Visitors' attitudes toward non-human primates in a free-roaming multi-species sanctuary (*Monkeyland*, South Africa)

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The aim of the present study is to investigate themes related to visitors' perceptions of captive wildlife in particular, attitudes towards non-human primates (henceforth, primates). This research took place in free-roaming, multi-species primate sanctuary, *Monkeyland* (South Africa), where 400 visitors were interviewed using an anonymous survey both before and after attending a guided tour. The answers were divided into different categories, in order to standardize the motivations behind tourists' choices. The results of the survey demonstrated that most visitors agree that a primate would not be a good companion animal. Visitors' desire to touch primates was found to be positively correlated with desire for companion primates and inversely associated with visitor age. In response to: "would you like to touch a monkey?", the majority of tourists who expressed this desire seemed aware that such interactions are not appropriate, with concern for animal welfare and human health. Of the various primate species present in the sanctuary, visitors preferred the ring-tailed lemur (*Lemur catta*) and, generally speaking, expressed appreciation for primates' "cuteness". Our results indicate a general awareness by the visitors on the importance of animal welfare in the human interactions with captive wildlife, in agreement with the "hands-off" policy of *Monkeyland* primate sanctuary. We discuss the findings from a general to zooanthropological point of view, proposing some reflections on the attitudes of visitors toward non-human primates.

Keywords: human-wildlife interactions; non-human primates; zooanthropology; primate sanctuary; *Lemur catta*

Introduction

Tourism and Public Perception of Wildlife

The environmental and educational context in which wild animals are displayed can influence the public's perception of the natural world, lifestyle, and behaviour of the species on-display. As demonstrated in a study by Finlay et al. (1988), animals in a zoo setting are typically perceived as passive and tame, while the same species presented in a more naturalistic environment are perceived as active and wild. Furthermore, a survey published in 2002 showed that interacting with wild animals, experiencing educational opportunities, and viewing a large diversity of species are the most exciting experiences visitors have in captive wildlife settings.

Negative experiences reported by visitors, however, include the presence of poorly managed facilities, a lack of services, and observing animals performing stereotypical behavior (Woods, 2002).

Researchers have evaluated the potential influence of knowledge, gender, age, occupation, pet ownership, education, and geographical location on human attitudes toward animals (Eagles & Demare, 1999; Prokop & Tunnicliffe, 2008; Pirrone et al., 2019). An older study examined these factors within the United States, finding significant differences between males and females' stances on moral issues (e.g. animal testing and hunting) and species preference (males prefer predators and invertebrates, while females prefer more conventionally attractive animals like dogs, cats and butterflies). Moreover, it appears a higher education level can have a positive influence on interest in and sensitivity to animals (Kellert & Berry, 1987), while occupation and income can play a key role in influencing the attitudes toward animals (Taylor & Signal, 2006).

Kellert has demonstrated that age is also an important factor influencing concern for animals (Kellert, 1984a). In particular, children's perception toward animal species develop by age: between ages 6 to 9, they are more sensitive to emotional and affective aspects for example about pets, between age 10 to 13 is suitable for knowledge of cognitive aspects, and between age 13 to 16 for discussion of moral and ecological issues connected to animals (Kellert, 1984b).

Beyond the influence of individual variables, however, preference for specific animal species is an ongoing subject of research. Children have shown a greater preference for mammals, especially domestic species, compared with other taxonomic groups (Bjerke et al., 1998; Borgi & Cirulli, 2015). One study demonstrated a preference for species with whom people were already familiar (e.g. domestic, companion species) (Woods, 2000). Reasons cited for liking animals include their perceived attractiveness, intelligence, and character, while reasons for disliking them tend to focus on the threat of potential harm the species poses to humans (Woods, 2000).

Among the various taxa, non-human primates (henceforth, primates) are a good case-study to interrogate the relationships between humans and wild animals, in both wild and captive settings. Primates have always been part of the collective imagination (Fuentes, 2012); they are protagonists (or, antagonists) in conflicts with local populations (Hill & Webber, 2010), and they are a popular order of animals represented virtually on social media, and on display at zoological facilities.

Tourism Encounters with Non-Human Primates

Direct, physical interactions between humans and primates can lead to health problems for both parties; such interaction often increases the likelihood that infectious pathogens will be exchanged (Wallis & Lee, 1999; Goldberg et al., 2007; Muehlenbein et al., 2010).

There are many situations in which tourists can experience a physical encounter with primates, involving touching, feeding, and photographing themselves with the animal for a wild 'selfie' (Stazaker & Mackinnon, 2018). At some sites, one can purchase wild animals as companion animals, as is in the case of white-handed gibbons and slow loris in Thailand (Gray,

2012; Osterberg & Nekaris, 2015) or macaques in Morocco (Stazaker & Mackinnon, 2018). Specifically, in the latter case the negative influence of the presence of tourists at short distance has been documented (Maréchal et al., 2011). This includes increased anxiety experienced by macaques when they were approached for a photo or to be fed, and the experience of stress when they were subjected to aggressive interactions from humans. Macaque encounters have become a popular tourist attraction; at tourist sites most human-macaque interactions include tourists in 85% of events (O'Leary & Fa, 1993).

What is the perception of tourists toward primates? The answer to this question is not immediately evident. Globally, primates may be perceived in different ways: from divinities (e.g. in India and Nepal), to pets, to pests or conflict animals. Cultural factors play an important role when it comes to devotion, tolerance, or rejection (Lee & Priston, 2005). It appears that in Asia, there are some of the greatest contradictions in attitudes toward non-human primates (Eudey, 1994; Knight, 1999; Fuentes, 2006).

