Analysis of wildlife tourism experiences with endangered species: An exploratory study of encounters with giant pandas in Chengdu, China

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Highlights
- Tourist reviews of the Chengdu Research Base of Giant Panda Breeding site in China were content analyzed.
- Tourist motivations, preferences, and satisfaction levels were found to vary.
- Generally tourist satisfaction levels increased with the levels of proximity and interaction with giant pandas.
- Three features of this wildlife tourism experience were found: tourists, pandas, and settings.
- A number of important management implications and recommendations were derived from this research study.

Abstract
This research examined wildlife tourism experiences in a unique site and species combination: giant pandas at the Chengdu Research Base of Giant Panda Breeding (CRBGPB) in Sichuan, China. Content analysis was undertaken on tourist reviews of CRBGPB on TripAdvisor.com in early 2012. The thematic analysis qualitative method was adopted in examining respondents’ written reviews of experiences interacting with giant pandas. ROST CM6 and NVivo 8 were used for the content analysis and qualitative coding.

A variety of tourist experiences, motivations, and preferences were revealed. Although respondents’ experiences were varied, satisfaction increased with closer encounters and interactions with the giant pandas. The thematic analysis identified three features of the wildlife tourism experiences at CRBGPB: tourists, giant pandas, and settings. Implications and management recommendations were identified for sites offering wildlife tourism experiences.

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1. Introduction

Many countries and regions rich in biodiversity but poor economically have been vigorously promoting tourism as a conservation tool in their protected areas since the 1990s (He et al., 2008). These include Nepal (Bookbinder, Dinerstein, Rijal, Cauley, & Rajouria, 1998); Indonesia (Walpole & Goodwin, 2000, 2001); Uganda (Adams & Infield 2003; Archabald & Naughton-Treves 2001); Central Africa Republic (Blom, 2000); and Costa Rica (Stem, Lassoie, Lee, Deshler, & Schelhas, 2003). China, with its fast-growing economy, has also advocated tourism to improve the economic status of reserve administrations and local communities (Han & Ren, 2001; Liu et al., 2003).

Wildlife tourism is playing a significant role in these efforts. People have had close relationships with animals throughout history (Orms, 2002). Wildlife interactions (observing, feeding, touching, photographing or otherwise experiencing wild animals) occur in a wide variety of settings worldwide. Wildlife tourism is regarded as a minimum impact activity and wildlife viewing is described as a non-consumptive use of wildlife (Duffus & Dearden, 1990; Green and Higginbottom, 2001). However, the importance of these interactions to the tourism sector and their impacts on many species of wildlife is not yet well understood, especially for endangered species of animals. The interfaces between tourists (social) and wildlife (environmental) can make a critical contribution to the sustainability of tourism (Rodger & Moore, 2004; Rodger, Moore, & Newsome, 2007). The key to sustainable development is...
the management of tourists, not the animals (Rodger & Moore, 2004). Therefore, it is vital to develop an in-depth understanding of tourist experiences. Wildlife tourism aims to educate visitors about the threats facing wildlife and the initiatives required to protect the environment and maintain biodiversity (Ballantyne, Packer, & Falk, 2011; Ballantyne, Packer, & Sutherland, 2011). It also has been recognised that an increased understanding of tourist–wildlife interactions will contribute to the sustainability of wildlife tourism experiences (Rodger & Moore, 2004) and wildlife conservation.

The understanding of wildlife tourism experiences has become more complex with the larger spectrum of information sources and channels. The focus of this research was on the features of giant panda interaction experiences and the four specific research objectives were to:

1. Describe the types of tourism experiences that people have when encountering and interacting with giant pandas.
2. Identify tourist motivations for wanting to see and interact with giant pandas.
3. Examine satisfaction with the quality of tourism experiences when encountering and interacting with giant pandas.
4. Pinpoint factors or features that influence wildlife tourism experiences in the context of captive giant pandas.

2. Literature review
2.1. Previous research on wildlife tourism

There is increased demand for tourists to interact with wildlife and especially with animals that are unusual or endangered (Rodger et al., 2007; Semeniuk, Haider, Cooper, & Rothley, 2010; Shackley, 1996) and when tourism products feature non-captive animals that are deemed to be particularly attractive or interesting (Weaver, 2005). The growing demand to interact with wildlife has led to the emergence of a wide range of wildlife tourism activities (Semeniuk et al., 2010; Weaver, 2005). Paralleling the growth in wildlife tourism is the expanding demand for closer interactions with wildlife in their natural habitats (Rodger, Moore, & Newsome, 2009). Tourism can provide the economic rationale for the long-term conservation of endangered and rare species (Higginbottom, 2004; Newsome, Dowling, & Moore, 2004; Reynolds & Braithwaite, 2001), and result in the creation or extension of protected area integrated conservation and development projects (Johannesen & Skonhoft, 2005).

