



OPEN ACCESS

EDITED BY

Susan Snyman,
School of Wildlife Conservation, Rwanda

REVIEWED BY

Susan Slocum,
George Mason University, United States
Mucha Mkono,
The University of Queensland, Australia

*CORRESPONDENCE

Christine A. Vogt
✉ chrisv@asu.edu

SPECIALTY SECTION

This article was submitted to
Ecotourism,
a section of the journal
Frontiers in Sustainable Tourism

RECEIVED 05 November 2022

ACCEPTED 20 January 2023

PUBLISHED 21 February 2023

CITATION

Kredens C and Vogt CA (2023) A
user-generated content analysis of tourists at
wildlife tourism attractions.
Front. Sustain. Tour. 2:1090749.
doi: 10.3389/frsut.2023.1090749

COPYRIGHT

© 2023 Kredens and Vogt. This is an
open-access article distributed under the terms
of the [Creative Commons Attribution License
\(CC BY\)](https://creativecommons.org/licenses/by/4.0/). The use, distribution or reproduction
in other forums is permitted, provided the
original author(s) and the copyright owner(s)
are credited and that the original publication in
this journal is cited, in accordance with
accepted academic practice. No use,
distribution or reproduction is permitted which
does not comply with these terms.

A user-generated content analysis of tourists at wildlife tourism attractions

Claire Kredens and Christine A. Vogt*

Center for Sustainable Tourism, School of Community Resources and Development, Arizona State University, Phoenix, AZ, United States

Introduction: Captive wildlife tourism is an increasingly complex subsector of ecotourism due to the varying degrees of care given to the animals, interpretation or education provided, and tourist expectations of potential interaction with the animals. Two recent tourism trends are the growing wildlife tourism sphere of ecotourism and the increased use of social media in both marketing and for tourists to share their experiences. In scientific literature, the connection between social media and tourism was largely under-studied, and tourist behavior on Instagram after visiting wildlife tourism attractions (WTAs) has not been studied. Some researchers call for more tourism research using social media data created by tourists, called user-generated content (UGC), to understand tourist behaviors.

Methods: This netnographic study examines tourists who visited a WTAs by analyzing their post-visit photos and captions on Instagram through the lens of involvement theory to evaluate the strength of their connection to wildlife and conservation. Previous research indicated wildlife tourism can have extraordinary benefits to conservation and communities, but some WTAs, some of which are photo-prop tourism attractions where animals are handed over to tourists for close-contact selfies, produce negative impacts on individual animals and entire species due to illegal sourcing, improper care, human interaction, and habituation.

Results: Findings from this study suggest WTAs with good or excellent conservation and welfare practices were found to lead to more highly involved tourists, ultimately benefitting community investment, animal welfare, and conservation efforts via the flow of tourist dollars and spread of information on social media, the tourist changing their behavior, or all the aforementioned. Conversely, WTAs with negative conservation and welfare practices were found not to foster the same level of tourist involvement as their counterparts, often leading to more anthropocentric Instagram posts that do not spread conservation messaging or imply appropriate tourist-animal interactions.

Discussion: The implications from this research suggest that WTA management practices should move toward a model focusing on conservation-themed interpretation, education, and positive animal welfare for the improvement of conservation efforts within wildlife and eco-tourism. Such models should keep up with evolving sustainability, responsible, and regenerative practices adopted by the tourism and outdoor recreation industry.

KEYWORDS

social media, ecotourism, wildlife tourism, photo prop tourism, involvement theory, netnography, animal welfare, conservation

1. Introduction

Wildlife tourism is an increasingly complex, global, and growing subset of the ever-increasing nature-based or eco-tourism phenomenon (World Tourism Organization, 2014), mostly occurring in non-Western countries with higher concentrations of biodiversity (Valentine and Birtles, 2004). Such regions benefit from economic development and wildlife-focused and community-based ecotourism that can be profitable for rural people living in or near wilderness areas because of their firsthand knowledge of the landscape working as guides or transportation workers (Hoefle, 2016). This is a dual benefit to conservation because people can turn from illegal wildlife hunting practices to tourism-based job opportunities (Hoefle, 2016). While wildlife tourism can be beneficial for the conservation of a species (Higginbottom, 2004; Ballantyne et al., 2009, 2011) and the local community (Wilson and Tisdell, 2003; Curtin, 2009), some wildlife tourism attractions (WTAs) such as zoos, safaris, or elephant parks that participate in practices such as feeding, capturing wild animals and not releasing them, and habituating wild animals to humans can harm animals and/or the longevity of their species. There are a range of wildlife tourism attractions (WTAs) worldwide with varying degrees of conservation effectiveness and animal welfare conditions (Moorehouse et al., 2015, 2017; Thomsen et al., 2021). Before COVID-19, over a half million captive wild animals worldwide were reported to be suffering for tourist entertainment by the Coalition for Ethical Wildlife Tourism (McKirdy, 2020). Given the chance COVID-19 is providing the tourism industry to reset for the better (Ioannides and Gyimothy, 2020; McKirdy, 2020; Mostafanezhad, 2020), the subset of the tourism industry that exploits animals could attempt to refocus its relationship with animals it benefits from and recognize them as stakeholders (Markwell, 2020) who deserve rights and to be advocated for in human society. Understanding the involvement of tourists in this process would advance knowledge of how the WTA industry can be improved to ensure that animals are treated with respect to strive for human-wildlife coexistence and adopt ecotourism models that embrace sustainability and responsibility.

The wildlife tourism industry has fostered stewardship of animals, improved conservation initiatives (Higginbottom, 2004; Ballantyne et al., 2009, 2011; Curtin and Kragh, 2014) and supported local economies (Wilson and Tisdell, 2003; Curtin, 2009). Tourism experiences that offer wildlife encounters, conservation themed interpretation, and clear guidelines for wildlife-tourist interaction have considerable potential to enhance tourists' learning and influence their long-term behavior, but the challenge is to meet the needs of tourists without compromising the needs of wildlife (Ballantyne et al., 2009). A focus on wildlife tourism was justified due to the annual 10% growth in the wildlife tourism industry (World Tourism Organization, 2014), and because many tourists are unable to recognize the negative effects some attractions have on animals (Moorehouse et al., 2015). Furthermore, *Annals of Tourism Research* published a curated collection dedicated to animal ethics in tourism for growing interest and expanded research over the last two decades that adopts an animal-centric approach upon which further research can be developed (Winter, 2020).

Some human-wildlife interactions at WTAs can lead to photos of tourists posing with animals like props (i.e., photo prop tourism). Individuals, particularly consumers, are increasingly involving themselves with social media to communicate experiences that reflect their values and who they are (Akehurst, 2009). The prevalence of wildlife selfies on social media has grown 292% globally since 2014 according to World Animal Protection. Selfies with wild animals do not reveal the welfare concerns that can happen behind the scenes (Daly, 2019), which include stress, reduced breeding success, disease, mortality (e.g., D'Cruze et al., 2017), decline of wild populations, and changes in physiology or behavior (e.g., Green and Giese, 2004). Consequently, previous research examined the welfare vs. conservation benefits of WTAs (Moorehouse et al., 2015); however, tourists' levels of involvement with WTAs remains understudied. Previous research indicates that user-generated content (UGC) and social media data in tourism research are rarely leveraged as a scientific data source to test theory and frameworks (Ukpabi and Karjaluto, 2018), but offer a rich source of information for applied tourism research and destination analysis (Marine-Roig and Anton Clavé, 2016). UGC from Instagram, the platform on which the most tourism photos and videos are shared worldwide (Iglesias-Sanchez et al., 2020), suggests tourism researchers can and should use these data to better understand how involved tourists are with WTAs. Given the increasing presence of social media in the tourism industry on the consumer and supplier sides (Ukpabi and Karjaluto, 2018), research is needed on the role of tourists in shaping WTA priorities and visitor experiences. This research deductively analyzed social media data applying several leading social-environmental theories to provide meaning to social media messaging.

