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**TOURISTS' EXPERIENCES OF RECREATION SPACES IN AUSTRALIA'S WET  
TROPICS**

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**Amy M. Osmond\***

Postdoctoral researcher

College of Business, Law and Governance, James Cook University, Townsville, Australia

amy.osmond@jcu.edu.au

Mail: C/O College of Business, Law and Governance, James Cook University, 1 James Cook  
Drive, Townsville, Queensland, Australia 4811

**Tingzhen Chen**

Postdoctoral researcher

College of Business, Law and Governance, James Cook University, Townsville, Australia

tingzhen.chen@jcu.edu.au

**\*Corresponding author**

## **Abstract**

People are increasingly engaging in recreational activities in nature. Preferences for recreation opportunities are, however, changing over time and among different people. Furthermore, different settings offer unique combinations of attributes; these attributes generate occasions for tourists to achieve particular recreation experiences albeit tourists create experiences differently. The current study investigated tourists' travel reviews of recreation opportunities in Australia's Wet Tropics. Drawing on two land and activity categorisation systems, the research explored tourists' reported experiences and interests across different natural environment leisure settings. The overall objective of the paper was to explore the setting-experience relationship by identifying differences in tourists' reported experiences according to setting attributes and personal characteristics. Leximancer analysis of over 2,000 TripAdvisor reviews (posted 2010-2012) was conducted on 11 tourist attractions in far north Queensland. Overall, tourists describe their experiences of different Wet Tropics' leisure settings in a relatively similar manner, with some distinctive features highlighted for each attraction. In particular, tourists commented about a variety of visit components including natural elements, supporting infrastructure, experiential aspects, as well as their feelings/impressions. Furthermore, differences were noticed when the attraction visits were explored according to various personal characteristics. Findings from the study offer useful directions in further developing, promoting and managing Wet Tropics attractions which offer diverse experiences in different recreation settings.

**Keywords:** Recreation Opportunity Spectrum; Preferences of Recreationists; Wet Tropics; tourist experience; TripAdvisor.

## Introduction

Tourists' experiences of recreation settings are increasingly diversified. In a broader sense, the spaces where recreation occurs can be distinguished by their setting attributes. That is, different biophysical, social and managerial attributes facilitate the possible range of recreation opportunities at any given site (Clark & Stankey, 1979; Hendee, Gale & Catton, 1971). For example, hiking by oneself in a rainforest would provide an entirely different experience to hiking with a group along a beach (Cole & Hall, 2009). Recreation experiences, therefore, can be dependent upon the setting(s) in which they are encountered. Managers need to understand how experiences of a region change according to individual settings and what factors shape tourists' experiences in order to appreciate nature-based recreation (Dorwart, Moore & Leung, 2010).

On the other hand – in a more intricate manner – recreation experiences can also be constructed differently through the recreationists themselves. Individuals can create personalised (and often diverse) experiences by drawing on any number of setting attributes (Eagles & McCool, 2003). For example, some beach recreationists might seek relaxation through sunbathing while others might desire health benefits by undertaking swimming or more involved sports like volleyball. Natural encounters might provoke certain affective responses, where individuals have divergent value orientations such as naturalistic, aesthetic, humanistic or negativist (Hill, Curtin & Gough, 2014). Thus, the level of enjoyment and satisfaction experienced by recreationists at the same site will inevitably vary. Recreation area managers need to understand how individual tourists experience and respond to these setting attributes.

Accordingly, this paper aims to connect the outdoor recreation and tourist experience literature by exploring tourists' reported experiences of recreation areas in Australia's Wet Tropics. In particular, the study focuses on 11 different nature-based sites, which are compared through different setting attributes (based accordingly to Recreation Opportunity Spectrum and Preferences of Recreationists) and tourist characteristics (i.e., origin, satisfaction rating). The examination provides insights into what aspects feature strongly in tourists' reported recreation experiences, and how those experiences might differ according to setting attributes and personal characteristics. This double-pronged, experience-based approach can help managers to appreciate the dynamic nature of the Wet Tropics' recreation offering and to improve overall destination management and marketing programs.

#### Recreation-based research and frameworks

Historically, recreation research has been conducted from an ecological viewpoint, with social science perspectives emerging from the late 1960s (Manning, 1985). Researchers in this field have since identified four separate facets of recreation opportunities: setting, activity, experience and benefit opportunities. Settings and activities are considered to be *inputs* that can produce recreation opportunities, while experiences and benefits are determined to be *outputs* arising from the production process (Pierskalla, Lee, Stein, Anderson & Nickerson, 2004). Inputs are largely under the control of area managers and include the situational and behavioural aspects of the recreation opportunity. Outputs, on the other hand, are realised in the moment and are thus difficult to control. These include the psychological outcomes and the advantageous change of state and/or condition derived from the recreation opportunity. Recreation is often examined in terms of the relationship between inputs versus outputs.

One assumption is that recreation inputs strongly influence recreation outputs. Individual settings are based on alternative arrangements of environmental, social and managerial attributes (Manning, 1985) that facilitate a spectrum of recreation opportunities. The control and shaping of setting attributes - through management practices - is assumed to influence the outcomes (Cole & Hall, 2009; Pierskalla et al., 2004). That is, the experiences and benefits derived from the setting will change according to participation in different kinds and styles of activities and settings (Clark & Stankey, 1979). Thus, a majority of recreation research has used inputs (i.e., setting attributes, facilities or activities) as a measure to assess outputs (i.e., experience, satisfaction or benefits). Diversity in recreation areas and activities, however, suggest that classification systems and/or frameworks are an important albeit challenging task for meaningful analysis (Clawson & Knetsch, 1963; Hendee et al., 1971). Several recreation based models have sought to measure these four facets of recreation opportunities. Two models which will be employed in the current work are the Recreation Opportunity Spectrum and the Preferences of Recreationists.

Recreation Opportunity Spectrum (ROS) is a conceptual framework that presents a continuum of recreation opportunity classes. Each class is based on different combinations of activity and setting opportunities, considered in turn with the physical, social and managerial requirements of the area (Pierskalla et al., 2004). Two groups of researchers have simultaneously developed the ROS: Clark and Stankey (1979) and Brown, Driver and McConnell (1978). Brown et al. (1978) attempt to empirically (or descriptively) link the setting to the derived outcomes while Clark and Stankey (1979) take a more applied approach (Manning, 1986). The current study employs Brown et al.'s (1978) work which includes six

different settings in order of most natural to most developed: primitive; semi-primitive (non-motorised); semi-primitive (motorised); rustic; concentrated; and modern.

Preferences of Recreationists (PoR), on the other hand, describes a typology of preferred recreation activities. Recreationists are believed to participate in specific activities, at desired locations, for anticipated outcomes (Pierskalla et al., 2004). This typology, developed by Hendee et al. (1971), classifies stated preferences of recreationists into different activity groups based on the purpose and level of required effort. Altogether, five conceptually linked groups of activities were established: appreciative-symbolic; extractive-symbolic; passive free-play; sociable learning; and active-expressive.

The ROS and PoR are effective tools for recreation managers in terms of evaluating recreation inputs into the experience. One criticism, however, is that these frameworks are built around a single aspect and do not consider the relationships between activities, settings, experiences and benefits. In addition, the ROS is a static concept and thus not adaptable to the dynamic nature of the recreation experience. For this study, aspects of the two models were integrated together to form a comprehensive and accommodating setting classification system. Selection of these two frameworks was due to the fact that both have been widely applied and provide a spectrum of opportunities; the spectrum of the ROS is according to setting characteristics (from pristine nature to highly urbanised) while the spectrum of the PoR is according to stated activity preferences (from reserved observation to involved engagement). The combination of the frameworks was believed to provide an informed assessment of the setting-experience relationship.

Later work has revealed a necessity to perceive recreation beyond an activity derived from a setting and more towards an inclusive experience within a setting (Budruk & Wilhelm Stanis, 2013). Indeed, Pietilä and Kangas (2015) argue that “recreation research and management has been dominated by a goal-directed approach that simplifies the experience construction process” (p.26). Fix, Carroll and Harrington (2013) also suggest that more work needs to be done to refine the measurement of the setting-experience relationship. For this study, an indirect, experience-based approach was undertaken to explore the setting-experience relationship. Indirect, experience-based approaches focus on the quintessence of the experience itself and allow respondents to more freely describe their experiences (Pietilä & Kangas, 2015). Perspectives gathered through these tourist-informed methods provide additional insights into experiences and activities that are occurring but might not have been conceived by management. Similarly, these more qualitative style methodologies can identify new factors shaping the experience, which provides a more comprehensive exploration of recreation opportunities (Fix et al., 2013; Pierskalla et al., 2004).

User generated content (UGC) allows researchers to explore the dynamic nature of the tourist experience and to understand travel patterns (Moscardo & Benckendorff, 2010; Agichtein, Gabrilovich & Zha, 2009). In particular, it is believed that UGC as a way for understanding tourist experiences is more representative of actual and situated touristic mindsets when compared to traditional data sources (Mkono, Markwell & Wilson, 2013). Due to relative anonymity of social media, users feel liberty to express their opinions and experiences in a public platform online (Kozinets, 2002). In this case, the experiences tourists share online are normally extensively detailed and quite reflexive, which makes them a data rich source (Mkono & Tribe, 2016; Kozinets, 2002). Thus, exploring recreation through tourists’ unelicited experiences offers an avenue for new insight.