Wildlife tourism experiences occur from interactions between humans and wildlife (Higham & Shelton, 2011; Orams, 2002). In fact, the experiencing of wildlife has now become the business of wildlife tourism (Reynolds & Braithwaite, 2001). This can be broadly defined as tourism undertaken to view or encounter wildlife (Newsome et al., 2004). Wildlife tourism takes place in a range of settings in natural or artificial environments, where animals are free or captive, and where visitors can interact closely with the animals or merely watch from a distance (Higginbottom, 2004; Newsome et al., 2004; Rodger et al., 2007). Wildlife tourism experiences provide opportunities to observe and interact with animals that may be endangered, threatened or rare. They are being offered in an increasing number of destinations worldwide (Cousins, 2007; Orams, 2002; Woods & Moscardo, 2003).

Reynolds and Braithwaite (2001) developed a conceptual framework for wildlife tourism and six intrinsic quality factors of the wildlife tourism experience were suggested. These quality factors were authenticity, intensity, uniqueness, duration, species popularity, and species status. Orams (2002) analyzed what attracted people to want wildlife tourism experiences and concluded that the decreasing number of opportunities to interact with nature was one of the important reasons. Higham and Carr (2003) developed insights into tourist experiences by gathering their viewpoints regarding the sustainability of wildlife experiences. This research was based on 12 ecotourism operations in New Zealand providing wildlife tourism as either primary or secondary components of tourism experiences. The study used content analysis of the comments from 76 tourists that were interviewed.

Higginbottom (2004) developed a model of the interactions of the components in wildlife tourism experiences. At the core of this model were the tourist–wildlife encounters and the wildlife tourism product. She further identified three factors influencing the core model components: wildlife and habitats, tourists, and the operators/businesses and settings. The impacts resulting from the consumption of the core components of wildlife tourism experiences were defined as being the effects on the natural environment, tourists, tourism operators, host communities, and economic returns. The Reynolds and Braithwaite (2001) and Higginbottom (2004) models provide a solid conceptual and theoretical platform for future research on wildlife tourism. There is, however, a need for more empirical research to test and refine these models.

Ballantyne, Packer, and Hughes (2008) explored the perceptions, preferences and conservation awareness of tourists visiting the Mon Repos Conservation Park in Queensland, Australia. The findings suggested that wildlife tourism management practices that enlist tourists as conservation partners, communicate the reasons behind any constraints imposed, and present a consistent message regarding interactions with wildlife are likely to be successful in meeting the needs of tourists and the wildlife. Ballantyne et al. (2011) used structural equation modeling to identify factors that best predicted the long-term impacts of wildlife tourism experiences. The objective was to investigate how visitors’ entering attributes combined with specific aspects of the wildlife tourism experience to produce changes in visitors’ environmental knowledge, attitudes, and engagement in environmentally sustainable practices. Ballantyne et al. (2011) examined participants’ memories of wildlife tourism experiences and explored processes through which such experiences could lead to long-term changes in conservation behaviour. Qualitative analysis revealed four levels of visitor responses to experiences: what visitors actually saw and heard (sensory impressions); what they felt (emotional affinity); thought (reflective responses); and finally what they did about it (behavioural responses).

Overall, there have been many valuable contributions to the research literature on wildlife tourism from 2001 to 2011 inclusive. However, the importance of these interactions to the tourism sector and their impacts on many species of wildlife is not completely comprehended. There is still a need for more empirical analyses especially on tourist experiences when encountering wildlife of specific species and in different settings. More in-depth analysis of tourist experiences is important for the sustainable development of wildlife tourism as well as helping to ease potential conflicts between economics and wildlife conservation. Exploring tourist preferences and response behaviours for specific destinations and for certain wildlife species will help with sustainable tourism development (Mazanec & Strasser, 2007). Moreover, greater analysis of wildlife tourism experiences will provide useful guidelines for tourism management and marketing.

2.2. Background and research on giant pandas

The giant panda (Ailuropoda melanoleuca) is the rarest member of the bear family and among the world’s most threatened animals. They live in the bamboo forests of six isolated mountain ranges in south-western China (Reid, 1994). The third national giant panda
investigation was completed in June 2004 and estimated there to be 1590 pandas alive in the wild; the nursery population under 1.5 years old was not included. The total number has been increasing. In addition, the 2010 China giant panda breeding statistics estimated that there were 314 pandas in captivity worldwide, with 46 of these being overseas (around 15% of the captive population).

The giant panda is a conservation-relevant endangered species and great strides have been made to conserve them. The Chinese Government by 2005 had established over 50 panda reserves covering more than 2.5 million acres—over 45 percent of remaining giant panda habitat—and protecting more than 60 percent of the population. A 2006 study via DNA analysis estimated that the panda population could be as high as 2000–3000. The Chinese Forestry Bureau in October 2011 initiated the fourth investigation on the wild panda population and distribution (Forestry Bureau of China, 2012).