This research aimed to understand the content people share on Instagram visually and textually about their WTA experiences worldwide through the lenses of involvement theory and the New Environmental Paradigm (NEP) framework. UGC was studied as an expression of involvement and environmental worldview and may represent the nature of an experience to a wildlife tourism attraction, self-identity, or commitment to animals, conservation, or the environment. The knowledge gained from this research begins to understand the tourist and WTAs and their the relationship to wildlife tourism and animal welfare for the ultimate benefit of improving animal welfare within tourism. Higher levels of tourist involvement and ecocentrism in wildlife tourism could have implications for bettering wildlife tourism *via* people's spoken, written, and visual representations of their experiences influencing other tourists if they convey messages that encourage better conservation behavior or tourist behavior. Understanding tourists and how they communicate and influence other people to visit WTAs and their relationship with wild animals has broad implications for wildlife conservation and management.

WTAs are defined as an attraction that a tourist expects to see or interact with captive wild animals as their main reason for going to such an attraction. Tourist may choose to visit a WTA because an animal is too hard or unlikely to see in the wild. Animals are captive at the time of a visit and some animals could be released into the wild after rehabilitation. These attractions are non-consumptive (non-hunting or eating) and highlight non-domesticated (wild) species. WTAs are one form of wildlife-based tourism that allow

visitors closer encounters with animals in the form of wildlife parks and animal sanctuaries (Reynolds and Braithwaite, 2001; World Animal Protection, 2014). Wildlife tourism is a subsector of ecotourism which is defined as tourism concerning the natural history of a region and any WTAs would highlight wildlife from the local geography (Fennell, 2009).

The question that guides this research is: *How do tourists involve themselves with wildlife across wildlife tourism attractions of varying ethical practices?* Tourist involvement at attractions reflects what is gained from their experience and how they did so, such as learning about a species through interpretation, talking to animal keepers, or the lack of the aforementioned. This overarching question is further framed with two objectives and more detailed research questions:

Objective 1. To identify, categorize, and measure visual representations of tourists' experiences when visiting WTAs.

1a) *What are people posting photos of from WTA visits?*

Objective 2. To understand how tourists are positioning themselves in relation to wildlife at WTAs through a text-based analysis and to identify levels of tourist involvement.

2a) *What do tourists' photo captions on Instagram signify about their involvement level with their WTA experience?*

2b) *Are text captions more anthropocentric (self- or human-centered) or ecocentric (about the wildlife, conservation, or action to protect the wildlife)?*

2. Materials and methods

This study aims to advance knowledge of ecotourism models and practices by addressing the limited research on the relationship between wildlife tourism, tourists, and social media from WTA visits. This research aims to add a social media component to wildlife tourism with an emphasis on the role social media plays on animal ethics within wildlife tourism. A netnographic approach was utilized, which is concerned with obtaining digital data such as social interaction and content analysis to understand human experience (Kozinets, 2015; Mkono, 2020). Qualitative data analysis was conducted on user-generated content (UGC) within the Instagram application and based on previous work with similar methodologies utilizing different types of UGC such as Instagram photos, consumer reviews, and Facebook and Twitter commentary. McCreary et al. (2020) used Instagram photos to study tourist perception of destination image, and Moorehouse et al. (2015) used TripAdvisor reviews to explore tourists' perceptions of wildlife tourist attractions (WTAs). Lastly, Mkono and Holder (2019) used Twitter and Facebook commentary to explore how social media was being used as a space of collective moral reflexivity regarding four highly publicized deaths of animals in the recreation industry. Using social media and digital data at this time is cost effective (Kozinets, 2015), takes advantage of large amounts of unused data that exist on the web, and is sensitive to the COVID-19 world where research is being executed so that human interaction is not necessary. McCreary et al. (2020) described using photo-based

UGC as a modified version of visitor-employed photography (VEP). VEP is a common method to understand individuals' visual preferences and physical characteristics of a place in which visitors take their own photos by the visitor discussing their images with a research team (which can be likened to a long-form version of a photo caption on Instagram). The VEP method is time-intensive and using UGC from social media is a similar method that is less time and resource intensive (McCreary et al., 2020). Because this research uses secondary data, a photo also allows the researcher to observe tourists for a moment in their visit without traveling to the destination. The photo offers a snapshot into tourist behavior at a certain attraction, and comparing photos can be used as a proxy to understand and compare tourist behavior at different WTAs with varying ethical stances that influence behavior at the attractions. Further, previous research has indicated that user-generated content and social media data in tourism research are rarely leveraged (Ukpabi and Karjaluoto, 2018) but offer a rich source of information for supporting tourism research and destination analysis (Marine-Roig and Anton Clavé, 2016).

This research seeks to directly extend Moorehouse et al. (2015) research which scored conservation and welfare impacts of 24 types of WTAs; only six had net positive welfare and conservation scores. These researchers examined consumer reviews for these attractions on TripAdvisor to evaluate if they were positive or negative regardless of the conservation or welfare scores or impact on the animals featured. Moorehouse et al. (2015) conservation and welfare scores were used in the current research to assess an attraction and analyze data for each attraction. Conservation scores reflect a positive or negative conservation outcome and are higher the more a species is threatened or endangered vs. not being of conservation concern. The factors which may impact the conservation scores could be related to education (or lack thereof) at the site, sourcing of the animals (illegally from the wild, captive breeding) or other factors such as rehabilitation and reintroduction of animals back into the wild. Welfare scores reflect the extent an attraction abides by the Five Freedoms of animal welfare (freedom from hunger and thirst, freedom from discomfort, freedom from pain, injury, or disease, freedom to express normal behavior, and freedom from fear and distress; Animal Humane Society, 2021). Welfare scores are the human treatment of animals at an attraction by the people who operate or work at a WTA and can reflect the ethical stance of an attraction. Conservation and welfare scores were considered when conducting data analysis in the current research that compares attractions that are objectively better or worse for the animals involved when considering welfare of the animals.

The netnographic qualitative research at hand evaluated the relationship between the conservation and welfare scores of five attractions from each of two categories of WTAs used in Moorehouse et al. (2015) and tourists' photos and captions shared on Instagram from the selected WTA. Two categories were selected based on the stark differences of conservation and welfare scores of captive-wildlife tourism attractions which ranges from zoos, wildlife parks, animal sanctuaries and aquaria, and circuses and shows (Moorehouse et al., 2015). Within this category are the sub-categories of captive-wildlife tourism attractions used for this research: Captive Interactions (including bear parks, dolphin interactions, elephant parks/treks, tiger interactions, and lion encounters) and Sanctuary Attractions (including bear sanctuary,

TABLE 1 WTA type, name, conservation and welfare scores, and category of attraction.

WTA type and name	Subcategory	Conservation score	Welfare score
Captive interactions			
Noboribetsu Bear Park	Bear Parks (Japan only)	−1	−3
Dolphin Discovery Los Cabos	Dolphin Interactions (captive)	−1	−2
Elephant Discovery Chiang Mai	Elephant parks/treks	−2	−2
Tiger Kingdom Phuket	Tiger interactions	−1	−3
Ukutula Lodge and Lion Center	Lion encounters	1	−1
Sanctuary attractions			
Bornean Sun Bear Conservation Center (BSBCC)	Bear sanctuary	1	2
Elephant Nature Park	Elephant sanctuary	1	2
Drakenstein Lion Park	Lion sanctuary	1	2
Sepilok Orangutan Rehabilitation Center	Orangutan sanctuary	3	2
Dolphin Research Center	Dolphin sanctuary	1	2

lion sanctuary, elephant sanctuary, orangutan sanctuary, and dolphin sanctuary). One attraction from each of the subcategories of Captive Interactions and Sanctuary Attractions (Moorehouse et al., 2015) was applied in this study and used the conservation and welfare scores allotted to the attraction sub-categories (see Table 1).