### *Defining the research aims*

Drawing on these ideas, the current work seeks to conduct research which integrates tourism experience and outdoor recreation. Some of the first interest in the interaction between recreation and tourism appeared to be linked to the perceived impacts of tourism on recreation opportunities (Lankford, Williams & Knowles-Lankford, 1997). Recreation analyses have focussed on estimating recreation value, exploring sustainable host community-tourism development, and identifying environmental impacts of recreation pursuits. The focus of the current work, however, is to extend research into the setting-experience relationship. Previous investigations in this area have sought to (1) identify the important qualities and characteristics of tourist experiences, (2) determine the effects of setting attributes on tourist experiences, and (3) explore the influence of setting attributes on experience quality (see commentary in Cole & Hall, 2009, p.25).

The current study analyses UGC to explore the dominant concepts and phrases used by tourists in reporting their recreation experiences of Australia's Wet Tropics. Specifically, the main objective is to identify differences in tourists' reported experiences according to setting attributes and personal characteristics. This is evaluated through two aims. Firstly, the paper aims to explore what factors tourists reflect upon in their experiences, and whether these factors are unique to different settings. It is important to apply a broad perspective because provided activities represent only a small array of the possible experiences, where the quality of these experiences depends on the setting conditions (cf. Cole & Hall, 2009). Individual settings have been classified through application of the ROS and PoR frameworks (see *site selection and recreation setting classification*). Secondly, the paper aims to determine how

experiences are reported differently due to personal characteristics. Differences between individuals warrants more attention because people engage in particular activities, in desired settings, for positive experiences, and expected benefits (Pierskalla et al., 2004). Tourists' overall evaluation of the experience and tourists' place of origin are explored in the current work.

### *Site selection and recreation setting classification*

Australia's Wet Tropics is a World Heritage listed area abundant with ancient rainforests, rugged gorges, wetland and coastal beaches. Located in far north Queensland, this area is especially renowned as a place 'where the rainforest meets the reef' and a tropical tourist hot spot. Previous recreation research conducted in this destination, although few in number, has generally explored the economic value of recreation opportunities (see Cook, 2008; Driml, 2002; Nillesen, Wessler & Cook, 2005). The selection of this region to explore recreation opportunities at tourist attractions was primarily literature informed. Manning (1986, p.123) describes a series of steps in managing recreation areas. In particular, step one – inventory existing recreation conditions – provided appropriate judgement criteria for selecting a study site (more details available from the research team on request). Consequently, 11 tourist attractions were selected to represent the diversity of recreation opportunities available. Table 1 profiles the individual Wet Tropics' tourist attractions included in the analysis.

<Insert Table 1 about here>

To explore tourists' perspectives of recreation opportunities, each attraction was assigned a recreation setting classification. These classifications were determined based on the authors'

knowledge of the sites and initial analysis of reported experiences. Table 2 describes the researcher-defined recreation setting classifications (which were informed by the ROS and PoR works) and the representative Wet Tropics' attractions.

<Insert Table 2 about here>

## Methodology

The data set for this study was compiled from UGC posted on popular online travel site – TripAdvisor. UGC has been identified as an effective data source for researchers, marketing and management personnel to analyse tourists' and/or consumers' behaviour and experiences (Phillips, Barnes, Zigan & Schegg, 2016). One concern with using UGC data is the reliability of the site. TripAdvisor was selected for this study as it is one of the world's largest travel sites, which enables users to plan and book trips as well as read fellow users' advice (TripAdvisor Inc., 2015). Furthermore, the credibility of TripAdvisor as a data source to address further research and marketing issues with respect to tourism inquiry has been validated through previous research (see Amaral, Tiago & Tiago, 2014; Aveh, Au & Law, 2013; O'Connor, 2010).

Specifically, data detailing tourists' experiences of recreation areas in Australia's Wet Tropics were collected during May 2015 via a three-stage process. Firstly, "Cairns region" was entered into the *near* search engine, followed by selecting "things to do" in the *find* search engine. The original 124 returned results were filtered down to 'things' (hereafter referred to as attractions) which were located within the boundary of the Wet Tropics and were nature-oriented. Secondly, based on the authors' experience and knowledge of the Wet

Tropics, the list was further refined to 11 attractions that represented the full recreation offering of the destination. Furthermore, most of the selected attractions were popular with large amounts of posted reviews. Thirdly, the date range for posted reviews was determined by noticeable differences in review behaviour; 2010 indicated tourists' early interest across the Wet Tropics' attractions and 2012 saw a relatively large number of reviews posted. Hence, the final data set included travel reviews posted 2010-2012 for the 11 selected attractions (see Table 3).

<Insert Table 3 about here>

Personal characteristics obtained from online mediums are not always entirely accurate or representative. The provision of personal information might be an optional choice for users on some Web 2.0 applications, with users potentially creating a pseudo persona to protect their identity. For this study, data were obtained from the reviewer profile only. In particular, information on the reviewer's home location, attraction rating, and year of review were collected. Occasionally, no information was provided. Tables 4 and 5 display the TripAdvisor profile for each attraction according to different factors.

<Insert Table 4 about here>

<Insert Table 5 about here>

Data were analysed and compared using Leximancer 4.0. Leximancer is a text analytics tool that measures (and visually displays) concepts based on both their presence within the text and how they co-occur or interrelate (Leximancer Pty Ltd, 2011). Specifically, Leximancer

utilises heat-mapping to demonstrate connections between concepts; more frequently occurring themes are represented with warm colours and displayed around the centre, while less occurring themes are portrayed with cool colours and located towards the periphery (Angus-Leppan, Benn & Young, 2010).

To achieve preliminary insight into the TripAdvisor data, initial exploratory analysis was conducted. The original concept map revealed a necessity for a number of user-manipulated configurations in order to enhance meaningful interpretation. In particular, adjustments were made to compliment the nature of the data (i.e., unstructured, grammatically inconsistent, and typically ‘SMS’ style) which included: (1) setting ‘prose test threshold’ to 0 and turning off ‘break at paragraph’, ‘auto-paragraphing’ and ‘boilerpoint cutoff’, (2) lowering ‘duplicate text sensitivity, and (3) allowing ‘identify name-like concepts’ and ‘merge word variants’. These configurations were applied to all subsequent analyses. In addition, some further intervention (e.g., editing concept seeds, theme size adjustments) was required in order to accurately reflect travel review data for individual concept maps. These final alterations were determined through the researchers’ first-hand knowledge of reading the data.

For aim 2 – exploring differences among tourists – Leximancer’s Insight Dashboard was further consulted. This dashboard provides other outputs which statistically evaluate the relative frequency and strength between prominent themes and concepts across different categories. Relative frequency is used to measure a conditional probability of the chance that a given attribute is coded in a text excerpt, whereas the strength score represents the reciprocal conditional probability. Strong concepts, therefore, distinguish the given category from others regardless of whether the concepts are mentioned frequently or not. The

prominence scores (computed as the product of the strength and frequency) measure the correlation between the given concepts and the given category.

## Results

### *Tourists' reflections of different Wet Tropics' recreation opportunities*

The first aim of this study was to explore what factors tourists reflect upon from their recreation experiences in Australia's Wet Tropics. Specifically, the goal of aim one was two-fold. Initial efforts involved analysis of an overview concept map produced from data on the 11 attractions combined. Figure 1 displays the concepts (smaller grey nodes) and themes (larger shaded circles) generated about tourists' combined recreation experiences.

<Insert Figure 1 about here>

As illustrated in Figure 1, six themes were generated. The first identified theme 'essence' focused on describing the core of the Wet Tropics experience with concepts such as 'tropical', 'local', 'visit', and 'wonderful'. The second theme 'immersion' illustrated tourists' experiences of being fully submerged in the recreation offering. This theme includes reflections on the value of the area ('worth', 'free'), the time spent ('hours', 'time', 'day', 'car') and the distinctiveness of the area ('history', 'experience', 'best'). Thirdly, the theme 'setting experience' identified tourists' thoughts towards activities ('walk', 'swimming', 'fish') and natural features ('trees', 'water', 'rainforest', 'gorge'). The fourth theme 'reflection' described tourists' satisfaction or appraisal of the region ('recommend', 'trip', 'family', 'friendly'). The fifth theme 'setting features' identified the supporting

infrastructure to the experience ('shops', 'food') and the connectivity of places ('Port Douglas', 'town'). Lastly, the theme 'specialties' reflected on the uniqueness of the area.

The proximity of concepts indicates the extent to which concepts appear in similar contexts (Angus-Leppan et al., 2010). As seen in Figure 1, 'worth', 'wonderful', 'amazing' and 'hours' are relatively central concepts, which indicates that tourists feel experiences in the Wet Tropics region are worthwhile. In particular, several recreation highlights were identified as follows: (1) *trip experience*: the trip was highly recommended particularly from individuals on guided tours who were impressed with tour guides' services; (2) *activities*: swimming and walking dominated discussions; (3) *tropical features*: rainforest and its associated views as well as the local people; (4) *supporting facilities*: restaurants and shops as well as the various towns in the region. Thompson and Prideaux (2010) in their study of visitors to tropical north Queensland also found 'visit rainforest' was a top travel motivation, and 'walking', 'guided tour' and 'swimming' were among the top seven activities for the region.