WWF’s “All Time Top 10 Species to See” ranked the giant panda as the top species in the world that people want to see (World Wildlife Fund, 2012). Moreover, tourism associated with giant pandas is certainly one of the most unique tourism products provided within China. The dilemma is how to make the giant panda conservation projects sustainable and, at the same time, to satisfy tourist needs for close interactions with giant pandas.

There have been few research studies examining wildlife tourism in Asia, especially in China which has rich wildlife resources (Higginbottom, 2004). In particular, there has been very little research on tourist experiences with wildlife encounters in China and tourist experiences with giant pandas have yet to be empirically analyzed.

2.3. Research on social media data and content analysis

With the development of websites and then social network systems (SNSs), tourists have become more capable and willing to share their experiences with the digital world. This has become a rich information source for researchers to analyze tourist experiences. Several studies have investigated photographs or text from websites to analyze different aspects of tourism (e.g., Choi, Lehto, & Morrison, 2007; O’Leary & Deegan, 2005; Stephenkova & Morrison, 2006; Stephenkova, Kirilenko, & Morrison, 2009).

As one component of these social media, traveler review sites are websites that include assessments by people that have visited destinations, hotels, attractions, restaurants, or used other travel services and facilities. TripAdvisor.com is the most used among these websites. According to its official website, it has 200 million unique visitors every month and around 100 million reviews and opinions by travelers (TripAdvisor.com, 2013). The main appeal of websites such as TripAdvisor is the perceived objectivity of the reviews for people who are considering going to the destination or using a particular tourism operation. Recent surveys of traveler review sites indicate that a majority of consumers using a particular tourism operation. Recent surveys of traveler review sites indicate that a majority of consumers

1) It was first used more than 200 years ago as a method for analyzing hymns, newspapers and magazines, political speeches, advertisements, etc. (Harwood & Garry, 2003). To date, content analysis using information from websites or SNSs for research on wildlife tourism experiences has been limited or, as in the case of Higham and Carr (2003), this information has been used in a supplementary fashion. However, this increasingly rich and readily available vein of text data can be mined for further exploration of wildlife tourism experiences.

3. Background to research

3.1. Study site

The Chengdu Research Base of Giant Panda Breeding (CRGBPB) is located in the northeast of downtown Chengdu and covers an area of 36.5 ha. CRGBPB is a non-profit organization engaged in wildlife research, captive breeding, conservation education, and educational tourism. It was founded in 1987 with six giant pandas rescued from the wild. By the end of 2011, it had succeeded in having 109 births and a total of 161 panda cubs. CRGBPB is different from normal zoos as its main function is for giant panda breeding research. It has made great progress as a giant panda breeding center by freezing semen as the way to breed. CRGBPB’s facilities include a Tourist Services Center, Giant Panda Museum, Research Center, Panda Story Cinema, Red Panda Enclosures, Giant Panda Nursery, Giant Panda Cub Enclosure, Adult Panda Enclosure, No.14 Enclosure, Sub-adult Panda Enclosure, Giant Panda Hospital, Giant Panda Kitchen, Swan Lake, and Restaurant (site map provided in Figure 1). The goals of CRGBPB are to be a world-class research facility, conservation education center, and international educational tourism destination. As the following quotation from CRGBPB’s official website indicates, the educational tourism mission is taken very seriously (Chengdu Research Base of Giant Panda Breeding, 2012):

As a famous sightseeing destination and a window to the wild, we improved our service facilities for tourists. Our efforts have made the Panda Base attractive to foreign and domestic audiences. We will fully use the resource of our endangered animals to strengthen conservation education to the public, and develop the Panda Base to be a unique educational tourism destination (http://www.panda.org.cn/english/visit/1.htm).

The CRGBPB is a unique place due to its abundance of giant pandas. Given its status as an endangered species, it is a very remarkable situation that visitors can encounter a significant proportion of the world’s total giant panda population at one site in Chengdu. CRGBPB started with just six giant pandas and now it has more than 100. Additionally, CRGBPB has giant pandas of all different ages. Other species of panda such as the red panda are also on display.

The reasons for selecting CRGBPB for this research were threefold: 1) it is ranked as the top among 126 attractions in Chengdu as reviewed by people on TripAdvisor.com. Additionally, CRGBPB has the most reviews by people on TripAdvisor.com for panda facilities; 2) CRGBPB attracts domestic and international visitors; and 3) CRGBPB has a large number of captive pandas. The research team attempted to obtain attendance figures for CRGBPB, but was told by management that these statistics were confidential. However, a search of other sources indicated that there were approximately 900,000 visitors to CRGBPB in 2009; approximately 40% from China and 60% from international origins.

3.2. Methodology

3.2.1. Collection of textual information

Understanding people’s experiences in encountering giant pandas when visiting CRGBPB was the major goal of this research.
Websites containing reviews of such visits were expected to yield extensive information about these encounters. A sample of potential websites was selected through a search of website lists in the travel directories of Yahoo and Google from April 17 to April 23, 2012. Thereafter, a number of websites including TripAdvisor, TravelPod, TripBlog, Lvping, and Sina were searched with the keywords of Chengdu Research Base of Giant Panda Breeding. After reviewing the search results, three websites were given further consideration (TripAdvisor, TravelPod, and Lvping).