2.1. Theoretical background

Involvement, often used in recreation, leisure, and consumer behavior research, reflects the degree that people devote themselves to an activity or product based on their self-identity and values (Slama and Tashchian, 1985). Involvement theory can be useful in understanding the development of an environmental ethic around WTAs due to the psychological aspects of it, such as a person's ego or self-identity, created through values and attitudes that can be pro-environmental or not. Involvement theory is the theoretical basis for this study because research surrounding involvement theory reveals the extent which people view nature-based activities as relevant, important, and central to eco-friendly lifestyles (Kyle and Chick, 2004). Further, involvement relates to a person's commitment (Kim et al., 1997). This means that visiting a WTA could form a commitment between a tourist and conservation-oriented behavior depending on the type of attraction visited. A person's involvement in wildlife tourism

can have implications relating to what types of attractions they visit (conservation-focused or interaction-based), how they share their experiences (in person and digitally), and how others are influenced by them, particularly social media postings of pictures and comments based on personal experience. Related, the concept of anthropocentric (human-centered) vs. ecocentric (environment-centered) worldviews derived from the New Environmental Paradigm (Dunlap and Van Liere, 1978) is applied in this study as an extension of involvement to further clarify if high involvement was due to environmental values or learning, or perhaps just related to oneself and a reflection of personal or anthropocentric values. The NEP is the most frequently used measure of a person's environmental concern and tests environmental values and attitudes (Stern et al., 1995). The two social-psychological concepts (i.e., involvement and NEP) used in conjunction have stronger potential to analyze tourists at WTAs because using secondary data, as this study does, removes the possibility of probing questions to the tourists, and adding another level of analysis aims to remove this shortcoming of using secondary data.

2.2. Study design

The research has been organized into two phases (photo and caption), but the secondary data were collected simultaneously from the Internet by downloading and putting them into Microsoft Excel *via* copying and pasting photos and captions into separate but adjacent cells. Photo data were analyzed with caption data after each has been analyzed separately to identify whether relationships between the photo and the caption exist. A pilot study using two WTAs was conducted to verify that this simultaneous approach of collecting and coding data was reflected in the coding schema that was used for all the remaining WTAs. A coding schema that undergoes testing enhances the consistency and completeness of the eventual dataset.

2.2.1. Photo analysis

The first research objective was to evaluate visual representation of tourists' experiences when visiting WTAs. For each attraction, the attraction name was typed into Instagram using the "Places" feature on the platform, also known as a geotag. The photos were filtered during research so only photos before January 2020 were analyzed to remove the effects of COVID-19 from the study. For each of the 10 attractions, 50 photos were analyzed (equating to 500 total photos analyzed). Photos were categorized based on what they contained. These categories are adapted from Gretzel's (2017) study that aimed to categorize travel photos:

- 1) Photo of animal.
- 2) Photo of the sign, poster, or other prop.
- 3) Selfie interacting with, touching, or feeding the animal (or close enough to touch).
- 4) Selfie distanced from the animal (not touching distance).
- 5) Selfie of only the person (no animal or sign/prop).
- 6) Selfie with a sign/prop.
- 7) Landscape or food photo.
- 8) Other.

2.2.2. Textual (caption) analysis

The second research objective was to understand how tourists position themselves in relation to wildlife at WTAs through a text-based analysis of the captions accompanying photos on Instagram posts. For the same 50 photos analyzed, the 50 accompanying captions were categorized by involvement level. The full text captions, including hashtags, were imported to Microsoft Excel manually. For the 500 total captions, each was analyzed based on its contents and coded as low, medium, high, or other category for involvement level. Categories are based on themes of captions such as environmental concern or relatedness to experience:

- 1) Low involvement: caption unrelated to experience or animals; self-centered caption, perceived sarcasm, trying to be “cute,” attention-grabbing.
- 2) Medium involvement: caption regarding experience; sharing about themselves traveling, more mindful caption but not necessarily conservation related.
- 3) High involvement: facts about animal(s) at WTA, facts about environment; conservation related, facts about status/threats of the animal, and action-oriented.
- 4) Other: does not fit into any of the above.

Further, the New Environmental Paradigm (Dunlap and Van Liere, 1978) was used as a framework to classify captions as “anthro or eco” such that captions concerned with conservation, wildlife, the environment, or suggested actions for a healthy planet were deemed as eco-centric and captions that were concerned with the person who posted it, attention-grabbing, or people-centered were deemed anthropocentric. These categories are born from different worldviews (anthropocentric or ecological) that the individual posting the photo may hold that influence their experience, caption writing, and views of animals at the WTA. For captions that have elements of both anthropocentrism and ecocentrism, a third “anthro-eco” category was created. This aspect of the study was created to separate captions that may have been high involvement per the coding schema, but not relating to conservation or their wildlife experience at an attraction. For example, a caption could have fallen into the “action oriented” piece of the definition of high involvement, but the caption could have been relating to the poster’s travels as a whole vs. the one attraction they visited and decided to post about. The anthro- and eco- categories were added to further solidify the medium and high involvement captions that were ecocentric and specifically related to the attraction.

2.2.3. Population

Photos and their worded captions are a way to convey individuals’ emotions, values, and experience, all represented as their involvement. The population studied were the individuals whose posts on social media contain photos and captions. To access this population, criterion based on involvement level was applied as an individual: (a) visited one of the 10 attractions studied, (b) took at least one photo there, (c) posted photo on Instagram, and (d) used the geotag feature to tag the WTA. All other pictures on Instagram were automatically excluded from this study. The six levels of tourist involvement necessary to be included in this study are:

- 1) Individual visited the country the WTA is located,
- 2) Individual visited the WTA,
- 3) Individual was involved with the WTA and had an experience there,
- 4) Individual took a photo at the WTA,
- 5) Individual posted a photo and tagged the WTA on Instagram, and
- 6) Individual captioned that photo.

2.2.4. Sampling approach

Participants were chosen based on the above six tourist involvement criteria, thus the sampling was purposive. Participants were chosen based on the criteria and whether they met the 50-photo quota this research collected from each site’s geotag on Instagram. A sampling rule was used for posts containing multiple photos, then only the first photo was used. A limitation was that Norboribetsu Bear Park had 17 tagged photos with captions between May 5, 2015 and December 31, 2019. There were no photos posted before this date; and no other substitute WTAs.

Identifying relevant WTAs that represent a range of conditions experienced by animals was important to examine any relationship between the ethics of a WTA and UGC analyzed at the attraction. Sites to study were drawn from Moorehouse et al. (2015); these sites were used to build upon Moorehouse et al. (2015) research and adopt the conservation and welfare scores concluded in that paper to aid in data analysis. One attraction was chosen for each WTA type outlined in the “Captive” and “Sanctuary” categories, for a total of 10 attractions (refer back to Table 1). Each attraction chosen was pre-screened to ensure that the attraction’s Instagram geotag was being used. Further, the quantity of tagged photos at each attraction was pre-examined. Due to variation in visitation, the number of photos tagged and posted in different time periods varied widely across the 10 attractions, so a set number of photos and captions (50) was chosen to account for the inconsistency that a time interval would have brought to the study. Further, netnographic research is highly flexible and allows researchers to determine specifics, though total text samples are typically in the hundreds (Mkono, 2020), which this research falls under with 500 total photos and 500 total captions.

2.2.5. Data collection

Secondary data were accessed from January 20 to February 25, 2021 using Instagram as a data source and Microsoft Excel as a data categorization and analysis tool. All captions not written in English were translated using Google Translate. A large majority of captions were written in English, with <10 written in Spanish or Malay. Photos were exported from Instagram into Excel accompanied by their captions for storage until the data collection period had concluded and analysis begun. All work was done by hand and within the Microsoft Excel program using simple equations for statistics.

2.2.6. Reliability and validity

A pilot study using two of 10 WTAs was done to create and test the codebook for photo and caption measurements and categories.

Categorizing captions by anthropocentric or ecocentric proved to be limiting, so an “anthro-eco” category was added. An other category was also added to each codebook so as not to force a photo or caption into a category. Another researcher was asked to code a random 10 photos and captions from each of the pilot attractions to test the edited codebook for inter-rater reliability (IRR). The standard set for the IRR test was at least 90% agreement in coding to not change the codebook and move forward with analysis. For photos, a 95% agreement was reached, and for both involvement level and “anthro” or “eco,” a 90% agreement was reached.

