (Campbell *et al.*, 2011). The proximity or distance between



concepts is indicative of the strength of relationships between them, meaning that concepts that are mentioned together in the text are also closer together or overlapping on the map.

Once Leximancer determines the set of concepts, the software attaches concept codes to individual segments of text (Tkaczynski *et al.*, 2015). In addition, the researcher can examine blocks of text that match each theme by using the query feature of Leximancer. As in previous tourism studies (cf. Brochado *et al.*, 2018; Brochado *et al.*, 2017; Lupu *et al.*, 2017; Pearce and Wu, 2016; Scott and Smith, 2005; Wu *et al.*, 2014), each theme can be described and illustrated with a set of narratives extracted from the Web reviews analysed.

### Results

The content analysis carried out on the 722 reviews employed mixed methods, the results of which are presented in this section. Leximancer first conducted gualitative content analysis that identified the main themes and concepts. Further analysis then produced a narrative description of each theme. The main themes identified are tree house, walk, experience, morning, opportunity to learn, Costa Rica, trip, staff, recommendation, wildlife and rainforest (Figure 1).

The tree house theme includes the concepts of tree house (count = 1,205; relevance = 100 per cent), beautiful (house) (263; 22 per cent), jungle (257; 21 per cent), love (239; 20 per cent) and nature (189; 16 per cent). In its broadest sense, this theme links tree houses with opportunities to live closely with nature.

A typical review reads, "I loved sitting in the Adirondack chairs on the wraparound porch and listening the sounds of the jungle". Another guest wrote, "[t]he house is built around a giant tree. We loved the opportunity to live with nature and the unique bird calls". A third reviewer said, "[t]he tree houses themselves are unbelievable, like they were crafted and pulled from a dream; although you feel tucked away and one with nature, the houses come with everything you could possibly need and more".

The tree houses also trigger feelings of nostalgia rooted in childhood. One guest shared, "[t] his is like a child's fantasy of a hotel room, with trees sprouting up from the floor, a toilet inside a tree trunk, and suspension bridges".

The walk theme encompasses the concepts of walk (586; 49 per cent), night (233; 19 per cent), property (322; 27 per cent), hike (291; 24 per cent), monkeys (237; 20 per cent), waterfall (193; 16 per cent), tour (239; 20 per cent) and river (152; 13 per cent). This second theme describes mainly the night-time experiences offered by the tree house properties. A typical review describes this theme as follows:

The night tour with Renaldo is not to be missed — this gold mine of local knowledge could spot sloths, rare frogs, armadillos and stick insects in the dark, and [he] stopped at nothing to make sure our curiosity was satisfied! The grounds are lovely, including the walk down to the river and the waterfall pools at the bottom of the property.

A further guest wrote, "[t]he property was just [large] enough to explore with a nice hike to the river and waterfall. The night tour with Rolando the night watchman was fun".

Still another traveller said:

There are a couple of hiking trails on the property, and we were lucky enough to see a troop of howler monkeys on our hike to the river. Do not pass up the night time walk with Rolando, there is so much to see at night and he knows where it all is!

An excited reviewer shared, "[w]e also saw monkeys on our walk around the property! The night hike was awesome!"

The experience theme, in turn, consists of the concepts of experience (562; 47 per cent), stay (531; 44 per cent) and place (494; 42 per cent), and this theme could be considered a

shortened version of the guests' overall experience. The theme links the tree house hotels to nature experiences. One related review reads, "[i]f you're interested in a unique experience in the jungle, this is a great place to stay". A further guest reported, "[t]his place is a must stay for any nature lover. You'll never have another experience quite like it". A third excerpt on this theme says, "I could go on and on, so to sum things up: if you want a nature filled hotel experience, this is the place to stay"!