3.2.1.1. TripAdvisor.com. At the time of completing the research, there were 296 reviews of CRBGPB; 153 reviews in English written by 151 persons (two people each published two reviews). The other 143 reviews were in non-English languages including Chinese, Japanese, and French. The researchers retained only the 153 reviews in English comprising a total of 20,717 words.

3.2.1.2. TravelPod.com. TravelPod is an online service which allows users to create travel blogs. TravelPod had 20,000 members by November, 2005 (PRWeb, 2005). Using the keywords for CRBGPB, there were 74 blogs, of which 73 were in English, with a total word count of 77,277. However, all of these blogs were not limited to CRBGPB and that was validated to ensure that it accurately reflected details of CRBGPB. Additionally, each account of a visit had to be interpretable results from this text-mining analysis: made to disqualify this source of text since the research focus was on visits to CRBGPB.

3.2.1.3. Lvping.com. The researchers also checked this website, which is a Chinese version of TripAdvisor.com. There were 184 reviews on CRBGPB. Since these were all written in Chinese, it was decided to exclude them from this research and focus only on reviews written in English.

Purposive sampling was used in selecting text to include in this research (Oliver, 2006). This is a non-probability approach that is sometimes applied in qualitative research. The researchers only included text that fit the criteria of being an account of a visit to CRBGPB and that was validated to ensure that it accurately reflected the details of CRBGPB. Additionally, each account of a visit had to be in sufficient depth. As such, the data set was limited by the amount of qualified text accounts available on TripAdvisor. Unlike probability sampling, there are no definite sample size standards for this type of qualitative research. However, experience shows that when materials reach saturation and content repeatedly appears, no new content is produced so the data collection can be completed (Chen, 2010), or the coding is saturated and there are no other new free codes (Santos & Buzinde, 2007).

3.2.2. Text frequency analysis

The text data were content analyzed using ROST CM6, which is a large and free social computing platform software developed by Professor Shen of Wuhan University in China. Its main function is to help people in the humanities to conduct Weibo (micro-blog) analysis, by calculating frequency statistics of Chinese and English words, as well as performing clustering analysis and certain other functions. The research team applied ROST CM6 to conduct the word frequency analysis.

Several preliminary steps were needed to achieve the best interpretable results from this text-mining analysis:

(1) Some words did not contribute to a meaningful interpretation of the results and were removed. Examples included words such as ‘is’, ‘a’, ‘the’, ‘I’, ‘of’, ‘to’, ‘in’, ‘and’, ‘you’, and some others.

(2) Inconsistencies caused by singular and plural nouns were resolved, e.g., ‘baby’ and ‘babies’, ‘photo’ and ‘photos’, etc.
3.2.3. Coding and analysis
The selected qualitative research process could be classified as thematic analysis. Braun and Clarke (2006) defined thematic analysis as “a method for identifying, analyzing, and reporting patterns (themes) within data. It minimally organizes and describes your data set in (rich) detail.” For this purpose, NVivo 8, a qualitative analysis tool from QSR International was used, and it is based on the grounded theory methodology. One of NVivo’s major advantages is in its strong coding (Code) function, but it has additional useful functions such as Set, Query, Link, Model, and others. After the text was entered into the NVivo software, three steps were followed:

**Descriptive coding or free codes.** The main aim was to find the basic relative content, but not to explain it (King & Horrocks, 2010). The coding was done line by line, so as not to miss any important information. To ensure the reliability and validity of the coding, two team members coded the text separately (Wan, 2002). Double-checks were made through discussions of each coding result. Where there were disagreements that could not be resolved, a third person was introduced into the discussion. At the end of this first step, the free coding spectrum included 68 free codes and 765 references (Table 1).

**Interpretive coding.** The second step was to classify the free codes, mainly based on the literature review materials, continuously comparing and analyzing the connections among the codes. This step is mainly to derive interpretive meanings (King & Horrocks, 2010: 154) and is called “level 2 coding.”

**Overarching themes.** This step defined the overarching themes within the data set of tourist reviews of CRBGPB. These broader themes often cover many different cases and reveal the core concepts and elements of the research (King & Horrocks, 2010: 158). Braun and Clarke (2006) refer to this as a “define and refine” process. Each tentative theme was reviewed one by one, as was the raw word text, and free and interpretive codes associated with each theme.