2.3. Delimitations

The research uses and builds upon the findings of [Moorehouse et al. \(2015\)](#) regarding wildlife tourist attractions’ (WTAs) conservation and welfare scores to advance research in this field using a user-generated content analysis of Instagram photos and captions at WTAs. To further delimit the research, only attractions that have captive wild animals (wild, not domesticated, animals in human care and kept in a human-made enclosure or fenced-in space) which visitors come to interact with and expect to see were used. This is because of the nature of social media and photo-taking; people typically must be close enough to animals to take photos with and of them (with a smartphone), which does not happen frequently with wild animals unless the tourist comes prepared with a high-quality camera or disregards their safety to approach a wild animal. Also, animal interactions often include someone taking photos of the interaction with the captive animal, even if they are in a sanctuary. Leaving with photos are a main reason for people visiting an attraction. WTAs that have non-captive wild animals (such as national parks or reserves) were not included because most people cannot or should not interact with animals in this environment, and the primary motivation for people visiting some of these places is often recreation or sightseeing related vs. wildlife interaction. Street performance attractions were excluded because animals are often performing vs. being interacted with at these attractions. Some of these attractions are also spontaneous vs. a physical attraction that a tourist can plan to attend in advance. Farmed wildlife attractions were not included due to their consumptive nature that the author does not include in their definition of wildlife tourism for this study. After excluding the aforementioned categories, two categories of WTA were left in [Moorehouse et al. \(2015\)](#) typology: Captive Interactions and Sanctuary Attractions, which have five examples of each. Thus, 10 categories of WTA were examined for this research.

This study focused on WTAs worldwide in order to gauge a wide array of popular attractions. The research studied 10 of the same attractions as [Moorehouse et al. \(2015\)](#) in order to add to their research for the advancement of knowledge rather than to create a new line of research with different or new attractions. Further, only content that was posted by human individuals’ accounts (not advertisement accounts, the WTA account, or travel blogs) were analyzed to gather data on involvement relating to humans and human experience. Lastly, the researcher has chosen to collect content before the impacts of the COVID-19 pandemic rather than making this distinction in the research (such as a “before and

after” COVID-19 analysis) since the tourism industry will take time to return to a normal level of functioning and will likely change when people do have the freedom to travel again. This study serves as a baseline for future research on the subject to evaluate the changing nature of human interactions in wildlife tourism at WTAs as measured by social media. Further research could focus on any change of tourist involvement or animal welfare in WTAs after the COVID-19 pandemic.

2.4. Limitations

Due to the nature of user-generated content (UGC), personal data on content creators cannot be collected ([Marine-Roig and Anton Clavé, 2016](#)), and only posts that were public (vs. only private to the content creator’s followers) were analyzed. This means that the study could not differentiate domestic tourist from international tourist and could not collect all the content that was potentially posted at each location. A caveat of this is that different cultures, age groups, education, income, etc., may have different levels of involvement that could affect what they posted due to their upbringing and environment. International visitors also may see the species at the center of the WTA as more rare or special than domestic tourists who are used to this animal in their lives, creating a difference in how they regard their time at the attraction. One further limitation or weakness of the research design is that there was no way to know for certain if the visitors are visiting the specified attractions based on a split-second decision while traveling, if it was previously planned by the tourist, or if a tour company led them there and they had no personal choice in the matter. Because of this, unless the text suggests otherwise, this research cannot assume that people have personally chosen to go to one site that may have higher welfare standards over one that has lower standards.

3. Results

Data are first presented with the photo analysis, followed by the two components of the caption analysis. For each section, data are shown by attraction and then, in a separate table, a comparison of captive and sanctuary attractions is provided following [Moorehouse et al. \(2015\)](#) research where sanctuary attractions have higher conservation and welfare scores (all positive) and captive interactions have lower conservation and welfare scores (all but one conservation score is negative, meaning the average is negative).

3.1. Photo analysis findings

[Table 2](#) showcases the answer to the first research question: What are people posting photos of from WTA visits? Patterns emerged in photo content between the WTA types. There is some indication of photo prop tourism happening due to the high percentages of animal selfies at the captive WTAs, as seen in all the attractions except at Noboribetsu Bear Park, which did not have as many photos as the other attractions. Only Elephant Nature Park,

TABLE 2 Photo type posted at each attraction.

WTA type and name	Conservation score	Welfare score	Photo of the animal*	Photo of the sign, poster, or other prop	Selfie interacting with, touching, or feeding animal (or touching distance)	Selfie not touching distance from the animal	Selfie of person without the animal or sign/prop	Selfie with a sign or prop	Landscape or food photo	Other
Captive										
Norboribetsu Bear Park	-1	-3	24%	0	0	6	29	24	12	6
Dolphin Discovery Los Cabos	-1	-2	4%	0	78	0	12	2	2	2
Elephant Discovery Chiang Mai	-2	-2	14%	2	82	0	0	0	0	0
Tiger Kingdom Phuket	-1	-3	6%	4	82	0	0	8	0	0
Ukutula Lodge and Lion Center	1	-1	8%	0	84	2	6	0	0	0
Sanctuary										
Bornean Sun Bear Conservation Center (BSBCC)	1	2	70%	6	0	0	10	14	0	0
Elephant Nature Park	1	2	16%	2	62	14	6	0	0	0
Drakenstein Lion Park	1	2	52%	0	0	12	26	6	2	2
Sepilok Orangutan Rehabilitation Center	3	2	62%	6	0	2	10	18	2	0
Dolphin Research Center	1	2	42%	2	40	6	2	4	2	2

*n = 50 photos for all attractions except Norboribetsu Bear Park in which n = 17.

in the sanctuary attraction category, had more than half (62%) of its photos as selfies of tourists interacting with elephants. This same attraction had one of the most photos (14%) that were categorized as animal selfies but with the tourist distanced from the animal. At Tiger Kingdom Phuket almost all the photos were close proximity animal selfies (82% of 50) photos with the tourist's hands on some part of the laying-down tiger.

At sanctuary WTAs similar photos to their captive counterparts were found, but overall, the focus was more on animals than tourists. This difference can also be found in the content posted by tourists to Dolphin Discovery Los Cabos (captive) and Dolphin Research Center (sanctuary), attractions that both offer the chance to interact with dolphins. While some of the photos follow the “selfie of tourist touching the animal” recipe, this attraction had about half the number of close proximity selfies (40 vs. 78%) as its captive counterpart. People posted more photos of the dolphins themselves (42%), the top category for Dolphin Research Center.

Evidence for Research Question 1a suggests the most common overall categories of photos posted were: (1) selfies of tourists interacting with, touching, feeding, or being close enough to touch the animal, (2) photos of the animal, and (3) selfies of the tourist. The most common categories differ in ranking, but not in type, when the sanctuary WTAs were separated from the captive WTAs (Table 3).

To further examine Research Question 1a, Table 2 shows the variation in photo types as categories posted at sanctuary and captive WTAs. For captive WTAs, the most common categories were: (1) selfies interacting with, touching, or feeding the animal (75%), (2) photos of the animal (9%), and (3) selfies of only the person (6%). Also, 75% of photos were selfies within touching distance of the animals, with the other two categories both having <10% of the total. The sanctuary attractions have a different ranking of most popular categories, which are: (1) photo of the animal (48%), (2) selfie of the tourist interacting with, touching, or feeding the animal (20%), and (3) selfie of the tourist (11%). Data showed that the percentage was more evenly spread between the three categories (11% is lowest and 48% is highest) than it was with the captive interactions (6% is lowest and 75% is highest).

TABLE 3 Photo types posted at captive and sanctuary attractions.

Photo type at WTA	Captive (<i>n</i> = 217)	Sanctuary (<i>n</i> = 250)
Photo of the animal	9%	48%
A photo of the sign, poster, or other prop	1	3
Selfie interacting with, touching, or feeding the animal (or close enough to easily touch)	75	20
Selfie distanced from the animal (not touching distance)	1	7
Selfie of only the person (without the animal or sign/prop)	6	11
Selfie with a sign or prop	4	8
Landscape or food photo	1	1
Other	1	1

Another distinction between the two categories of WTA is that 86% of the photos posted at the captive WTAs were a type of selfie photo compared to only 46% of sanctuary WTA photos as selfies. Similarly, photos were more evenly distributed across categories in the sanctuary WTA (48% being the highest number in one category) than the captive WTA (with one category holding 75% of all photos), meaning more diversity of photos at sanctuary attractions were found.