The morning theme includes the concepts of morning (565; 47 per cent), birds (388; 32 per cent), breakfast (382; 32 per cent), coffee (304; 25 per cent), fruit (136; 11 per cent), fresh (fruit) (128; 11 per cent) and delicious (breakfast) (176; 15 per cent). In general, this theme links breakfast experiences in the morning with sensory experiences of tasting fresh, delicious fruit, smelling coffee and listening to the birds. The following review is a good example of this:

We had mango-stuffed "French toast" (Tuesday); rice and bean burritos served with a fantastic avocado salsa (Monday); gallo pinto with a fried egg and fried plantains (Wednesday); and our absolute favorite and hands-down our best meal of the whole week-long trip: fried plantain "cups" filled with beans and topped with cheese and salsa, along with scrambled eggs and strawberry rolls (Sunday). Each breakfast comes with fresh fruit, as well as OJ [orange juice], fruit juice, and coffee.

#### One guest shared:

[The food was made with such] a wonderful touch. The traditional breakfast was absolutely delicious, and served in an outdoor setting that is surrounded by fresh fruit left out to attract the stunning local birds.

#### Another reviewer wrote:

If we ever have a chance to stay here again, I would plan more "down time" - just sitting on the deck or in the Rancho (where breakfast is served) - to just enjoy and observe. And the breakfasts were delicious - freshly cooked, with fresh fruit and fruit juices and [a] delicious [selection of] coffees.

The opportunity to learn theme includes the concepts of learn(ing) (303; 23 per cent), nice (staff) (252; 21 per cent) and fun (251; 21 per cent), as illustrated by the following excerpts. A guest said, "[i]f you're an outdoors person, you'll love it here. This is a great place to bring kids to learn about nature, and outdoors". Another reviewer wrote:

All of our guides were friendly and on time, and we learned so much about the plants, animals, trees and history of the island that was so interesting to us! The treehouse is so unique and different than anywhere we have ever stayed before. Be prepared to have some stinky and moist clothes all week though due to rainforest humidity. However, it was surprisingly cool and non-buggy, which was wonderful, and we had great weather. [Our t]hanks go to a wonderful treehouse staff.

The Costa Rica theme encompasses the concepts of Costa Rica (293; 24 per cent), hotel (261: 22 per cent) and people (185: 15 per cent). Various guests highlighted in their reviews the link between the tree houses and Costa Rica. One reviewer said, "Treehouses Hotel gave us a wonderful introduction to Costa Rica, its amazing ecosystem, and beautiful people". Still another wrote, "[this is w]ay better than staying in a typical hotel setting. We felt like we really experienced Costa Rica"!

Another relevant review reads, "[t]hey set up a couple of tours for us, using local people and businesses. I wished we had stayed here longer; however, [we] did stay for our final three nights in Costa Rica". A final example is as follows:

Finca Bellavista is not for everyone as they say on their website, but if you want to experience something most will never [have] in the beautiful jungle of Costa Rica, GO [sic]! You will meet the nicest people you ever have [met], and experience something you never will again.

The trip theme includes the concepts of trip (308; 26 per cent) and best (stop) (192; 16 per cent), as shown in these excerpts. A guest asserted, "[t]hey are the best! We visited for two nights at the end of January, and it was the highlight of our trip"! Another reviewer said:

[We c]ame on our honeymoon, as we had never been to Costa Rica. We only stayed two nights as we had rented a car and intended to see more of the country. This was by far the best stop of the whole trip.

A further enthusiastic guest wrote, "[t]his was the best trip of our lives. [...] We will be back very soon!"

The staff theme includes the concepts of staff (342; 28 per cent), helpful (employees) (227; 19 per cent) and friendly (staff) (175; 15 per cent). One guest commented, "[t]he owner was personable and engaging, and the staff are all equally friendly and helpful". Another reviewer reported, "[t]he staff is very helpful, friendly and fun!" A similar comment in another review reads, "[t]he staff was very friendly and helpful." Still another guest said, "[t]here's so much to do and see, and the staff couldn't possibly be more friendly and helpful.