Secondly, tourists' perspectives of the five different recreation settings were examined. This analysis was undertaken because different recreation settings provide endless opportunities for recreation experiences. Leximancer has the capacity to apply mapping concepts to explore differences among sub-groups. Categorical tags are positioned around the edges of concept maps, closest to the themes and concepts that each sub-group is strongly associated with (Angus-Leppan et al., 2010). Figure 2 displays the themes and concepts emerging for tourists' reviews according to the different recreation settings.

<Insert Figure 2 about here>

In Figure 2, five themes were identified. Similar to Figure 1, ‘essence’ and ‘immersion’ appeared as the two most connected themes of recreation experiences. One difference in Figure 2, however, is that a majority of the concepts fell within these two themes (37/53 or 70%). The third theme ‘environment’ reflected on the activities of the region (previously in ‘setting experience’ for Figure 1), and in particular, the importance of the beach in the Wet Tropics setting. The fourth theme ‘travel’ highlighted tourists thoughts about the worth of the area (‘recommend’, ‘trip’, ‘Cairns’) and the unique ways to see the region (‘down’ – describes *hanging upside down and zip lining through the rainforest* and ‘ride’ – describes *the train ride through the rainforest*. ‘Setting features’ was again revealed as a theme with lower connectivity.

Figure 2 also shows that the five recreation setting classifications are independently connected to different themes and concepts. To further explore differences among settings, individual concept maps were computed for the 11 tourist attractions. For comparative reasons, however, the top five themes for individual attractions have been collectively listed in Figure 3. The following section discusses perspectives by the five recreation setting categories.

<Insert Figure 3 about here>

*Primitive (symbolic) spaces.* Cape Tribulation, Daintree Rainforest and Wet Tropics’ beaches were considered to represent primitive (symbolic) spaces. The top five themes identified in the individual attraction concept maps can be categorised in several recreation highlights including: (1) *natural features*: ‘beach’, ‘water’ and ‘rainforest’; (2) *activities*: ‘walk’, ‘swim’

and 'explore'; (3) *emotional connections*: 'fun', 'beautiful' and 'amazing'; (4) *regional travel*: 'Cape Tribulation', 'day', and 'place'. Overall, tourists' perspectives predominately reflected the pure natural environment. Furthermore, the array of opportunities that is available in this setting (as described by Brown et al., 1978 and Hendee et al., 1971) were reflected in travel reviews including isolation, feeling a part of the environment and appreciating natural features.

*Primitive (passive) spaces*. Mossman Gorge and Wet Tropics' waterfalls were considered to represent primitive (passive) spaces. According to the individual attraction concept maps, the top five themes can be grouped into two recreation highlights: (1) *natural features*: 'gorge', 'falls', and 'water'; (2) *activities*: 'walk' and 'swim'. The other themes in both concept maps suggest different experiences of these two attractions. For Mossman Gorge, another highlight *human connection* was identified. 'Visitor', 'people' and 'local' described the friendliness of the local community and visitor centre staff, the usefulness of the visitor centre in serving as an information source, and the need to improve public access to the Gorge. For Wet Tropics' waterfalls, two additional highlights *regional travel* and *seasonal travel* were identified. 'Area', 'drive' and 'worth' reflected tourists' impression that it is worthwhile to visit many regional attractions. Whereas 'rain', 'season' and 'spectacular' highlighted tourists' recommendation to see the waterfalls during wet season. Overall, tourists' reported experiences of this recreation setting reflected nature appreciation (cf. Brown et al., 1978) and low-involvement activities (cf. Hendee et al., 1971).

*Enriched (passive) spaces*. Cairns Botanic Garden and Kuranda Scenic Railway were considered to represent enriched (passive) spaces. In this recreation setting, resources are modified to enhance specific recreation opportunities. The top five themes for the two

attractions reflected this feature well. For Cairns Botanic Garden, ‘café’ was an important theme with tourists commenting that a rest in the café made their experience more enjoyable. Alternatively, ‘train’, ‘railway’ and ‘Skyrail’ for Kuranda Scenic Railway described add-on features which assist tourists’ experiences. Furthermore, tourists reflected on the easy-enjoyment of the natural environment; beautiful scenery and scenic views on the train ride to/from Kuranda and views of tropical plants and flowers from the Botanic Gardens’ boardwalk. This reflects the passive-free play opportunities illustrated by Hendee et al. (1971).

*Enriched (active) spaces.* Jungle Surfing and Paronella Park were considered to represent enriched (active) spaces. As defined in Table 1, enjoyment of this recreation setting is through physical means. For these attractions, ‘tour’, ‘guides’ and ‘parks’ were prevalent themes which suggest an interactive aspect to tourists’ attraction visits. Furthermore, the other top five themes for the individual attractions explain this feature including ‘zip’ and ‘down’ for Jungle Surfing and ‘buildings’ for Paronella Park. In addition, elements of challenge/risk taking and interaction with the natural environment were highlighted in Jungle Surfing reviews which support Brown et al.’s (1978) opportunities linked to this setting.

*Urbanised (passive) spaces.* Port Douglas and Mission Beach were considered to represent urbanised (passive) spaces. For these attractions, ‘restaurant’, ‘town’ and the actual place name (e.g., ‘Port Douglas’ or ‘Mission Beach’) emerged in the top five themes. These themes directly link to the key character of this setting – substantially urbanised environment with facilities provided for the users’ convenience. In addition, the function of the natural environment as a background was present. Other moderately-connected themes included ‘reef’, ‘Dunk Island’ and ‘beach’. The travel reviews also highlighted tourists’ emotional

connection with themes such as ‘experience’, ‘friendly’, ‘lovely’, ‘place’, ‘recommend’ and ‘worth’ suggesting easy enjoyment of the area.

*Differences in tourists’ demographic and travel factors for Wet Tropics’ recreation opportunities*

The second aim of this study was to explore differences among tourists’ recreation experiences in Australia’s Wet Tropics according to TripAdvisor profile data. Specifically, the goal of aim two was two-fold. Firstly, an overall concept map was computed with satisfaction ratings selected as mapping concepts. Table 3 indicates that tourists reviewed attractions positively, with TripAdvisor ratings of very good and excellent featuring in high numbers. Consequently, ratings of terrible, poor and average were combined to determine if tourists who rated attractions unfavourably differed to highly satisfied groups. Figure 4 displays perspectives arising from tourists’ combined recreation experiences for the different satisfaction groups.

<Insert Figure 4 about here>

In Figure 4, five themes were identified. The four most connected themes were representative of the themes presented earlier in Figures 1 and 2; however, the arrangement of concepts within each theme differed. ‘Environment’ was more inclusive in Figure 4, and depicted activities, natural features and the social environment (‘people’, ‘lovely’, ‘nice’). The theme ‘connection’ – depicted as a hybrid of the themes ‘immersion’ and ‘reflection’ in Figure 1 – mainly described tourists’ deep involvement with the Wet Tropics experience and their willingness to promote the region to other tourists. ‘Setting features’, which was much

larger in Figure 4, included not just the supporting infrastructure and connectivity of the places (as in Figures 1 and 2) but also the experiential features ('beautiful', 'best', 'tropical'). Similarly, 'travel' was a bigger theme in Figure 4 compared to Figure 2 as it also incorporated tourists' reflections on the temporal nature of their visits ('hours', 'take', 'trip', 'drive'). Lastly, the theme 'friendly' was a new idea emerging in this analysis.

Figure 4 indicates that particular themes and concepts are more closely linked to certain satisfaction group users. Leximancer's Insight Dashboard was consulted to explore these differences among tourists' evaluation groups further. For the group who rated Wet Tropics attractions as 'excellent', the top five important concepts were 'beautiful' (prominence score [ps] = 1.1), 'rainforest' (ps = 1.1), 'place' (ps = 1.1), 'beach' (ps = 1.1), and 'day' (ps = 1.1). Tourists who rated the experience as 'very good' reflected mostly on 'nice' (ps = 1.4), 'visit' (ps = 1.2), 'views' (ps = 1.2), 'train' (ps = 1.2), and 'trip' (ps = 1.2). Lastly, with respect to the 'poor, terrible or average' group, the top five concepts were 'train' (ps = 1.6), 'people' (ps = 1.5), 'nice' (ps=1.3), 'views' (ps = 1.1), and 'time' (ps = 1.0). This suggests that the 'very good' and 'terrible, poor or average' satisfaction groups describe their Wet Tropics attraction visits in a relatively similar manner, which is distinct to the 'excellent' rating group (as evidenced in Figure 4).

Secondly, an overall concept map was computed with reviewers' origins selected as mapping concepts. Figure 5 displays perspectives arising from tourists' combined recreation experiences for different origin groups.