3.2. Caption analysis findings

Captions of each photo were analyzed to understand the types of tourists' experiences and storytelling about wildlife using social media to answer Research Questions 2a and 2b which tested involvement and NEP theories. Some captions had no relevance to the WTA experience or animal, and others told stories of individual animals at the attractions or the mission of the attraction itself. Fifteen captions within the captive WTA category portrayed false or inaccurate information about the WTA to make animal or habitat conditions appear better, which may be a possible action by the attraction's staff. These captions were coded as “Other” for involvement level and coded as normal for the anthro- or eco-centrism category which reflects a worldview or the caption sentiment rather than the content itself.

3.2.1. Involvement of captions

Table 4 details the involvement levels across all attractions, aiding in answering the Research Question 2a: What do tourists' photo captions on Instagram signify about their involvement level with their WTA experience? The captive WTAs with low conservation and welfare scores each had more low involvement captions than the sanctuary WTAs and thus had less high involvement captions. The attractions with high conservation and welfare scores (sanctuary WTAs) had high percentages of medium and high involvement captions.

Low involvement captions often accompanied selfies of tourists touching or interacting with animals. This was the case at the captive attractions such as Tiger Temple with one caption to a tiger selfie reading: “How to be a tourist 101.”

As an example of high involvement, Sepilok Orangutan Rehabilitation Center had the highest percentage of high involvement captions. Many of these captions attempted to educate followers of why these animals were endangered and needed to be rehabilitated. One caption expressed that the tourist has changed their behavior to help these animals: “...We now plan to double down and remove palm oil from our home. Check the ingredients before you buy; palm oil is in everything and the only way to save orangutans and their habitat is to go in search of those products that don't support the palm oil industry. #boycottpalmoil #savetheforest #savetheorangutans #orangutans #sepilokorangutanrehabilitationcentre #sabah #borneo #malaysia.”

Additional WTAs that exhibit high involvement were found at Elephant Nature Park and Bornean Sun Bear Conservation Center which tie for the second highest percentage (36%) of high involvement captions. Many of these high involvement captions

TABLE 4 Low, medium, high, and other involvement captions by WTA.

WTA type and name	Conservation score	Welfare score	Involvement level			
			Low	Medium	High	Other
Captive						
Noboribetsu Bear Park	-1	-3	94%	6	0	0
Dolphin Discovery Los Cabos	-1	-2	68%	30	2	0
Elephant Discovery Chiang Mai	-2	-2	58%	32	6	4
Tiger Kingdom Phuket	-1	-3	56%	38	2	4
Ukutula Lodge and Lion Center	1	-1	54%	24	0	22
Sanctuary						
BSBCC	1	2	28%	36	36	0
Elephant Nature Park	1	2	26%	38	36	0
Drakenstein Lion Park	1	2	38%	40	22	0
Sepilok Orangutan Rehabilitation Center	3	2	16%	40	42	2
Dolphin Research Center	1	2	28%	56	16	0

TABLE 5 Caption involvement posted at captive and sanctuary attractions.

Involvement level	Captive (n = 217)	Sanctuary (n = 250)
Low	62%	27%
Medium	29	42
High	2	30
Other	7	1

exemplify concern for nature, education about the animal at the WTA, why they may be threatened in the wild, and the tourist spreading information about these animals. A lot of these high involvement captions accompanied photos of just the animal at the attraction (no selfies).

Table 5 details the differences in percentages of low, medium, and high involvement captions between the two WTA groups. Sanctuary attractions had 30% high involvement captions, while their captive counterparts had 2% high involvement captions. When combining medium and high involvement, captive interaction attractions still had only 32% of higher involvement captions vs. the sanctuary attractions having 72% in this mixture of categories. This suggests that majority of captive WTAs had low involvement captions (62%) and majority of sanctuary attractions had medium or high involvement captions (72%). Sanctuary attractions had 13% points more medium involvement captions, solidifying that sanctuary WTAs with higher conservation and welfare scores also have tourists with higher levels of involvement.

3.2.2. Anthro- or eco-centrism of captions

This subsection tests Research Question 2b: Are text captions more anthropocentric or ecocentric? by analyzing the captions.

Table 6 shows similar patterns as Table 4. Tiger Kingdom Phuket and Noboribetsu Bear Park had the lowest welfare scores and lowest percentage of ecocentric captions. These two attractions have negative conservation scores. All captive WTAs had higher percentages of anthropocentric captions than the sanctuary attractions. Conversely, all the sanctuary attractions had a higher percentage of ecocentric captions than all the captive WTAs. Further, when combining ecocentric and anthro/ecocentric mixture categories, suggesting there was an ecocentric element within the caption, there were still more anthropocentric captions for all captive WTAs. When examining data on sanctuary attractions, two attractions had more ecocentric captions than anthropocentric, but when analyzing captions with ecocentric or partly ecocentric sentiment, all attractions had a higher number of ecocentric captions than anthropocentric.

Many close proximity animal selfies, along with other photo types, were accompanied by more anthropocentric captions than ecocentric (or a mixture). Photos of just animals at the WTA more often were accompanied by ecocentric captions.

To further examine Research Question 2b, data were examined by captive vs. sanctuary WTAs. Captive interactions had 64% anthropocentric captions, while sanctuary attractions had < half (31%) (Table 7). Even when the mixture was added to the ecocentric category, 33% of captions are somewhat or fully ecocentric; this is over half (64%) of the total anthropocentric captions. When the mixture was applied to the anthropocentric category, 91% of captions at captive interactions could be viewed as anthropocentric or somewhat anthropocentric. Even though these photos and captions were from WTAs, only 6% of the captions were solely about wildlife at the attraction. Sanctuary attractions had more evenly distributed percentages across categories but have the most ecocentric captions at 40%. This was closely followed by anthropocentric captions at 31% and a mixture of ecocentric and anthropocentric totaling 26%. For all sanctuary WTAs, 66% of captions had some ecocentric element.

TABLE 6 Comparison of captions interpreted as anthropocentric, ecocentric, or both.

WTA type and name	Conservation score	Welfare score	Worldview			
			Anthropocentric	Ecocentric	Anthro/eco	Other
Captive						
Noboribetsu Bear Park	−1	−3	88%	6	6	0
Dolphin Discovery Los Cabos	−1	−2	82%	4	14	0
Elephant Discovery Chiang Mai	−2	−2	68%	12	18	2
Tiger Kingdom Phuket	−1	−3	50%	6	38	6
Ukutula Lodge and Lion Center	1	−1	48%	2	44	6
Sanctuary						
BSBCC	1	2	18%	62	18	2
Elephant Nature Park	1	2	38%	34	26	2
Drakenstein Lion Park	1	2	44%	30	24	2
Sepilok Orangutan Rehabilitation Center	3	2	20%	44	28	8
Dolphin Research Center	1	2	36%	26	36	2

TABLE 7 Comparison of captions' worldviews.

Anthro or eco	Captive (<i>n</i> = 217)	Sanctuary (<i>n</i> = 250)
Anthropocentric	64%	31%
Ecocentric	6	40
Anthro/eco	27	26
Other	3	3

4. Discussion

Through a netnographic analysis of social media posts, inquiry was primarily focused on how are WTA tourists involved in social media and what are the implications for conservation and wildlife tourism. Two types of WTAs were studied—sanctuary and captive. A general finding drawn from the analysis was that tourists were involved with wildlife in a more conservation-minded, involved, and less egotistical (more ecocentric) manner at wildlife tourism attractions (WTAs) with higher conservation and welfare scores (sanctuary attractions). The photos posted that were taken at these attractions were more wildlife-centered, with less animal selfies posted due to the nature of the attraction or desire of the tourist. A common pattern for sanctuary attractions was to find a photo of just the animal at the attraction with an ecocentric or ecocentric/anthropocentric mixture and a high involvement caption. At the WTAs with low conservation and welfare scores (captive attractions), tourists were involved with wildlife in a more egotistical, less involved, and less conservation-minded manner. Social media data from the visitors at these captive attractions held higher percentages of selfies, anthropocentric captions, and low involvement captions. A common pattern found at captive attractions, which offer close interactions with the animals, was a close proximity animal selfie with an anthropocentric and low involvement caption. The research findings for sanctuary attractions, with better conservation and welfare outcomes for the

animals, showed better behavior from tourists with implications that those who visit these attractions learn and have more respect for the animal, and share information about their experience and conservation on Instagram. These behaviors align with ecotourism principles and provide evidence to shape ecotourism models for wildlife tourism attractions and more generally nature-based outdoor recreation.