The recommendation theme and its concept of the same name (240: 20 per cent) describe a post-consumer experience phase of the reviewers. A guest stated, "I would recommend this experience to anyone with a sense of adventure and a love of nature". Another reviewer asserted, "I [would] recommend an experience like this for everyone!!" A related comment reads, "[I d]efinitely would recommend [this] to anyone looking for an alternative to the cookie cutter resorts". A final example is the guest who wrote, "I strongly recommend this place. We had the best honeymoon possible".

The wildlife theme and the concept of the same name (180: 14 per cent) appeared in many reviews. One reads, "[w]e spent most of our time on the huge deck, where we saw cool wildlife like armadillos. It is especially romantic in the evenings". Another guest stated, "[w] hen my son gets old enough to appreciate (and not accidentally threaten) the wildlife, we'll take him!" A final example is a reviewer who wrote, "[this is a r]emarkable property [in terms of] people, experience[s] and a great abundance of wildlife".

The rainforest theme includes the concepts of rainforest (217; 18 per cent), room (152; 13 per cent), area (121; 11 per cent) and open (107; 9 per cent). One guest shared:

By the second night, we noticed that it is surprisingly not scary sleeping so deep in the rainforest completely alone with no "real" building protecting us. (In front of our bed is a huge opening with sheer fabric drapes.) [There is d]efinitely a feeling of being one-with-nature [sic].

Another reviewer wrote, "[t]he shower [...] is screened in, so you feel like you are showering in the rainforest". Still another guest said, "[t]he open-air shower was incredible, [giving us a] feeling like being in the rainforest". A final relevant example reads:

We heard only the sounds of the rainforest; we had a great view out of all our windows (including the shower, which was surrounded by big windows but very private!) and a huge tree in the middle of the room!

The present study's second research objective was to determine whether different types of travellers share different narratives online about their experiences with tree houses. To answer RQ2, three tags were added that describe the reviewers' travel group: friends, couples and families. The results show that the most important theme and concept for all three groups is tree house. Families also frequently share narratives about the themes of opportunity to learn, staff, morning and trip. Friends are most likely to focus on the themes of walk and wildlife. Couples are more prone to sharing narratives about the rainforest, experiences and Costa Rica (Table II).

#### Conclusion

This research's first objective was to identify the main dimensions of tourists' nature-based experiences shared online, focussing in particular on guests of tree house facilities located in Costa Rica. Different types of glamping accommodations such as rainforest tree houses

| Table II Main themes and concepts by traveller type |  |   |  |  |  |  |  |
|---|--|---|--|--|--|--|--|
| Traveller type                                      | Theme                                  | Concept   |  |  |  |  |  |
| Couple  | Rainforest<br>Experience<br>Costa Rica | Rainforest (53%); open (54%), area (47%), room<br>(44%) Experience (43%), place (43%), stay<br>(43%) Costa Rica (48%), people (50%), hotel  |  |  |  |  |  |
| Family  | Learn<br>Trip<br>Staff<br>Morning      | (48%) Learn (49%); fun (34%)<br>Trip (40%); best<br>(36%) Staff (35%); helpful (37%),<br>friendly (31%)   |  |  |  |  |  |
| Friends   | Walk<br>Wildlif<br>e                   | Morning (37%), coffee (41%), breakfast (36%), fresh (31%), fruit (37%), delicious<br>(40%) Walk (14%), river (15%), waterfall (15%), hike (14%), tour (13%), property<br>(13%), night (11%) Wildlife (12%), monkeys (16%) |  |  |  |  |  |

are attractive destinations for nature-based tourists, who report high satisfaction levels with their experiences. The present results match the elevated satisfaction levels among visitors to the Australian rainforest reported by Moscardo (2005). Brochado *et al.* (2018) also reported extremely high levels of satisfaction with experiences of nature-based sports (i.e. surf camps).