<Insert Figure 5 about here>

In this new analysis, four themes were identified. Results indicate stronger links (than satisfaction groups) to the overall themes produced in Figure 1. 'Setting features' was again identified in Figure 5, which included the supporting infrastructure and connectivity of the places (similar to Figures 1 and 2), the experiential features (similar to Figure 4) and also the value of the experience ('worth', 'drive', 'wonderful'). The second theme 'stay' was quite similar to the theme 'connection' identified among the satisfaction groups (Figure 4), but it also included aspects of traveling around the region ('trip', 'views', 'hours'). In Figure 5, 'environment' and 'specialties' were relatively similar to the same named concepts identified in the other analyses, with some different concepts emerging (environment: 'gorge', 'local', 'centre') (specialities: 'friendly', 'bus', 'family', 'staff'). These concepts mostly described the Mossman Gorge attraction.

Furthermore, tourists were more easily defined through origin groups implying that diverse narratives exist according to the individuals' proximity to the Wet Tropics. The Leximancer Insight Dashboard revealed that the most important concepts for the reviewers from Queensland were 'tour' (ps = 1.2), 'area' (ps = 1.2), 'lovely' (ps = 1.2), 'visit' (ps = 1.1), and 'time' (ps = 1.1). For non-locals (or Australians not from Queensland), the key concepts were 'lovely' (ps = 1.1), 'water' (ps = 1.1), 'swimming' (ps = 1.1), 'beautiful' (ps = 1.0), and 'walk' (ps = 1.0). Finally, the top concepts for the international group were: 'trip' (ps = 1.2), 'day' (ps = 1.1), 'area' (ps = 1.1), 'views' (ps = 1.1), and 'visit' (ps = 1.0). Further investigations using the Quadrant Report Chart and the Ranked Compound Concepts for Categories Report revealed that locals expressed their experiences in distinctly different ways to the non-locals and internationals. The locals mostly reflected the ideas of the 'immersion' theme in Figure 1 because when these reviewers talked about concepts like 'tour', 'area' and 'visit', they also mentioned concepts like 'park', 'free' and 'worth'. For non-locals and

internationals, the key concepts identified above were associated more with concepts like ‘gorge’, ‘rainforest’, ‘fish’ and ‘water’, which mostly fall into the ‘setting experience’ theme in Figure 1.

## Discussion and management implications

Recreation research which explores the setting-experience relationship has typically applied researcher-driven approaches. Methodologically, the Recreation Experience Preferences scale has been commonly employed to measure the experience(s), whereas preferences for setting characteristics or the ROS system has been utilised to measure the setting(s) (Fix et al., 2013). This paper considered UGC data to determine if setting attributes form part of tourists’ evaluation of recreation opportunities, and subsequently, whether these experiences change according to different setting attributes and personal characteristics. Tourists’ experiences of 11 different nature-oriented attractions in Australia Wet Tropics were used to explore setting-experience relationships through a respondent-informed approach. Overall, the experience-based approach dually supports previous findings as well as identifies new insight into recreation opportunities, and more specifically, relationships between settings and experiences.

Firstly, the study provides support for the notion that experiences can be shaped by the recreation setting in which they are encountered. In Figure 2, recreation classifications were applied as mapping tags to the 11 individual attractions (see Table 2 for classification assignment). Primitive spaces had the closest proximity to concepts about natural features (symbolic: ‘sand’, ‘beach’, ‘water’) and activities (symbolic: ‘swimming’, ‘morning’ – *morning walks along the beach*; passive: ‘walk’, ‘drive’, ‘fish’). On the other hand, enriched

spaces described some of the more people-related aspects (active: ‘guides’, ‘tour’, ‘staff’; passive: ‘recommend’, ‘trip’) while the urbanised spaces described supporting facilities (‘restaurant’, ‘shops’). Exploration of individual attractions, however, further revealed some site specific highlights. For example, with reference to the enriched (active) spaces, both attractions were described by its people (‘staff’, ‘guides’) but Paronella Park was also described by its story (‘history’, ‘story’, ‘park’) and Jungle Surfing Canopy Tours was described by its set-up (‘platforms’, ‘heights’, ‘down’ – *hanging upside down flying through the forest*). Therefore, recreation managers need to consider the setting attributes which make the experience unique compared to other attractions within the region, while simultaneously addressing the attributes that facilitate the regional experience.

Physical, social and managerial setting factors were also reflected upon in tourists’ reported experiences of the Wet Tropics. The factor with the most presence was physical which includes the biophysical and cultural-historic resources as well as the relatively permanent man-made structures. In Figure 1, tourists reported a diverse range of natural products, both in a generic sense (i.e., ‘rainforest’, ‘water’, ‘trees’) but also with specific connection to the Wet Tropics setting (i.e., ‘tropical’, ‘area’, ‘views’). Cultural-historic resources were also evident with concepts such as ‘history’ and ‘old’. Tourists reflected upon the ancient rainforest, the old coastal towns, and the rustic scenic train (concept: ‘old’) and the history (or story) of various attractions (e.g., Paronella Park was built by the dream of one Spanish man; Chinese immigrants constructed the railway on which the Kuranda Scenic Train now runs). Social factors – which include the individual person, their behaviours and associated items – were moderately mentioned in tourists’ reported experiences. For this factor, tourists’ overall experiences (see Figure 1) mainly described the activities they participated in like ‘swimming’, ‘walk’, ‘drive’ and ‘long’ (e.g., *go for long walks on the beach, spend a long*

*time here*). Managerial factors were the least mentioned which includes setting factors such as the movable structures, management personnel and their services, as well as the rules and regulations set by management and use of equipment. Figure 1 shows that experiences linked to managerial factors mainly surrounded the management personnel and their services. Tourists reported about the 'guides' and 'staff' which made their experience(s) memorable. Heywood, Christensen and Stankey (1991) revealed from their study about relationships between the biophysical and social setting factors that complex relationships exists which might be further delineated by employing setting classifications like the ROS. In this study, additional concepts revealed in Figures 2 and 4 reflected the physical setting only. Thus, managers of recreation areas may need to pay more attention towards the environment in which the experience is had (physical factors) instead of the way tourists use the site (social factors) or how they as managers shape the site (managerial factors).

Secondly, findings from this study also support the fact that experiences do change according to the individual recreationist. With respect to tourists' evaluation of recreation opportunities in Australia's Wet Tropics, Figure 4 showed a distinct difference between highly satisfied tourists and those that were less satisfied. Highly satisfied reviewers ('excellent') were most likely to comment on supporting infrastructure and services such as the concepts 'restaurant', 'shop', 'food' and 'stay' within the 'setting features' theme. In addition, this group of people also tend to be the most expressive about their feelings and human interactions as reflected in the concepts like 'amazing' and 'friendly' within the 'friendly' theme. Less satisfied tourists ('very good' or 'poor, terrible or average'), however, had more interest in reviewing the scenic, temporal and distance aspects. In Figure 4, these groups were located near concepts like 'views', 'hours', 'drive' and 'ride' within the 'travel' theme. These findings provide support for Hendee and colleagues' (1971) argument that satisfaction levels may vary within

groups according to the quality of the experience and the time and resources available.

According to this study, managers of recreation areas need to concentrate on providing a personalised, contextualised and supported experience in order to create highly satisfied tourists.

In addition, recreation experiences were also reported differently according to the individual tourists' origin. As shown in Figure 5, locals (Australians: Queenslanders) were closest to the themes of 'setting features' and 'environment', which included concepts relating to the facilities (e.g., 'restaurant', 'place') and activity-oriented experiences (e.g., 'swimming' and 'walk'). In comparison to this group, non-locals (Australians: non-Queenslanders) tended to report about the guide services and tropical atmosphere; this group was tagged closer to the 'specialties' theme which contains concepts like 'friendly', 'guides', 'rainforest' and 'history'. Furthermore, international tourists mainly documented experiences linked to particular locations (e.g., the concepts of 'Kuranda' and 'Cairns' within the 'stay' theme) and supporting facilities (e.g., the concepts of 'town' and 'food'). Proximity of the tourist to the recreation experience has seldom been explored; however, this study revealed a need to do so, as tourists who are closest to the attraction (locals) reflect more upon the place-based activities, while those a little further away (non-locals) report about intangible aspects and those that are the furthest away (internationals) describe their experiences through a whole-of-region perspective.

Finally, the current work revealed that tourists describe all four aspects of recreation demand – activity, setting, experience (or psychological outcome) and benefit – when documenting their experiences. With respect to activities, tourists participated in 'swimming', 'walk' and 'tour' in their overall Wet Tropics' experiences. Figure 3 further revealed specialised

activities for different settings including ‘drive’ for Wet Tropics’ waterfalls, ‘explore’ for Daintree rainforest and ‘down’ for Jungle Canopy Surfing Tours (i.e., procedure of doing the zip-lining activity). Setting attributes were relatively limited and focussed on the natural features of the region (e.g., ‘rainforest’) and the supporting facilities (e.g., ‘restaurant’). Again, further individual setting attributes were noted including ‘train’ and ‘railway’ for Kuranda Scenic Railway and ‘town’ for Mission Beach. Contrary to the work by Pierskalla et al. (2004), setting features appeared to have more relevance than activities, as natural aspects were mentioned more frequently and were more closely connected to the main concepts (see Figure 1). Experience features (or psychological outcomes) held the most importance in tourists’ Australian Wet Tropics’ experiences. In particular, the Leximancer analyses support Manning’s (1985) idea that different settings produce various psychological outcomes. Primitive (symbolic) spaces indicated a relaxing, active experience due to its proximity to themes like ‘sand’, ‘swimming’ and ‘water’, while enriched (passive) spaces suggest tourists seek satisfaction and value, located near themes such as ‘trip’, ‘recommend’ and ‘views’. Finally, the benefits derived from experiences in the Wet Tropics formed the core of tourists’ perspectives. That is, in Figure 1, the themes of ‘essence’, ‘immersion’ and ‘reflection’ all portrayed tourists’ underlying opinion that a visit to the region is definitely rewarding. Overall, these findings suggest that managers can identify important aspects of all four areas of recreation demand if they were to evaluate recreation opportunities through a more respondent-informed, unelicited approach like UGC employed in the current work.