4.1. Photo evidence-based conclusions

Attractions with lower conservation and welfare scores (captive WTAs) had more animal selfies, which is indicative of the photo prop tourism subsection of wildlife tourism already documented to have negative impacts to wildlife (D'Cruze et al., 2017). For captive WTAs, 75% of all photos were close proximity animal selfies vs. 20% at sanctuary WTAs. On the other hand, sanctuary attractions with high conservation and welfare scores featured the animals with 48% (highest percentage) of photos showing only the animal at the attraction vs. 9% of animal-only photos at the captive WTAs. This pattern continued into the next two categories with more ecocentric and involved tourists being indicative of the sanctuary attractions. With these data, it can be inferred that attractions that are objectively better for the animals' welfare and conservation status either attract or foster tourists to have an ecocentric presence on social media in terms of the photos they post. Conversely, attractions that are worse for the animals' welfare and conservation status were more indicative of photo-prop tourism such that 75% of photos collected were close-proximity animal selfies.

4.2. Caption evidence-based conclusions

Sanctuary attractions with high welfare and conservation scores had captions that indicated higher levels of tourist involvement in their wildlife tourism experience and conservation. The captive

WTAs did not foster the same kind of involved captions, and these attractions all had a greater number of low involvement captions than the sanctuary attractions. Many of the high involvement captions at the sanctuary attractions were about the species within the attraction, describing the animals' conditions (judging abuse in the tourism industry, illegal poaching, and habitat loss) and examples of animal care. This relays positive information to the social media poster's followers, whereas the low involvement captions do not relay this conservation or environment-positive messaging. Overall, this study's application of involvement theory helped to interpret visitor's motives and/or outcomes of visiting a certain type of attraction and their digital involvement with others as a form of social-environmental relationships and values.

Similar patterns were found in the worldview of the caption (ecocentric or anthropocentric). Sanctuary attractions had more ecocentric (or partly ecocentric) captions, whereas the captive WTAs had more anthropocentric captions. While related to involvement in this study (higher involvement level was typically found with an ecocentric or ecocentric/anthropocentric mixed caption), the worldview of the caption reflects the sentiment behind the caption regardless of the involvement level. This study adds a more simplistic methodology and available secondary data to understand the New Environmental Paradigm (NEP) phenomenon, whereas other research used the NEP scale with surveys or primary data collection.

4.3. Applications and implications

This study has implications for future research and applications for practice. While this research's conclusions are drawn from data before the pandemic altered the tourism industry, research on social media, animal welfare, and wildlife tourism was necessary as this research investigated new frontiers in digital forms of "tourism postcards." This research on WTAs within the larger sector of wildlife and eco-tourism aims to assess the ever-changing nature of the tourism industry which is a reflection of external factors such as technology, travel trends, pandemics, or more eco-friendly attitude structures as the planet progresses through the climate crisis. More research is needed on mega topics such as wildlife extinction, climate change, and pandemics, along with the role that tourism and technology plays in such mega events.

4.3.1. Current actions in practice

Some policies and actions have already been taken to improve ethics within the wildlife tourism industry. World Animal Protection created a Wildlife Selfie Code in 2017 to inform tourists of what a responsible animal selfie looks like and how to identify if their animal selfie is contributing to animal welfare or conservation concerns. This was considered to guide this research, but this specific Wildlife Selfie Code does not consider captive animals in such situations as the attractions used in this research, perhaps different wildlife selfie codes should be created for wild animals and ethical captive attractions such as those in this study. World Animal Protection also adopted the list of Five Freedoms of Animal Welfare that tourism operators can attempt to follow or that tourists can see and use to evaluate an attraction before going to an

attraction. Further, in response to the increase in animal selfies on its platform, Instagram, in conjunction with World Wildlife Fund, TRAFFIC, and World Animal Protection, started to deliver pop-up messages in 2017 when people searched or clicked on hashtags like "#slothselfie" or "#exoticanimalforsale" that informed people of the behind-the-scenes animal abuse (Daly, 2017). Some booking companies such as Expedia, who own [Hotels.com](#), Orbitz, and Travelocity, are acting in support of animal welfare and removing the choice for consumers to book certain wildlife attractions (Modak, 2017), although some attractions that participate in animal cruelty, such as elephant rides, remain bookable. There has also been a movement for tourism companies (such as Intrepid and G Adventures) to include Animal Welfare Policies on their website and in the creation of their trips to ensure that these companies do not contribute to attractions with negative outcomes for animals or conservation. The #refusetoride pledge by Wildlife SOS has gained traction due to a social media campaign informing people what an elephant has to go through (and what the long-term health impacts are) of elephant riding. Even with the increasing use of social media and desire to post selfies (especially with animals), social media has been used as a platform to exploit some attractions, share information and videos, and to gain traction in the movement to end animal abuse in tourism.

4.3.2. Implications for practice

This research has many implications for practice. Photo prop tourism has been shown to negatively affect animals (D'Cruze et al., 2017), and with photo prop tourism, the findings show that animal selfies lead to more anthropocentric and low involvement sentiments toward these experiences and animals. Close-up selfies with wildlife at WTAs are potentially indicative of tourism attractions and experiences that harm wildlife and do not foster any sort of conservation attitudes or revenue. Moving forward into a post-COVID-19 world and tourism sector, tourism should be meaningful and responsible for people and animals involved. This suggests that wildlife tourist attractions (WTAs) should improve welfare standards and tourist education and experience to foster higher levels of involvement and ecocentrism. One way to do this is to adopt a hands-off approach to wildlife tourism as some of the sanctuary attractions studied in this research did. This model, exemplified in attractions such as Sepilok Orangutan Rehabilitation Center and the Bornean Sun Bear Conservation Center, fosters higher tourist involvement and the sharing of conservation-related messaging on social media, along with photos showcasing the animals themselves. Another way to improve welfare standards for animals in the tourism industry is to create policy change and a regulatory authority to ensure that wildlife is well-cared for. Large organizations and governing boards such as zoological societies (e.g., American Zoological Society, World Wildlife Fund, and National Geographic) have the following and reputation to endorse such policies and potentially catalyze change.

A related implication for practice lies in what COVID-19 has taught the human world; close interactions involving touching or being in animal's contrived space can have consequences for human and wildlife health. A professional from Conservation

Through Public Health reported that tourists are all too willing to share their too-close encounters with mountain gorillas on Instagram, which creates expectations for future tourists that risks disease transmission between species (Guy, 2021). This professional emphasized that wildlife tourism needs to provide better education to risks, as well as in terms of conservation, because tourism is a valuable source of financial support for communities and conservation (Guy, 2021). Tourist-centered behavior change, as called for by previous research by Heberlein (2012), is another solution, although environmental attitudes and behaviors are relatively difficult to change. Ecotourism companies such as G Adventures and Intrepid build in ethical wildlife experiences to their tours and created their own animal welfare policies.