#### Discussion

Mixed content analysis methods were employed to process the data. The analyses revealed 11 core themes mentioned when guests describe nature-based experiences in tree houses. Three themes are specifically related to the concepts of tropical tree houses, rainforest and wildlife, which describe the open accommodations (i.e. rooms and bathrooms) that allow guests to live comfortably with nature and appreciate it more fully. The additional facilities provided to visitors are identified as a feature that enhances tourists' perceptions of the quality of rainforest tourism.

Some of the identified themes have already been mentioned in previous studies, such as rainforest (Moscardo, 2005), wildlife (Chan and Baum, 2007), staff (Brochado and Pereira, 2017; Chan and Baum, 2007), walks and/or activities (Brochado and Pereira, 2017; Chan and Baum, 2007; Moscardo, 2005) and opportunities to learn (Chan and Baum, 2007). However, the present study identified two new themes. The first is tree houses, which links the accommodations in question with the rainforest, jungle and nature, and the second theme is Costa Rica, which highlights the role of interactions with local people and businesses that add to nature-based experiences. Experiences in tree houses are recalled as the best part of trips, and positive experiences with locals appear to improve the host country's brand image for guests.

As user-generated content is written in the post-purchase phase, an additional significant theme is that tourists recommend the tree house facilities and host country. Service quality dimensions, therefore, have a positive effect on destination image (Akroush *et al.*, 2016). Guests include the themes of trip, experience and recommendation when recalling their overall best trips and experiences, as well as when assessing these for other travellers. Thus, these themes are linked with their related concepts in Web reviews, which are shared in the post-purchase phase.

Tree houses trigger intense feelings. Although previous studies have included dimensions that describe eco activities overall (Moscardo, 2005), the present study found two themes emphasising the activities offered in the morning and those occurring at night. Morning experiences are associated with the senses, such as the sound of birds singing and the taste of delicious breakfasts made with fresh ingredients. The role of bio-food and food quality in tourist experiences has also been confirmed by previous research (Bastic and Gojc c', 2012; Lu and Stepchenkova, 2012). The current study further found that favourite

night time experiences include walking tours and the properties' natural scenery (i.e. waterfalls and rivers).

This research study's results also show that the overall range of activities available to guests is an important way to generate satisfaction, which is in accordance with previous studies on nature-based tourism (Moscardo, 2005). For example, eco-activities such as jungle walks are important because visitors physically engage with the natural environment (Ban and Ramsaran, 2017; Chan and Baum, 2007). In addition, the current study found that fun and learning experiences are also associated with tree house facilities. According to the reviews under study, both adults and children learn about the host country (i.e. Costa Rica), wildlife and rainforest during their visit.

Other researchers have found evidence confirming that ecotourists are looking for opportunities to learn about nature (Khan, 2003). Chan and Baum (2007), for instance, identified information acquired during trips as an important dimension. Acquiring ecological and environmental knowledge (i.e. eco-learning) is a dimension of the ECOPERF scale (Ban and Ramsaran, 2017).

Another theme identified in the present research is linked with the staff, who are described as friendly and helpful. Interactions with facilities' service staff have been previously identified as an important dimension of ecotourism experiences (Ban and Ramsaran, 2017; Chan and Baum, 2007). This dimension also covers the dissemination of environmental ethics and business owners' values (Bowles and Ruhanen, 2018).

The current study's second objective was to identify whether guests' narratives vary according to type of traveller. The results confirm that traveller type is an important market segmentation variable in nature-based tourism (Chen *et al.*, 2016). The present analyses revealed that, although the tree house theme is the most important for all traveller categories, differences appear in the key themes that describe their experiences. As mentioned previously, couples more frequently share narratives about the rainforest and their stay. Families write about their opportunities to learn and breakfasts in the jungle, while friends talk about their physical engagement with the jungle through activities such as walking and hiking.