### Table 1

<table>
<thead>
<tr>
<th>The coding spectrum.</th>
<th>Interpretive codes</th>
<th>Free codes</th>
<th>Frequencies</th>
<th>Percents (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overarching themes</strong></td>
<td>Abundance of pandas; amount of pandas; red panda</td>
<td>42</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Panda behaviour; panda feeding</td>
<td>42</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Habitat; living situation of pandas; panda conservation; panda living situation; physiological knowledge of giant panda; reasons for scarcity; the functions of the center; scarcity</td>
<td>21</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td><strong>Setting features</strong></td>
<td>Chinese culture; climate; local people; location; weather</td>
<td>17</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Facilities; panda movie; museum; signage; souvenirs</td>
<td>60</td>
<td>7.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Food; guide; panda card; park area; park environment; park management; queue for holding pandas; tour guide</td>
<td>85</td>
<td>11.1</td>
<td></td>
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<tr>
<td></td>
<td>Take taxi; transportation in park; transportation to the park</td>
<td>22</td>
<td>2.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Price</td>
<td>55</td>
<td>7.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Treatment of animals</td>
<td>4</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Staff service</td>
<td>1</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td><strong>Tourist features</strong></td>
<td>Description of panda; emotional affinity</td>
<td>42</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Book a tour; children visitors; fellow travelers</td>
<td>10</td>
<td>1.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Compare to zoo; fun place; perception of park; perception of visit</td>
<td>83</td>
<td>10.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Behaviour after the visit; buy souvenirs; feed panda; hold panda; learn about panda; length of stay; observe panda; see nursery; take photos; tourist behaviour; volunteer program</td>
<td>147</td>
<td>19.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tourist motivation</td>
<td>10</td>
<td>1.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tourist preferences</td>
<td>22</td>
<td>2.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Efficient way for panda time; previous experience; revisit route of the visit</td>
<td>8</td>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Visit time</td>
<td>94</td>
<td>12.3</td>
<td></td>
</tr>
</tbody>
</table>

### 4. Research results and findings

#### 4.1. Demographics and countries of origin

The proportion of male respondents (55.9%) was higher than female (44.1%); although it should be mentioned that there were a significant number of missing values for the genders of the writers of reviews (Table 2). Some 71.3% of the respondents were aged from 25 to 49. Another 20.8% were 50–64 years old; those 18–24 and 65 and over both accounted for less than 5%.

The 151 review writers were from many different countries. The nations with the highest numbers were USA (23.7%), China (16.5%), UK (15.8%), and Australia (15.1%). Singapore and Malaysia each represented less than 5%, and there were reviews from 30 additional people from other countries.

A total of 294 people rated CRBGPB on the five-level scale provided by TripAdvisor: excellent, very good, average, poor, and terrible. Some 95.3% rated CRBGPB as either excellent or very good, indicating a very high level of enjoyment and satisfaction (Table 3). Only two of 294 people gave CRBGPB a below-average rating. Because of the limitations of the text source, being only from the TripAdvisor.com website, limited demographic and origin information was available on the respondents. Additionally, since many people’s personal information was left blank, there were significant numbers of missing values.

Table 4 shows the word frequencies for the “cleaned” text data. Not surprisingly, “pandas” *(n = 541)* had the highest word frequency. “Saw” *(n = 171)* ranked second; and “time” *(n = 77)* and “Chengdu” *(n = 73)* ranked third and fourth respectively.
4.2. Thematic analysis of text

There were 765 reference points and 68 free codes. For the second step of interpretive coding, the 68 free codes were reduced to 18 interpretive codes. In the third step, these 18 codes were reduced to three overarching themes (Figure 2): tourist features \( (n = 416; 54.4\%); \) setting features \( (n = 244; 31.9\%); \) and giant panda features \( (n = 105; 13.7\%). \)

### 4.2.1. Tourist features

Features of the respondents were the most discussed in the text data set, representing more than half of the reference points. The interpretive codes identified therein were tourist behaviours, motivations, preferences, visit times, visit experiences, fellow travelers, emotional affinity, and sensory impressions.

#### 4.2.1.1. Tourist behaviours

The tourist behaviours at CRBGPB could be divided into three parts based on their interactions with giant pandas: seeing or watching; holding; and other personal interactions. For panda watching, most people said the most important factor influencing the quality of experiences was the time of visiting CRBGPB. "Try to get to the Panda Research Base as early as you can" was a clear recommendation. In the early morning around 8 a.m., the pandas are active and it is a panda feeding time. Seeing the panda nursery was another highlight of tourist experiences. Here there are many panda cubs of different ages, including a 5-week-old in an incubator, and in a bassinet type of enclosure there was a two-month-old and two four-month-old twins. One comment was that, "I got to see a staff member hold one of the twins and feed her a bottle. It was one of the cutest things I have ever seen!"

Many people talked about holding giant pandas, comprising 51 reference points. Holding pandas was one of the most popular topics and most prized experiences that respondents shared with others and most highly recommended this activity. When talking about holding pandas, they always mentioned the price, which is a 1000 RMB (approximately USD 160) donation for giant panda research. Many respondents understood this practice and supported its contribution to panda conservation:

"After regretting not paying the slightly hefty fee (¥ 1000) to hold a Panda on my first visit I jumped at the opportunity to experience this wonder the second time around, if you can afford to it’s a definite must do: ) Admittedly you only get at the most 5 min each to sit/hold a Panda but it’s worth every penny believe me."