## Conclusions

Differences among tourists’ recreation experiences in Australia’s Wet Tropics were examined in the current work. The aims of the study were to (a) identify the factors that tourists reflect

upon in their experiences, and whether these factors are unique to different Wet Tropics recreation settings, and (b) highlight differences in tourists' experiences according to personal characteristics. TripAdvisor reviews on 11 Wet Tropics attractions (posted 2010- 2012) were content analysed using Leximancer 4.0. Overall, tourists reported a multitude of experiential aspects which varied according to different recreation settings and personal characteristics. For a destination like the Wet Tropics, it was revealed that recreation opportunities should be marketed both in terms of key attraction experiences (e.g., surfing in the jungle canopy) as well as larger, regional experiences (e.g., walking, beach and swimming). In addition, tourists' evaluation of the recreation opportunities identified some new concepts, which suggests that managers need to evaluate many aspects of recreation experiences in order to achieve a full understanding.

The combination of the ROS and PoR recreation classification systems was demonstrated to be a valid approach. That is, tourists' reported experiences of the 11 different attractions aligned with the classification descriptions set by the researchers (see Table 2 and Figure 2). Natural spaces tended to describe activities (experiences), emotions and geological features while developed spaces highlighted supporting facilities and human aspects. Therefore, recreation classification systems can be applied not just in a planning and/or managerial sense, but also as an ongoing evaluation tool that assesses what aspects tourists reflect upon in their experiences. This novel application of the frameworks revealed how setting, activity, experience and benefit opportunities interact and may thus lead to more understanding of the recreation outcomes (Harrington, 2011, cited in Fix et al., 2013, p.34).

Finally, UGC as a data source was determined to be an effective approach to assessing recreation opportunities. The relative commonalities between Figures 1 through 5 indicate

that the diversity of human-nature encounters available induces broadly similar responses in tourists (Hill et al., 2014). Subtle differences across the four figures, however, reinforced that setting attributes and personal characteristics do have some influence on the overall recreation experience. Figure 1 also revealed a total of 53 concepts which were spread across six themes. These themes portrayed the core of the experience ('essence', 'setting features'), tourists' involvement with the experience ('immersion', 'setting experience') and tourists' overall appraisal of the region ('reflection'). Accordingly, the tourist-informed, experience-based approach adopted in this study, by using UGC data, revealed to be useful for exploring patterns among a diverse array of recreation opportunity aspects. Furthermore, the centrality of concepts like 'worth', 'wonderful', 'amazing', 'hours', 'time' and 'day' in tourists' overall experiences indicates that all recreation opportunities in Australia's Wet Tropics have some degree of emotional connection. Thus, this study has further reinforced that UGC is instrumental in assessing tourists' true opinions and reflections, which are hard to determine through other approaches.

#### *Limitations and future research*

This study contributes to the under-researched field of linking outdoor recreation and tourist experiences. The purpose of the work was to explore if the concept of outdoor recreation could be applied in already-established areas such as tourist attractions. Undoubtedly, there are some study limitations. Firstly, tourists' travel reviews varied in nature in regards to length, English use and structure. While efforts were made to account for these features, some meaningless themes still emerged. Additional content analysis methods might provide other themes portraying tourists' recreation experiences. Secondly, Leximancer can be an effective way to explore how tourists' use spaces and describe their feelings associated with

outdoor recreation. Different sample sizes between the attractions, however, might have identified themes that are representative of particular attractions. Interviewing or observing tourists at attractions might supplement the present approach. Furthermore, while the current study revealed that locals and tourists utilise the same recreation spaces and engage in similar activities, there might be differences in their reasons for engaging and the associated reported outcomes which warrants further exploration. Thirdly, the researcher-assignment of ROS and PoR categories to individual tourist attractions might influence the subsequent analysis. For example, Cape Tribulation could arguably be classified as an 'urbanised' space, whereas tourists' reported experiences and researchers' knowledge of the area indicated a 'primitive' experience. New ways to assign spaces to recreation classifications might facilitate the refinement of the variability within these systems.

## Reference list

Agichtein, E., Gabrilovich, E., & Zha, H. (2009). The social future of web search: Modeling, exploiting, and searching collaboratively generated content. *Data Engineering*, 52.

Amaral, F., Tiago, T., & Tiago, F. (2014). User-generated content: Tourists' profiles on TripAdvisor. *International Journal on Strategic Innovative Marketing*, 1.

Angus-Leppan, T., Benn, S., & Young, L. (2010). A sense making approach to trade-offs and synergies between human and ecological elements of corporate sustainability. *Business Strategy and the Environment*, 19(4), 230-244.

Aveh, J. K., Au, N., & Law, R. (2013). Do we believe in TripAdvisor? Examining credibility of perceptions and online travellers' attitudes toward using user-generated content. *Journal of Travel Research*, 52(4), 437-452.

Brown, P. J., Driver, B. L., & McConnell, C. (1978). The opportunity spectrum - Concept and behavioural information in outdoor recreation resource supply inventories: Background and application. In *Integrated inventories of renewable natural resources: Proceeding of the workshop*. January 8-12, Tuscon, Arizona. Retrieved from

[http://scholarworks.umt.edu/forest\\_pubs/31/](http://scholarworks.umt.edu/forest_pubs/31/)

Publisher: USDA Forest Service, Rocky Mountain Forest and Range Experiment Station.

Budruk, M., & Wilhelm Stanis, S. A. (2013). Place attachment and recreation experience preference: A further exploration of the relationship. *Journal of Outdoor Recreation and Tourism, 1-2*, 51-68.

Clark, R. N., & Stankey, G. H. (1979). *The recreation opportunity spectrum: A framework for planning, management, and research*. Retrieved from [http://www.fs.fed.us/pnw/pubs/pnw\\_gtr098.pdf](http://www.fs.fed.us/pnw/pubs/pnw_gtr098.pdf)

Clawson, M., & Knetsch, J. L. (1963). Outdoor recreation research: Some concepts and suggested areas of study. *Natural Resources Journal, 3(2)*, 250-275.

Cole, D. N., & Hall, T. E. (2009). Perceived effects of setting attributes on visitor experiences in wilderness: Variation with situational context and visitor characteristics. *Environmental Management, 44(1)*, 24-36.

Cook, A. (2008). Recreation value of a new long-distance walking track. *Tourism Economics, 14(2)*, 377-391.

Dorwart, C. E., Moore, R. L., & Leung, Y-F. (2009). Visitors' perceptions of a trail environment and effects of experiences: A model for nature-based recreation experiences. *Leisure Sciences: An Interdisciplinary Journal, 32(1)*, 33-54.

Driml, S. (2002). Travel cost analysis of recreation value in the Wet Tropics World Heritage Area. *Economic Analysis and Policy, 32(2)*, 11-26.

Eagles, P. F. J., & McCool, S. F. (2003). (Eds), Management of visitors in national parks and protected areas. In *Tourism in national parks and protected areas: Planning and management*. (pp.97-129). Cambridge: CABI Publishing.

Fix, P. J., Carroll, J., & Harrington, A. M. (2013). Visitor experiences across recreation settings: A management or measurement issue? *Journal of Outdoor Recreation and Tourism*, 3-4, 28-35.

Hendee, J. C., Gale, R. P., & Catton, W. R. (1971). A typology of outdoor recreation activity preferences. *The Journal of Environmental Education*, 3(1), 28-34.

Heywood, J. L., Christensen, J. E., & Stankey, G. H. (1991). The relationship between biophysical and social setting factors in the recreation opportunity spectrum. *Leisure Sciences*, 13(3), 239-246.

Hill, J., Curtin, S., & Gough, G. (2014). Understanding tourist encounters with nature: A thematic framework. *Tourism Geographies*, 16(1), 68-87.

Kozinets, R. V. (2002). *The field behind the screen: Using netnography for marketing research in online communities*. *Journal of Marketing Research*, 39, 61–72.

Lankford, S. V., Williams, A., & Knowles-Lankford, J. (1997). Perceptions of outdoor recreation opportunities and support for tourism development. *Journal of Travel Research*, 35(3), 65-69.

Leximancer Pty Ltd. (2011). *Leximancer: Leximancer manual version 4*. Retrieved from <http://www.leximancer.com/>

Manning, R. E. (1985). Diversity in a democracy: Expanding the recreation opportunity spectrum. *Leisure Sciences: An Interdisciplinary Journal*, 7(4), 377-399.