*Theoretical implications.* This study's results contribute to the literature in several ways. The research focussed on a specific type of glamping accommodation: tree houses. The valuable insights gained provide further support for the advantages of analysing user- generated content in tourism studies instead of data from surveys and in-depth interviews conducted by researchers. The results offer a better understanding of the main themes in guests' narratives about this type of nature-based tourism, including a graphic representation of the key themes and concepts.

The identified themes are in accordance with the dimensions of nature-based experiences found by previous studies (Ban and Ramsaran, 2017; Brochado and Pereira, 2017; Chan and Baum, 2007; Lu and Stepchenkova, 2012). However, the present results highlight specific components of nature-based experiences that could be included in new or adapted scales developed for this sector. Besides confirming the dimensions of ecotourism experiences reported by Chan and Baum (2007), the current results further suggest that interactive dimensions should include not only wildlife, staff and group members but also opportunities to meet local people. Thus, locals need to be incorporated as a component of eco-learning and can enhance destinations' brand image.

In contrast to the present study, Lu and Stepchenkova's (2012) study only considered other guests in the dimension of eco-lodge settings and the staff in the dimension of customer and/or tour guide services. The cited research also failed to include the staff's perceived characteristics, such as helpful and friendly, which are highlighted in the current findings.

Tree houses have been considered part of the glamping category (Brochado and Pereira, 2017), for which previous studies' results have highlighted the role of lodging amenities (Ban and Ramsaran, 2017; Lu and Stepchenkova, 2012). However, most of these amenities (e.g. spas) do not apply to the tree house concept. According to the present research's results, tree house accommodations link guests more closely with nature, allowing experiences to last over the entire 24 h of each day and giving travellers the feeling of living in a rainforest. The openness of tree houses uniquely offers guests opportunities to listen to nature's sounds and to observe wildlife, thereby appealing to tourists through sensory experiences.

Managerial implications. This study's results also have managerial implications. Managers offering innovative types of rainforest accommodations such as tree houses must be aware that their offer must be genuinely nature-based to allow guests to live in the rainforest and watch wildlife all day. More specifically, the quality of experiences reported in Web reviews appears to be linked to sensory experiences, such as hearing animal sounds, tasting fresh food and observing nature.

In addition, activities such as walking and hiking allow guests to observe and come closer to nature. As narratives about these nature-based activities are quite often shared online by guests travelling with friends, managers can develop experience packages targeting this group. In contrast, families report opportunities to learn as an important dimension, which gives managers an opportunity to develop offers emphasising learning experiences focussed on biodiversity for parents and children. Therefore, activities, guides and staff should be properly trained in order to enhance these guests' knowledge about the region, country (i.e. Costa Rica), wildlife and rainforest.

Finally, as couples value their stays in tree houses and continuous contact with nature, managers could design tree houses especially targeting this market segment. Nature- based tourists staying in tree houses are apparently not a homogeneous group. Thus, managers can make the most of opportunities for segmentation according to different types of travellers' most frequent themes in narratives shared online.

*Limitations and avenues for future research.* While this study's findings make significant contributions to a fuller understanding of nature-based tourism experiences' dimensions, some limitations need to be considered when interpreting these results. The analyses were conducted based on data generated by visitors who shared online reviews written in English, so the findings cannot be directly generalised to all guests of nature-based accommodations. Another limitation, the three tree houses are located in a single country: Costa Rica.

Based on the present results and the studies reviewed (Ban and Ramsaran, 2017; Lu and Stepchenkova, 2012), the various themes identified by the current research could apply to other research contexts in nature-based tourism. However, the concepts that describe travellers' experiences may vary in different settings. As the present research focussed on a specific country, further studies are needed to test whether these themes are geographically restricted (e.g. local fauna and flora). In addition, given a larger sample, future research needs to identify the main themes and narratives linked with both satisfaction and dissatisfaction. Finally, another area that merits further study is the sensory experiences linked with nature-based tourism. Web reviews could thus be complemented with other user-generated content, such as photos.

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