"For a donation of at least RMB 1000 (about £ 100/USD155) you can sit next to a young panda and have photos taken with it. Although it sounds a bit pricey, I was happy to pay this as it helps to support the breeding. This is worthwhile in itself."

However, there were respondents mentioning that it was very expensive to hold a panda for only five minutes and others complained about the experience because they felt the area was poorly organized. Taking photos often occurred when holding pandas:

"I had 45 s holding the panda whilst the lady in front of me (another Westerner) had nearly 2 min. There was also no professional photograph, which they could easily make more money from doing. Instead one of the workers takes your camera and does a few photos."

Besides holding pandas, respondents mentioned observing and learning about them, and engaging in the volunteer program, such as feeding pandas. The volunteer program was one of the most satisfying experiences at CRBGPB and it was highly recommended by those who participated. They gave very detailed descriptions of their volunteering and considered it to be the best way to interact with wildlife:
"We went with the Panda Keeper Program through travelchinaservice.com. The program costs 600 RMB per person. It starts at 8:30 and ends around 3–4 pm. The guide met us at the gate and stayed with us through the program. We got to feed the pandas, visit their enclosures, and also clean their night cage (didn’t enjoy this part). Overall was a great experience."

People signing up for this program can have one to four days of close contact with giant pandas. They clean cages, prepare food and feed pandas, as well as observing them as they go about their daily routines. Although fewer people engaged in the volunteer program than holding and watching pandas, they were very highly satisfied with their experiences. Besides spending at least a whole day with close interactions with pandas, “the price of the panda volunteer program is very reasonable at 600 RMB per day.”

4.2.1.2. Tourist motivations. Fewer talked about their motivations for visiting CRBGPB. In general, there were three different types of motivations:

- They loved pandas or were panda fans; for example, “I am a huge panda fan so it was a dream come true to come to this place.”
- They were visiting Chengdu so took advantage of that opportunity to go to CRBGPB; for example, “We weren’t huge panda fans, but being in Chengdu you feel obliged to make a visit.”
- They wanted to escape the city or just kill time when in Chengdu; for example, “Escape the buzz of the City to spend some quiet time with the Giant Pandas and the lovely Red Pandas” and “I had time to kill before my flight and found that the research base was about a half hour drive from the city center by taxi. Having read other reviews I knew the feeding time would be 8:00 a.m. so timed my arrival to witness this.”

4.2.1.3. Tourist preferences. Some respondents expressed personal preferences while others did not. It might be thought that for those who did not, their preferences were reflected in their behaviours. However, this coding only focused on those who articulated preferences. There were differences in what people most preferred; some valued the proximity to pandas; for example, “It was really great to see the Pandas up close and in somewhat of their natural environment.” Others thought panda behaviour was the real attraction; “Their laziness and the way they go about being lazy is highly entertaining – you just have to see it for yourself.” Some were fond of cubs; “The best was the baby panda enclosure, where they brought out three baby pandas for their checkups, and put them into a baby panda pile, which is just as cute as it sounds.” Others were most impressed by the settings at CRBGPB; “I liked the shuttle service provided and the layout and facilities in the base are world-class.”

Fig. 2. Features of wildlife tourism experience at Chengdu Research Base of Giant Panda Breeding. Source: Drawn by the research team.
Most respondents were excited when seeing active giant pandas and chose the early morning as the best visiting time, since this is the time period when the animals are most active. “However, you need to be there early in the morning, about 9 am, there is the time where pandas are still active eating, and you guarantee have a close up look on them.” Many respondents preferred to take photos with giant pandas, either by getting up close to them or by paying to hold a panda.

Some people liked the panda nursery, while others considered the red pandas to be “the stars of the show.” There was also significant discussion about the high quality of the settings at CRBGBP, with some respondents praising the shuttle service and layout and facilities as being world-class. It was especially pleasing for some to see giant pandas up close in what resembled their natural habitat. There were even some respondents who gave high marks to the toilet facilities at CRBGBP.

4.2.2. Giant panda features

The three interpretive codes for this feature were the abundance of pandas, panda behaviour, and panda conservation (Table 4). Many respondents mentioned the behaviour of giant pandas and the large number of pandas at CRBGBP: “Giant pandas spend most of the time eating and sleeping, and they are only active in the morning and breeding times” and “Giant pandas spend more than 13 h a day eating bamboo and a mature panda can consume about 20 kg of bamboo each day”. So for many respondents, the best view of pandas was while they were eating.

Some people were fortunate to witness more active panda behaviour. They reported that it was fascinating to see young pandas fighting with each other. Others observed active adult pandas: “Meanwhile a parent was patrolling and play fighting with some of the young. This is what I came for! It was great to see.” Overall, the more active were the pandas, the greater was the satisfaction felt by respondents.