Manning, R. E. (1986). *Studies in outdoor recreation: Search and research for satisfaction*. Oregon: Oregon State University Press.

Mkono, M. & Tribe, J. (2016). Beyond reviewing: uncovering the multiple roles of tourism social media users. *Journal of Travel Research*, March 7, 1-12. doi: 10.1177/00472875166636236

Mkono, M., Markwell, K. & Wilson, E. (2013). Applying Quan and Wang's structural model of the tourist experience: A Zimbabwean netnography of food tourism. *Tourism Management Perspectives*, 5, 68-74.

Moscardo, G., & Benckendorff, P. (2010). Sustainable luxury: Oxymoron or comfortable bedfellows?. In M. van Niekerk, W. Coetzee & S. Geldenhuys (eds.), *Proceedings of global sustainable tourism conference. global sustainable tourism: 709-728*. Mbombela, Nelspruit, South Africa.

Nillesen, E., Wesseler, J., & Cook, A. (2005). Estimating the recreational-use value for hiking in Bellenden Ker National Park, Australia. *Environmental Management*, 36(2), 311-316.

O'Connor, P. (2010). Managing a hotel's image on TripAdvisor. *Journal of Hospitality Marketing and Management*, 19(7), 754-772.

Phillips, P., Barnes, S., Zigan, K., & Schegg, R. (2016). Understanding the impact of online reviews on hotel performance: an empirical analysis. *Journal of Travel Research*, March 10, 1-15. doi: 10.1177/0047287516636481

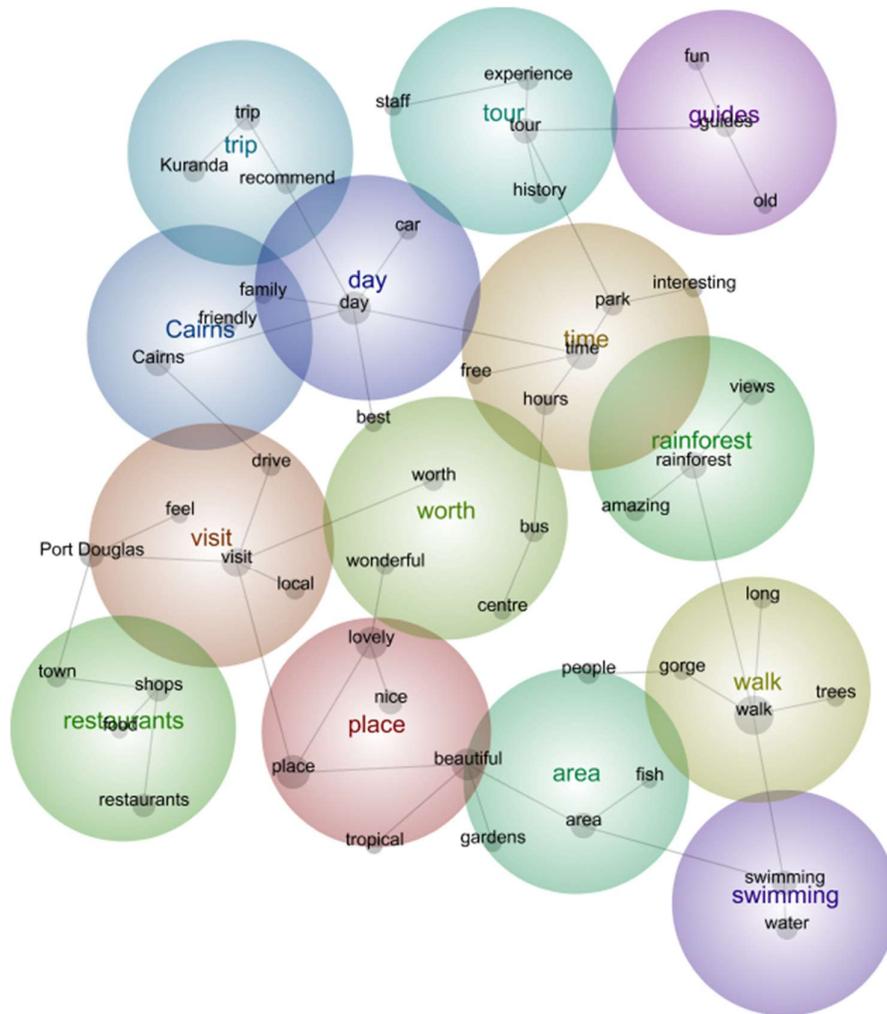
Pierskalla, C.D., Lee, M. E., Stein, T. V., Anderson, D. H., & Nickerson, R. (2004). Understanding relationships among recreation opportunities: A meta-analysis of nine studies. *Leisure Sciences*, 26(2), 163-180.

Pietilä, M., & Kangas, K. (2015). Examining the relationship between recreation settings and experiences in Oulanka National Park – A spatial approach. *Journal of Outdoor Recreation and Tourism*, 9, 26-36.

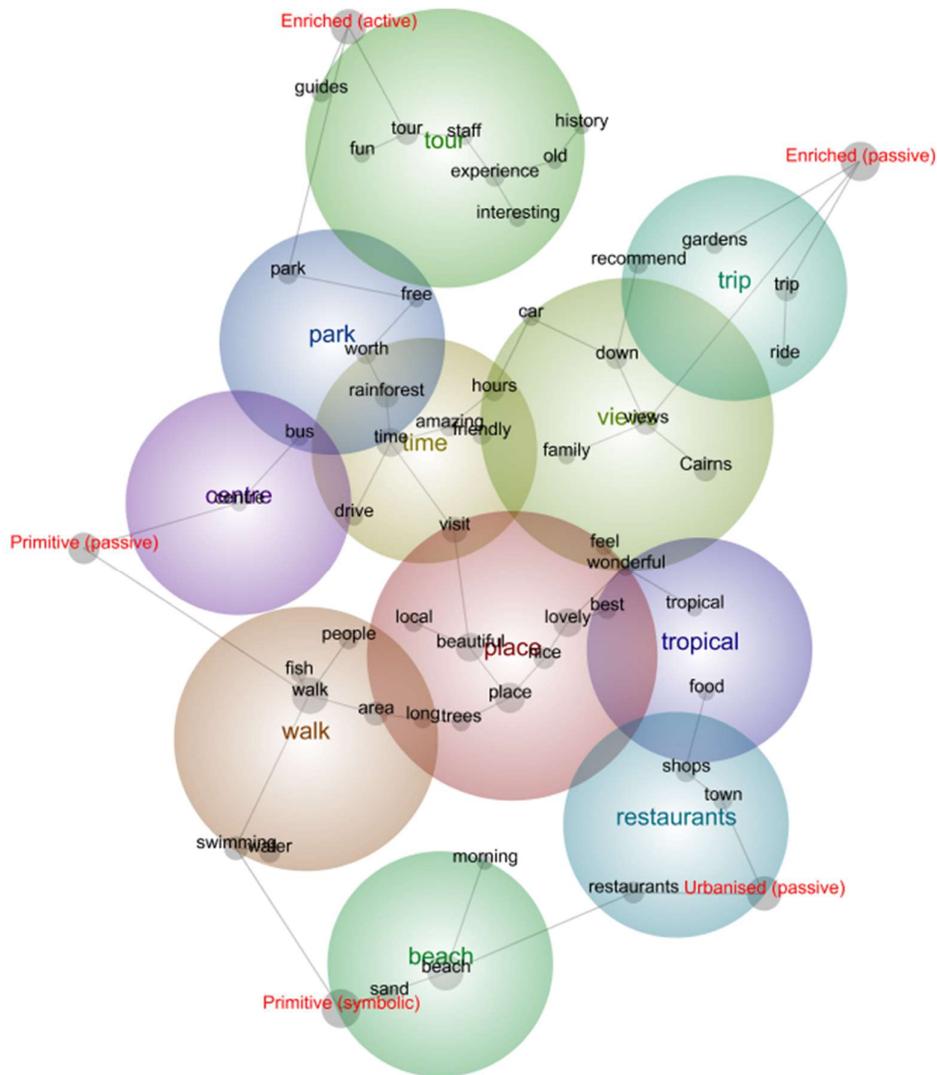
Thompson, M., & Prideaux, B. (2010). Interdependency of reef and rainforest tourism – A segmentation analysis of visitors to Tropical North Queensland. Marine and Tropical Sciences Research Facility, Cairns.