4.3.3. COVID-19 and global consciousness

Because COVID-19 is a zoonotic disease, this has implications for wildlife and the environment, which in turn crosses into the tourism sphere. It was estimated by Jones et al. (2008) that more than 70% of emerging zoonotic diseases, which are infectious diseases that are transmitted from animals to humans, originate in wildlife. Reaser et al. (2021) call for ecological countermeasures such as ecological restoration and public friendly measures such as investments and projects that also benefit people or other causes such as climate change, zoonotic disease mitigation, etc. Tourism could be a key piece when moving forward; as tourism can be used as a tool for ecological conservation and public return on investment in the form of community development. Further, both CNN and the New York Post reported new research suggests tourists who take selfies with wild mountain gorillas could potentially put them at risk of catching COVID-19 because selfies are typically taken within 13.1 feet of the gorillas, which is close enough to spread the virus (Guy, 2021).

With increasing intensity of climate-related disasters, human-caused environmental destruction, and the COVID-19 pandemic, there is an increasing global consciousness and increased appreciation for the role of the natural environment in supporting tourism (Galvani et al., 2020). COVID-19 halted the tourism industry and briefly created widespread hope for environmental healing (Crossley, 2020). The pandemic created an opportunity to understand the patterns and behaviors of tourists through the collection and analysis of secondary data (public available Internet data) when primary data collection (visitor surveys) was not possible. This advancement in knowledge could help to establish more socially-minded, sustainable, and responsible travel, including the increasing public concern for the treatment of animals as seen through food, entertainment, and tourism choices (Sneddon et al., 2014), as the new normal (Ioannides and Gyimothy, 2020; McKirdy, 2020; Mostafanezhad, 2020). The World Tourism Organization (UNWTO) calls for increased conservation and sustainability regarding wildlife because biodiversity is essential for human health and wellbeing (especially sustainable development) and the wellbeing of the planet. Because of this, the UNWTO included safeguarding the natural environment in tourism in their Global Code of Ethics. Creating worldwide awareness and policy for ethics in wildlife tourism attractions could enhance the post-COVID world of tourism to align with the growing social and environmental consciousness of humans.

Moving forward into a more ethical and responsible wildlife tourism attraction industry seems to be the logical way forward for people and the planet within the ecotourism space and reputation.

4.3.4. Future research

This study aims to be a baseline and an inspiration for future research because it is the first of its kind. With the growing wildlife tourism industry, more research should be done on the topics pertaining to the relationship between animal welfare, social media, and wildlife tourism under the category of ecotourism. Nonetheless, the tourism industry is going through a period of change and this study on WTAs examined the relationship between a segment of wildlife tourism, animal welfare, and social media before COVID-19. COVID-19 is a zoonotic disease, meaning that it is transmitted between animals and humans and this specific coronavirus likely infected humans from a wild animal. The public learned more about zoonotic diseases because of this pandemic, and it may have changed their perceptions of wild animals, consuming animals, or even being near animals. This could motivate people to want to learn more about wildlife, stay away from wildlife, respect wildlife, or to see wildlife either in captivity or in the wild in the form of tourism. If attitudes shift toward wildlife, wildlife tourism may be affected depending on this shift. Further, as technology advances (as it has rapidly over the last few decades), social media is becoming a part of daily life, replacing the static postcards and photos people used to share with one another. Now, words and images can be shared instantaneously, and almost everyone has a camera with a digital phone. Social media is a tool than can and should be used in tourism research to examine what people are posting about in person wildlife experiences, as well as a tool which can be used to raise awareness, education, monitor the wild, and fundraise.

Future research could examine wildlife tourism in the wake of the COVID-19 pandemic, if animal welfare is improving or declining based on shifting attitudes or the need for a greater respect of the natural world, or even if more beneficial wildlife tourism attractions exist such as the sanctuary attractions in this study. Some venues that were studied in this research may have shut down due to financial constraints, but was the pandemic more likely to shut down the attractions that are better for the animals, or worse? There are many opportunities and options for future research surrounding the topics of animal welfare, social media, and wildlife tourism because it is an ever-present issue in this changing technological world.

5. Conclusion

In closing, this research on social media's relationship to some elements of wildlife tourism and animal welfare demonstrated the use of netnography as a viable research method to test that WTAs with good to excellent conservation and welfare practices lead to responsible tourism behaviors. A visitor's involvement with wildlife conservation at two categories (captive interaction and sanctuary) of wildlife attractions was featured as a means of showcasing that management (of animal welfare and conservation) practices at wildlife attractions influences human behaviors. While these data were from attractions found across the globe, the

human behaviors shared on social media sites are a window into visitor behavior in other attractions not studied such as zoos, wildlife boat cruises, or circus-type animal performances (Reynolds and Braithwaite, 2001). This research shows that social media is a source to study both good and bad behaviors by people when they see or can get close to animals in a tourism attraction. Lastly, this research suggests that when animals, if held in captivity, are treated with respect and given freedoms and enclosures that replicate their natural environment, then tourists respond in such a way that is more positive for conservation outcomes vs. attractions that have poor welfare standards, and this model of wildlife tourism should be at the forefront of this sector of ecotourism.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Author contributions

CK contributed 75% of the research and writing of this paper. CV contributed 25% of the writing and assistance with the editorial

process. This research satisfied CK's master's thesis. All authors contributed to the article and approved the submitted version.

Acknowledgments

The authors would like to acknowledge Megha Budruk and Carena van Riper for their assistance on the original version of this document as a master's thesis.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

References

- Akehurst, G. (2009). User generated content: The use of blogs for tourism organizations and tourism consumers. *Serv. Bus.* 3, 51–61. doi: 10.1007/s11628-008-0054-2
- Animal Humane Society (2021). *The Five Freedoms for Animals*. Available online at: animalhumanesociety.org (accessed December 1, 2022).
- Ballantyne, R., Packer, J., and Hughes, K. (2009). Tourists' support for conservation messages and sustainable management practices in wildlife tourism experiences. *Tour. Manag.* 30, 658–664. doi: 10.1016/j.tourman.2008.11.003
- Ballantyne, R., Packer, J., and Sutherland, L. (2011). Visitors' memories of wildlife tourism: Implications for the design of powerful interpretive experiences. *Tour. Manag.* 32, 770–779. doi: 10.1016/j.tourman.2010.06.012
- Crossley, É. (2020). Ecological grief generates desire for environmental healing in tourism after COVID-19. *Tour. Geograph.* 22, 536–546. doi: 10.1080/14616688.2020.1759133
- Curtin, S. (2009). Wildlife tourism: The intangible, psychological benefits of human-wildlife encounters. *Curr. Iss. Tour.* 12, 451–474. doi: 10.1080/13683500903042857
- Curtin, S., and Kragh, G. (2014). Wildlife tourism: Reconnecting people with nature. *Hum. Dimension. Wildlife* 19, 545–554. doi: 10.1080/10871209.2014.921957
- Daly, N. (2017). *Exclusive: Instagram Fights Animal Abuse With New Alert System*. National Geographic. Available online at: www.nationalgeographic.com/news/2017/12/wildlife-watch-instagram-selfie-tourism-animal-welfare-crime/ (accessed December 1, 2022).
- Daly, N. (2019). *Suffering Unseen: The Dark Truth Behind Wildlife Tourism*. National Geographic. Available online at: <https://www.nationalgeographic.co.uk/dark-truth-behind-wildlife-tourism> (accessed December 1, 2022).
- D'Cruze, N., Machado, F., Matthews, N., Balaskas, M., Carder, G., Richardson, V., et al. (2017). A review of wildlife ecotourism in Manaus, Brazil. *Nat. Conserv.* 22, 1–16. doi: 10.3897/natureconservation.22.17369
- Dunlap, R., and Van Liere, K. (1978). The "new environmental paradigm". *J. Environ. Educ.* 9, 10–19. doi: 10.1080/00958964.1978.10801875
- Fennell, D. (2009). "Ecotourism," in *International Encyclopedia of Human Geography* (Amsterdam: Elsevier), 372–376. doi: 10.1016/B978-008044910-4.00564-2
- Galvani, A., Lew, A. A., and Perez, M. S. (2020). COVID-19 is expanding global consciousness and the sustainability of travel and tourism. *Tour. Geograph.* 22, 567–576. doi: 10.1080/14616688.2020.1760924
- Green, R., and Giese, M. (2004). *Negative Impacts of Wildlife Tourism on Wildlife. Wildlife Tourism: Impacts, Management and Planning*. Altona, VIC: Common Ground Publishing Pty Ltd., 81–87.
- Gretzel, U. (2017). *#travelselkie: A Netnographic Study of Travel Identity Communicated via Instagram. Performing Cultural Tourism*. (London: Routledge), 115–127. doi: 10.4324/9781315174464-8
- Guy, J. (2021). Selfie-taking tourists could be spreading COVID-19 to gorillas. *CNN Travel*. Available online at: <https://www.cnn.com/2021/02/16/africa/gorilla-covid-selfie-safety-scli-intl-scn/index.html>
- Heberlein, T. A. (2012). *Navigating Environmental Attitudes*. Oxford University Press.
- Higginbottom, K. (2004). "Wildlife tourism: An introduction," in *Wildlife Tourism: Impacts, Management and Planning*, ed K. Higginbottom (Altona, VIC: Common Ground Publishing Pty Ltd), 1–11.
- Hoefle, S. W. (2016). Multi-functionality, juxtaposition and conflict in the Central Amazon: Will tourism contribute to rural livelihoods and save the rainforest? *J. Rural Stud.* 44, 24–36. doi: 10.1016/j.jrurstud.2015.12.009
- Iglesias-Sanchez, P., Correia, M., Jambrino, C., and De Las Heras-Pedroa, C. (2020). Instagram as a co-creation space for tourist destination image-building: Algarve and Costa del Sol case studies. *Sustainability* 12, 2793. doi: 10.3390/su12072793
- Ioannides, D., and Gyimothy, S. (2020). The COVID-19 crisis as an opportunity for escaping the unsustainable global tourism path. *Tour. Geograph.* 22, 624–632. doi: 10.1080/14616688.2020.1763445
- Jones, K. E., Patel, N. G., Levy, M. A., Storeygard, A., Balk, D., Gittleman, J. L., et al. (2008). Global trends in emerging infectious diseases. *Nature*. 451, 990–993. doi: 10.1038/nature06536
- Kim, S., Scott, D., and Crompton, J. (1997). An exploration of the relationships among social psychological involvement, behavioral involvement, commitment, and future intentions in the context of birdwatching. *J. Leisure Res.* 29, 320–341. doi: 10.1080/00222216.1997.11949799