Giant pandas are a “living fossil” of ecosystem protection. Since the ancient era of the apes, there were giant pandas and they are still alive today. Therefore, the giant panda is a symbol of wildlife conservation and biological diversity. However, there remains a real urgency to do more for giant panda conservation. Many respondents really cared about panda conservation conditions and the project at CRBGBP. Thus, their survival status and what was being done to make them prosper were other significant attractions for certain respondents: “The pandas have big areas and it is not a zoo at all! The pandas in the centre are well kept and protected. The pandas are well looked after here and the carers really take care of them.”

4.2.3. Setting features

Several respondents described CRBGBP as a zoo: “though they are doing a great job breeding pandas and securing their survival and all, but it’s kind of boring and looks like any other specialized zoo. The Panda breeding center is done in typical Chinese government style. In that, is has the potential to be something very special; however the PRC has institutionalized it.” However, there were others who disagreed and thought the pandas had large areas and it was not a zoo at all. Regarding transportation to CRBGBP, the respondents mentioned three different ways, such as taking taxis, buses, and tour coaches or vans. The internal transport within CRBGBP is via shuttle bus or tram and only costs 10 RMB. Most respondents depicted CRBGBP as “quite clean and pleasant to walk around” and as being “large and well maintained and picturesque, full of trees.” For the facilities, many mentioned the panda museum, restaurant, Swan Lake, tourist center, antenatal clinic, toilets, shuttle service, gift shop, and movie theatre. Many judged CRBGBP to be: “A world-class facility for pandas.” On the negative side, some noted there was no ATM in the park, which was not convenient if you wanted to pay in cash to hold a panda. Others commented that: “the maps of the park were less than accurate.”

Staff behaviour and staff service were two other interpretive codes for this feature. There were comments about staff service, mentioning that staff members were very friendly, could communicate in English, and they cared most about the giant pandas: “The staff care more about their few precious bears, than all the tourists put together.”

5. Conclusions and discussion

The types of experiences that people had at CRBGBP were quite varied and, therefore, these research findings supported Uriely’s (2005) idea of the pluralistic nature of tourist experiences. Tourist motivations for visiting CRBGBP were also diverse and the subjective interpretations of experiences were different from person to person. Those visiting CRBGBP varied from the highly-motivated “panda fans” to the “accidental tourists” who were in Chengdu for others reasons, but since they were there already felt obliged to see the giant pandas.

Reynolds and Braithwaite (2001) identified six quality factors influencing satisfaction with wildlife tourism experiences: authenticity, intensity, uniqueness, duration, species popularity, and species status. Although not explicitly measured in this research, the tourist experiences at CRBGBP seemed to support and also be very positive for all six of Reynolds & Braithwaite’s quality factors. Generally, respondents writing reviews expressed high satisfaction levels with CRBGBP and their encounters with giant and other pandas. Species popularity for giant pandas has already been discussed and the species status is highly endangered. People who had the most “intense” experiences in encountering giant pandas expressed the highest levels of satisfaction. Authenticity was enhanced since people knew they were visiting an officially sanctioned and operated giant panda breeding research center. That CRBGBP has uniqueness was verified by the respondent’s reviews and, in actual fact, it is a unique site in China (Fig. 3).

The factors or features influencing the wildlife tourism experiences at CRBGBP were the tourists, giant pandas, and the settings of the Research Base. These corresponded quite closely with the model suggested by Higginbottom (2004), which encompassed the four elements of wildlife and habitat, visitor/market, operator/business and setting, and the visitor wildlife/encounter/wildlife tourism product.

![Fig. 3. Tourist response behaviours compared with satisfaction and proximity/interaction with giant pandas. Source: Drawn by research team.](image-url)
6. Limitations

This research was not without limitations. Interactions with giant pandas in the wild might be significantly different from the captive situation herein described at CRBGPB. Moreover, this research only focused on one species, but other wildlife species still remain to be studied in Asia and worldwide. It was also a limitation of this research that only reviews written in English were included and that those written in Chinese and other languages were excluded.

The results were based only upon respondents’ reviews published on the TripAdvisor.com website. TripAdvisor is undoubtedly a valuable source of information on tourism opinions and behaviours, but this information is not without its critics. Some believe that TripAdvisor reviews reveal people's true motivations, preferences, and behaviours. Others argue that the reviews may not be representative of all tourists' opinions and also that “false reviews” are often posted. Additionally, reviews on TripAdvisor are recollections of experiences and not “real-time” accounts of tourist experiences. The qualitative data set used does not guarantee that the findings are representative of all the visitors to CRBGPB who were capable of writing in English; obviously many of these visitors chose not to write accounts of their visits to the site. Additionally, although accounts were checked for validity, the researchers had to assume that all reviews were honestly prepared and that TripAdvisor’s methods and procedures for collecting reviews were sound.