TripAdvisor Inc. (2015). About TripAdvisor. Retrieved from [http://www.tripadvisor.com.au/PressCenter-c6-About\\_Us.html](http://www.tripadvisor.com.au/PressCenter-c6-About_Us.html)

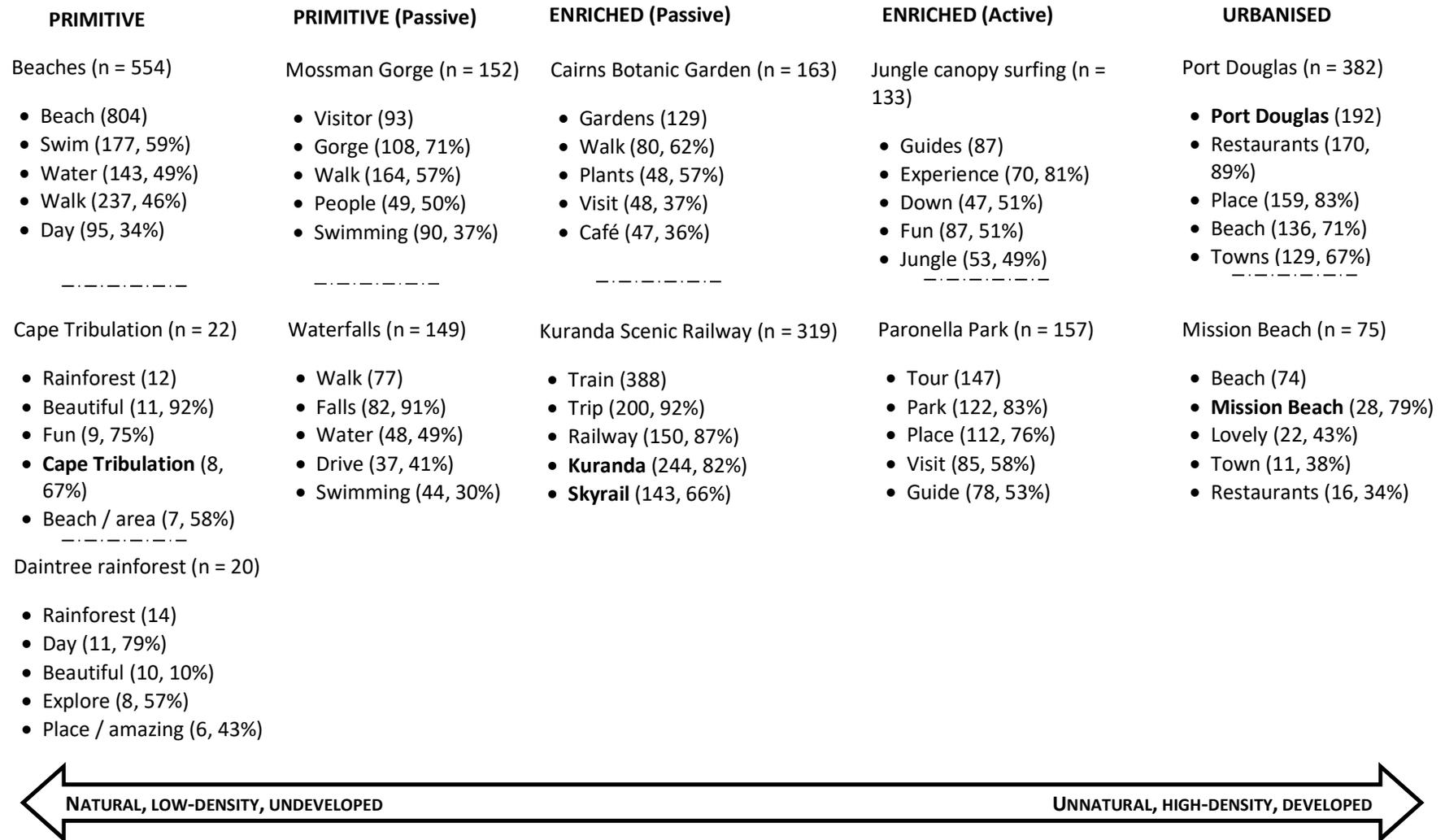
Figure 1. Themes and concepts defining Wet Tropics' recreation experiences.



**Figure 2. Tourists' evaluation of Wet Tropics' recreation experiences according to different settings.**

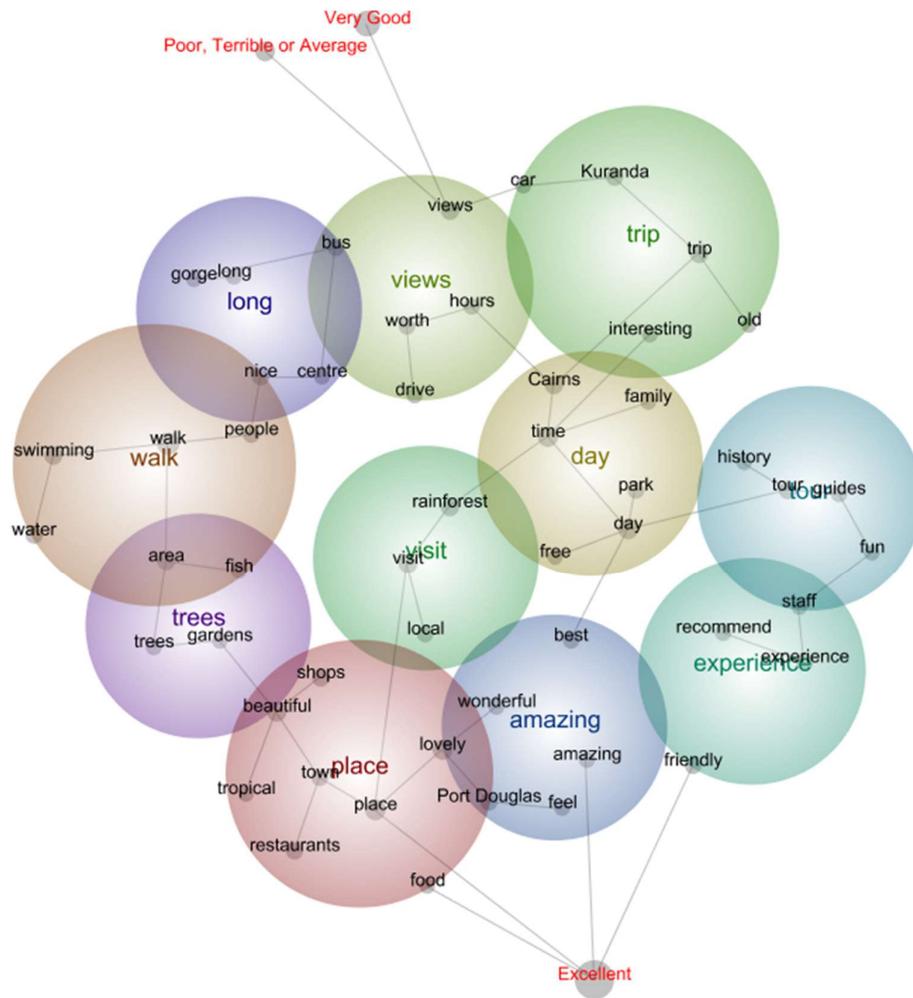


**Figure 3. Themes and concepts defining Wet Tropics' recreation experiences according to different settings.**



*Note.* Parenthesis indicates number of hits for theme (according to concept of the same name) followed by connectivity to main theme.

**Figure 4. Different satisfaction groups' evaluation of Wet Tropics' recreation experiences.**





**Table 1. Profile of the selected Wet Tropics' attractions.**

<b>Region</b>	<b>Wet Tropics' experience</b>	<b>Description</b>	<b>Website</b>
Northern	Cape Tribulation National Park	One of the most biologically diverse areas in the world, the Cape Tribulation area was included in the Wet Tropics World Heritage Area in 1988. Rainforested mountains sweep down to long sandy beaches.	<a href="http://www.nprsr.qld.gov.au/parks/daintree-cape-tribulation/">http://www.nprsr.qld.gov.au/parks/daintree-cape-tribulation/</a>
	Daintree Rainforest	Added to the World Heritage List in 1988, this forest is home to the largest range of plant and animal species that are rare, or threatened, anywhere in the world and abounds with biodiversity. One of the oldest continuous living tropical rainforests in the world.	<a href="http://www.destinationdaintree.com/the-daintree/rainforest-reef-rivers-beaches">http://www.destinationdaintree.com/the-daintree/rainforest-reef-rivers-beaches</a>
	Jungle Surfing Canopy Tours	Once you get high on the views and exhilaration that come from flying between our six rainforest canopy platforms on our fully guided zipline tour. There's nothing like seeing the world's oldest rainforest from this angle	<a href="http://junglesurfing.com.au/">http://junglesurfing.com.au/</a>
	Mossman Gorge	Located in the southern part of the World Heritage Listed, Daintree National Park, Mossman Gorge is one of the few places in the country that visitors can gain an insight into the lives, culture and beliefs of Australia's Indigenous population and their connection to the natural environment. Take in the beauty of its	<a href="http://www.mossmangorge.com.au/">http://www.mossmangorge.com.au/</a>

		pristine rainforest, cool streams, towering mountains and the dramatic Gorge.	
	Port Douglas	Port Douglas has a distinctive laid back atmosphere, and a low-rise tropical old world charm. Known as Australia's most idyllic Great Barrier Reef seaside destination, with the world famous 4 Mile Beach right at your door.	<a href="http://www.portdouglas.com/">http://www.portdouglas.com/</a>
Cairns and Central Coast	Wet Tropics beaches	Researcher-defined collection of beaches located in the Wet Tropics including: Ellis Beach, Four Mile Beach, Palm Cove, Trinity Beach and Yorkey's Knob.	
	Cairns Botanic Garden	The Cairns Botanic Gardens are a tropical paradise where you can explore the beauty of tropical plants, relax in stunning surroundings and learn about tropical flora and horticulture. Renowned for having one of the best exhibitions in Australia of tropical plants.	<a href="http://www.cairns.qld.gov.au/cbg">http://www.cairns.qld.gov.au/cbg</a>
	Kuranda Scenic Railway	One of the most unique rail journeys in Australia, unwind your way through a tropical paradise framed by rugged mountains with waterfalls tumbling forever into deep ravines.	<a href="http://www.ksr.com.au/Pages/Default.aspx">http://www.ksr.com.au/Pages/Default.aspx</a>
South Central	Wet Tropics waterfalls	Researcher-defined collection of waterfalls located in the Wet Tropics including: Barron Falls, Crystal Cascades, Josephine Falls, Jourama Falls, Millaa Millaa Falls, Murray Falls and Wallaman Falls.	