- Kozinets, R. (2015). *Netnography: Redefined*. Los Angeles, CA: Sage. doi: 10.1002/9781118767771.wbiedcs067
- Kyle, G., and Chick, G. (2004). Enduring leisure involvement: The importance of personal relationships. *Leisure Stud.* 23, 243–266. doi: 10.1080/0261436042000251996
- Marine-Roig, E., and Anton Clavé, S. (2016). A detailed method for destination image analysis using user-generated content. *Inf. Technol. Tour.* 15, 341–364. doi: 10.1007/s40558-015-0040-1
- Markwell, K. (2020). Koalas, bushfires and climate change: Towards an ethic of care. *Ann. Tour. Res.* 2020, 84. doi: 10.1016/j.annals.2020.103003
- McCreary, A., Seekamp, E., Davenport, M., and Smith, J. (2020). Exploring qualitative applications of social media data for place-based assessments in destination planning. *Curr. Iss. Tour.* 23, 82–98. doi: 10.1080/13683500.2019.1571023
- McKirdy, E. (2020). *Could Coronavirus Usher in an Era of Ethical Wildlife Tourism? 5 of the Best Experiences in Kenya, Uganda, Argentina, South Africa and Scotland? South China Morning Post*. Available online at: <https://www.scmp.com/magazines/style/news-trends/article/3089189/could-coronavirus-usher-era-ethical-wildlife-tourism-5> (accessed December 1, 2022).
- Mkono, M. (2020). Eco-hypocrisy and inauthenticity: Criticisms and confessions of the eco-conscious tourist/traveler. *Ann. Tour. Res.* 84, 102967. doi: 10.1016/j.annals.2020.102967
- Mkono, M., and Holder, A. (2019). The future of animals in tourism recreation: Social media as spaces of collective moral reflexivity. *Tour. Manag. Perspect.* 29, 1–8. doi: 10.1016/j.tmp.2018.10.002
- Modak, S. (2017). *Expedia to Stop Offering Certain Animal-Based Attractions*. Condé Nast Traveler, Condé Nast Traveler. Available online at: www.expedia.com/lp/b/wildlife (accessed December 1, 2022).
- Moorehouse, T., Dahlsjo, C., Baker, S., D’Cruze, N., and Macdonald, D. (2015). The customer isn’t always right—conservation and animal welfare implications of the increasing demand for wildlife tourism. *PLoS ONE* 10, 138939. doi: 10.1371/journal.pone.0138939
- Moorehouse, T., D’Cruze, N., and Macdonald, D. (2017). Unethical use of wildlife in tourism: What’s the problem, who is responsible, and what can be done? *J. Sustain. Tour.* 25, 505–516. doi: 10.1080/09669582.2016.1223087
- Mostafanezhad, M. (2020). Covid-19 is an unnatural disaster: Hope in revelatory moments of crisis. *Tour. Geograph.* 22, 639–645. doi: 10.1080/14616688.2020.1763446
- Reaser, J., Witt, A., Tabor, G., Hudson, P., and Plowright, R. (2021). Ecological countermeasures for preventing zoonotic disease outbreaks: When ecological restoration is a human health imperative. *Restorat. Ecol.* 29, 13357. doi: 10.1111/rec.13357
- Reynolds, P. C., and Braithwaite, D. (2001). Towards a conceptual framework for wildlife tourism. *Tour. Manag.* 22, 31–42. doi: 10.1016/S0261-517700018-2
- Slama, M. E., and Tashchian, A. (1985). Selected socioeconomic and demographic characteristics associated with purchasing involvement. *J. Market.* 49, 72–82. doi: 10.1177/002224298504900107
- Sneddon, L. U., Elwood, R. W., Adamo, S. A., and Leach, M. C. (2014). Defining and assessing animal pain. *Anim. Behav.* 97, 201–212. doi: 10.1016/j.anbehav.2014.09.007
- Stern, P., Dietz, T., and Guagnano, G. (1995). The new ecological paradigm in social psychological context. *Environ. Behav.* 27, 723–743. doi: 10.1177/0013916595276001
- Thomsen, B., Thomsen, J., Copeland, K., Coose, S., Arnold, E., Bryan, H., et al. (2021). Multispecies livelihoods: A posthumanist approach to wildlife ecotourism that promotes animal ethics. *J. Sustain. Tour.* 2021, 1942893. doi: 10.1080/09669582.2021.1942893
- Ukpabi, D., and Karjaluto, H. (2018). What drives travelers’ adoption of user-generated content? A literature review. *Tour. Manag. Perspect.* 28, 251–273. doi: 10.1016/j.tmp.2018.03.006
- Valentine, P., and Birtles, A. (2004). “Wildlife watching,” in *Wildlife Tourism: Impacts, Management and Planning*, ed K. Higginbottom (Gold Coast: Common Ground Publishing, CRC for Sustainable Tourism), 15–34.
- Wilson, C., and Tisdell, C. (2003). Conservation and economic benefits of wildlife-based marine tourism: Sea turtles and whales as case studies. *Hum. Dimension. Wildlife* 8, 49–58. doi: 10.1080/10871200390180145
- Winter, C. (2020). A review of animal ethics in tourism: Launching the annals of tourism research curated collection on animal ethics in tourism. *Ann. Tour. Res.* 84, 102989. doi: 10.1016/j.annals.2020.102989
- World Animal Protection (2014). *Animal-Friendly Travel Campaign Wins at World Responsible Tourism Awards*. World Animal Protection USA. Available online at: www.worldanimalprotection.org/news/animal-friendly-travel-campaign-wins-world-responsible-tourism-awards (accessed December 1, 2022).
- World Tourism Organization (2014). *UNWTO Tourism Highlights. World Tourism Organization (UNWTO). Global Code of Ethics in Tourism*. Available online at: <https://www.unwto.org/global-code-of-ethics-for-tourism> (accessed December 1, 2022).