It is also acknowledged that some scholars have concerns about using online blogs and reviews as a data source for research, mainly based upon doubts about the generalizability of the results to tourist populations as a whole. Although this methodology is becoming a common practice in the social media era, it is recommended that tourism researchers further confirm their results with traditional quantitative methods and validated samples. Above all, caution is urged in generalizing from the results of this research.

Due to data limitations, this research did not examine the relationships among tourist characteristics and their experiences, preferences, and motivations. The methodology used was qualitative and not quantitative, and it was definitely exploratory in nature.

7. Contributions, management implications and future research

7.1. Contributions

This analysis of respondents’ written reviews of wildlife tourism experiences has shed light on encounters with giant pandas in a captive situation. The research was designed to identify types of experiences, tourist motivations, preferences and satisfaction levels, and factors or features affecting this specific case of wildlife tourism experiences. A major challenge to wildlife managers is providing tourists with opportunities to observe rare or endangered wildlife while also protecting the species from deleterious impacts (Ballantyne et al., 2011; Smith, Ham, & Weiler, 2011; Soric, Shafer, & Ditton, 2005).

Visitor–wildlife encounters comprise the core of wildlife tourism products (if a commercial operator is involved) or of wildlife tourism experiences (if not) (Higginbottom, 2004). For this research, the core of the wildlife tourism experience was to be in close proximity to giant pandas, which was consistent with the research findings for other species, such as whale watching and whale shark experiences (Catlin, & Jones, 2010; Reynolds & Braithwaite, 2001).

Much of the wildlife tourism experience research to date has been conceptual or theoretical in nature. This study makes a contribution by analyzing a real-life situation within Asia, addressing the call for further research of wildlife tourism in Asia by scholars such as Higginbottom (2004). Moreover, the specific destination and species combination was unique: giant pandas in Chengdu, Sichuan. The use of thematic analysis of text information derived from tourist reviews on a website was also a unique approach in the field of wildlife tourism experience research.

7.2. Management implications

The findings suggest that to evoke powerful memories, enhance tourist experiences, and encourage people to adopt environmentally responsible behaviours after their visits, wildlife tourism managers and operators should consider six initiatives.

First, the expansion of voluntourism programs should be contemplated since this is an increasingly popular option for travel (Bailey & Russell, 2010). This type of experience allows tourists to have much closer encounters with animals. This tends to enhance tourists’ experiences, heighten environmental awareness, and assist with wildlife conservation programs. At CRBGPB, this was a very meaningful experience for the visitors who engaged in the voluntourism program.

Second, there is often a need to tighten the control and management of external services. For example in this specific case, CRBGPB must pay more attention to the transportation access options to the site, especially since some tourists complained about taxi “scammers.” Although this is not part of the operation itself, this situation is greatly affecting the CRBGPB’s image, in a negative way.

Third, managers and operators should continuously be seeking new ways to improve photo-taking arrangements and services. The taking of photos is very important in recording tourists’ experiences and so the arrangements made for photography are critical. The photo-taking arrangements at CRBGPB are not ideal and the management needs to devote greater attention to this situation. Better arrangements for queuing are needed for taking photos with giant pandas. Additionally, having staff available to take photos for/ of tourists is also desirable.

Fourth, it is important to continually enhance environmental interpretation information and systems. For example at CRBGPB, the high price for holding a panda needs to be more clearly explained, as some tourists thought the price was too high and a “waste of money.” The management at CRBGPB must have a rationale for these high price levels and needs to clearly articulate the reasons to visitors so that they can more fully understand the value inherent in this activity.

Fifth, providing a more complete destination through the addition of helpful tourist services should be considered. There is often a need to increase facilities and services for tourists, e.g., at CRBGPB there is a need to add ATM services. The provision of these additional services not only increases visitor convenience and satisfaction, but also will increase per capita expenditures and lengths of stay.

Sixth, wildlife tourist sites like CRBGPB must ensure that they have comprehensive maps, and directional and building signs. Several tourists at CRBGPB complained that its maps were not accurate, while others said that the entrances to buildings were not well marked, making it difficult to access them. In China, it is often difficult to continuously update signage and maps due to the lack of language capabilities other than Chinese, but nevertheless a practical solution must be found to satisfy the needs and requirements of international visitors.

7.3. Recommendations for future research

To extend and enrich the findings of this study, future research on encounters and interactions with giant pandas should use...
quantitative techniques along with other forms of qualitative analysis (e.g., individual in-depth interviews, focus groups, etc.). Ideally a survey of Chinese domestic and international tourists should be conducted at CRGBP, and similar surveys should be completed at giant panda natural habitat sites such as Wolong and Wanglang. Cross-cultural comparisons should be made between domestic and international tourists.

Additionally, future researchers should consider invoking theories that may more fully explain tourist experiences and behaviours at sites such as CRGBP and giant panda natural habitats. For example, involvement theory has been extensively applied in tourism research (Brey & Lehto, 2007) and might be very relevant in this particular context. Those who signed up for the volunteer program at CRGBP may be the most highly involved; while the “accidental tourists” may have the lowest involvement levels.

References


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