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Mission Beach	Mission Beach is a relaxed, yet vibrant beachfront town with over 14 kilometres of magnificent golden sandy beaches. Mission Beach offers an excellent choice of restaurants, galleries, gift stores and coffee shops.	<a href="http://www.missionbeach.com.au/">http://www.missionbeach.com.au/</a>
Paronella Park	On 5 Hectares beside Mena Creek Falls José Paronella built his castle, picnic area by the falls, tennis courts, bridges, a tunnel, and wrapped it up in an amazing range of 7,500 tropical plants and trees (now a lush rainforest!). First opened in 1935, Paronella Park is State and National Heritage listed and is a National Trust listed property.	<a href="http://www.paronellapark.com.au/">http://www.paronellapark.com.au/</a>

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*Note.* <sup>a</sup>Geographical sections of the Wet Tropics defined by Wet Tropics Management Authority.

**Table 2. Researcher-defined recreation experience setting classification system.**

<b>Category</b>	<b>Description</b>	<b>Literature</b>	<b>Representative attraction</b>
Primitive (symbolic)	Area is characterised by essentially unmodified natural environment of fairly large size. Concentration of users is very low, and the area is managed to be free of man-induced controls and restrictions. Activities directed toward appreciation of features of the natural environment.	ROS (primitive) PoR (appreciative: symbolic)	Cape Tribulation National Park Daintree Rainforest Wet Tropics beaches
Primitive (passive)	Area is characterised by essentially unmodified natural environment of fairly large size. Concentration of users is very low, and the area is managed to be free of man-induced controls and restrictions. Activities directed toward unstructured, easy-going enjoyment of the natural environment.	ROS (primitive) PoR (Passive free play)	Mossman Gorge Wet Tropics waterfalls
Enriched (passive)	Area is characterised by a predominately natural environment. Resource modification is primarily to enhance specific recreation activities and to maintain vegetation protection. Concentration of users is low, and the area is managed with subtle on-site controls and restrictions. Activities directed toward unstructured, easy-going enjoyment of the natural environment.	ROS (semi-primitive: non-motorise) PoR (passive free play)	Cairns Botanic Garden Kuranda Scenic Railway
Enriched (active)	Area is characterised by a predominately natural environment. Resource modification is primarily to enhance specific recreation activities and to maintain vegetation protection. Concentration of users is low, and the area is managed with subtle on-site controls and restrictions. Activities directed toward	ROS (concentrated) ROS (rustic) PoR (active-expressive)	Jungle Surfing Canopy Tours Paronella Park

enjoyment of the natural environment through physical means.

Urbanised (passive)	Area is characterised by a substantially urbanised environment, although the background may have natural areas. Large numbers of users can be expected on-site and in nearby areas, with facilities provided for the convenience of the user and to enhance specific recreation activities. Activities directed toward the unstructured, enjoyment of the natural environment.	ROS (concentrated) ROS (modern urbanised) PoR (passive free play)	Mission Beach Port Douglas
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*Note.* ROS = Recreation Opportunity Spectrum (see Brown, Driver & McConnell, 1978);  
PoR = Preferences of Recreationists (see Hendee, Gale & Catton, 1971).

**Table 3. Tripadvisor profile of Wet Tropics' attraction reviews (year posted).**

<b>Wet Tropics' experience</b>	<b>Total reviews<sup>a</sup></b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>Sample</b>
Cairns Botanic Garden	726	0	9	154	163
Cape Tribulation National Park	207	1	8	13	22
Daintree Rainforest	105	1	10	9	20
Jungle Surfing Canopy Tours	450	13	38	82	133
Kuranda Scenic Railway <sup>b</sup>	1,058	16	33	270	319
Mission Beach	220	1	8	66	75
Mossman Gorge	679	6	26	120	152
Paronella Park	703	16	33	108	157
Port Douglas	1,261	4	97	281	382
Wet Tropics beaches <sup>c</sup>	2,122	4	69	481	554
Wet Tropics waterfalls <sup>d</sup>	649	1	14	134	149
<b>TOTAL</b>	<b>8,180</b>	<b>63</b>	<b>345</b>	<b>1,718</b>	<b>2,126</b>

*Note.* <sup>a</sup>Total reviews posted as at 7<sup>th</sup> May 2015. <sup>b</sup>Kuranda reviews only; Kuranda Scenic Railway – Cairns also exists on Trip Advisor. <sup>c</sup>Reviews were collected on the following: Ellis Beach (3), Four Mile Beach (305), Palm Cove (169), Trinity Beach (68), Yorkey's Knob (9). <sup>d</sup>Reviews were collected on the following: Barron Falls (68), Crystal Cascades (28), Josephine Falls (12), Jourama Falls (10), Millaa Millaa Falls (6), Murray Falls (9), Wallaman Falls (16).

**Table 4. TripAdvisor profile of Wet Tropics' attraction reviews (reviewer location).**

Wet Tropics' attractions	Queensland	Other Australia	International	Total
	% (n)	% (n)	% (n)	Valid (n)
Cairns Botanic Garden	22.6 (36)	39.0 (62)	38.4 (61)	159 (163)
Cape Tribulation National Park	10.0 (2)	45.0 (9)	45.0 (9)	20 (22)
Daintree Rainforest	21.1 (4)	42.1 (8)	36.8 (7)	19 (20)
Jungle Surfing Canopy Tours	21.0 (25)	42.0 (50)	37.0 (44)	119 (133)
Kuranda Scenic Railway <sup>a</sup>	17.6 (52)	36.3 (107)	46.1 (136)	295 (319)
Mission Beach	31.0 (22)	25.4 (18)	43.7 (31)	71 (75)
Mossman Gorge	16.1 (22)	50.4 (69)	33.6 (46)	137 (152)
Paronella Park	35.9 (52)	35.2 (51)	29.0 (42)	145 (157)
Port Douglas	14.2 (53)	45.7 (170)	40.1 (149)	372 (382)
Wet Tropics beaches <sup>b</sup>	20.1 (106)	44.5 (235)	35.4 (187)	528 (554)
Wet Tropics waterfalls <sup>c</sup>	44.2 (61)	29.0 (40)	26.8 (37)	138 (149)
<b>TOTAL</b>	<b>21.7 (435)</b>	<b>40.9 (819)</b>	<b>37.4 (749)</b>	<b>2,003 (2,126)</b>

*Note.* <sup>a</sup>Kuranda reviews only; Kuranda Scenic Railway – Cairns also exists on Trip Advisor.

<sup>b</sup>Reviews were collected on the following: Ellis Beach (3), Four Mile Beach (305), Palm Cove (169), Trinity Beach (68), Yorkey's Knob (9). <sup>c</sup>Reviews were collected on the following: Barron Falls (68), Crystal Cascades (28), Josephine Falls (12), Jourama Falls (10), Millaa Millaa Falls (6), Murray Falls (9), Wallaman Falls (16).

**Table 5. Tripadvisor profile of Wet Tropics' attraction reviews (reviewer rating).**

<b>Wet Tropics' attractions</b>	<b>Excellent</b>	<b>Very good</b>	<b>Average</b>	<b>Poor</b>	<b>Terrible</b>
Cairns Botanic Garden	105	49	9	0	0
Cape Tribulation National Park	19	2	1	0	0
Daintree Rainforest	18	1	1	0	0
Jungle Surfing Canopy Tours	76	35	17	4	1
Kuranda Scenic Railway <sup>a</sup>	167	101	32	12	7
Mission Beach	45	21	8	1	0
Mossman Gorge	87	38	14	6	7
Paronella Park	93	33	17	5	9
Port Douglas	247	109	22	3	1
Wet Tropics beaches <sup>b</sup>	317	158	65	8	6
Wet Tropics waterfalls <sup>c</sup>	86	55	8	0	0
<b>TOTAL</b>	<b>1,260</b>	<b>602</b>	<b>194</b>	<b>39</b>	<b>31</b>

*Note.* <sup>a</sup>Kuranda reviews only; Kuranda Scenic Railway – Cairns also exists on Trip Advisor.

<sup>b</sup>Reviews were collected on the following: Ellis Beach (3), Four Mile Beach (305), Palm Cove (169), Trinity Beach (68), Yorkey's Knob (9). <sup>c</sup>Reviews were collected on the following: Barron Falls (68), Crystal Cascades (28), Josephine Falls (12), Jourama Falls (10), Millaa Millaa Falls (6), Murray Falls (9), Wallaman Falls (16).