The popularized keeping of primates in homes as companions may have contributed to the perception of these animals as domesticable (Lee & Priston, 2005). In addition to this, films and TV shows depicting chimpanzees or other primates dressed in human clothing can have a major impact on the public's collective imagination, leading to a potential underestimation of their conservation status and increasing their desirability as a pet (Ross et al., 2008; Ross et al., 2011; Schroepfer et al., 2011; Leighty et al., 2015). A recent study has shown how the propagation of viral videos on social media can have similar significant impacts, offering a distorted view of wild animals and promoting captive detention as pet (Clarke et al., 2019).

Zoological facilities are excellent sites to investigate how tourists perceive non-human primates. A study carried out on visitors to Chicago's Lincoln Park Zoo showed that, people had a good prior knowledge, after visiting the zoo visitors demonstrated a significant increase in knowledge about gorillas and chimpanzees. There were no significant differences between the attitudes of the visitors before and after the visit, but returning visitors showed a more ecocentric perspective compared with first-time visitors (Lukas & Ross, 2005). Exhibiting primates in naturalistic environments may be an effective way to engage tourists' interest on conservation issues of monkeys and apes (Lukas and Ross, 2014). In particular, viewing free-ranging monkeys can stimulate interest, increase sensitivity and education of visitors towards primates (Price et al., 1994).

One of the first free-roaming sanctuaries established for non-human primates is *Monkeyland* (South Africa), inaugurated in 1998, featuring 12 hectares of indigenous forest hosting semi-free monkeys and apes of many species (Nelson et al., 2009; Hamilton & Fragaszy, 2014). In 2017, the anthropologist Muehlenbein conducted a study surveying 1175 of *Monkeyland's* visitors. This study showed that: (1) 31.1% of visitors had already visited an attraction to see primates, while 29.4% were aware of health risks related to contact with primates, and (2) although most visitors were aware of the possibility of contracting (86.2%) or transmitting (84.5%) diseases to wildlife, 54.8% would touch or feed a primate given the chance, and 10.4% desire primate companions. Furthermore, 20.0% of visitors had already experienced a direct interaction with a monkey or ape, and 2.3% have been scratched or bitten by a primate. Finally, the study demonstrated the positive impact of having a guided tour of the sanctuary: a survey of 258 visitors showed that, after the visit, there was an increase in

awareness of zoonoses, and a decrease in the desire for direct interactions or for primates as companion animals (Muehlenbein, 2017).

Aims of the study

The aforementioned research carried out at *Monkeyland* by Muehlenbein (2017) considered human attitudes toward non-human primates mainly in relation to zoonoses and other possible risks to human health. Following the review of this study and the broader literature regarding visitors' perceptions of wild primates at tourist sites, from zoos to natural settings, we suggest that this topic requires further investigation. The aim of our present study is to contribute to this growing body of literature.

In particular we focus on themes relevant to zoo-anthropological studies, including primates as companion species, direct encounters between visitors and primates, and visitors' preferences for a particular primate species. We interviewed visitors to *Monkeyland* using an anonymous, written survey, and present the results here using a qualitative and descriptive approach, with suggestions for future research.

Materials and Methods

This research was conducted at *Monkeyland*, a private free-roaming multi-species primate sanctuary located in Plettenberg Bay, Western Cape, South Africa. The data was collected between November 2017 and January 2018.

Monkeyland is part of the SAASA (South African Animal Sanctuary Alliance), together with Birds of Eden and Jukani, and consists of 12 hectares of indigenous forest bounded by an electric fence along its perimeter. The sanctuary is home to 11 species of non-human primates, native to different continents, totaling more than 700 individuals living sympatrically in the forest (<https://www.monkeyland.co.za/about-our>). The 11 non-human primate species include: the black and white tufted lemur (*Varecia variegata*), ring-tail lemur (*Lemur catta*), spectacled langur (*Trachypitecus obscurus*), hanuman langur (*Semnopithecus entellus*), black howler monkey (*Alouatta caraya*), Bolivian squirrel monkey (*Saimiri boliviensis*), Geoffroy's spider monkey (*Ateles geoffroyi*), tufted or brown capuchin (*Sapajus apella*), red-backed bearded saki (*Chiropotes chiropotes*), vervet monkey (*Chlorocebus pygerythrus*), and white handed or lar gibbon (*Hylobates lar*). Most of the primates living in this sanctuary were rescued from captivity (including old zoos, circuses, research laboratories, touristic attractions, homes), but some were also born in the sanctuary.

As a tourist attraction, the sanctuary is open daily to the public. Visitors attend hour-long guided tours during which they can observe the animals at a safe distance, take pictures and videos. Although the free-ranging primate residents are habituated to human presence, any "hands-on" experiences between tourists and animals are forbidden, including feeding and touching. The official web site states: "Please note: We have a strict no-touch policy at our primate sanctuary. Look, photograph, video, but please don't touch." (<https://www.monkeyland.co.za/about-our-primates/>).

In order to collect information on the attitude of visitors towards the resident primates, we conducted an anonymous survey of *Monkeyland* visitors. We handed out questionnaires to 400

visitors in total; 200 to visitors before their visit and 200 to different visitors after their visit. Survey participants included both adults, and with parents' permission, children over the age of 5. Questions on the survey included: socio-demographic information (i.e. gender, age, nationality, educational level, profession), prior experiences at SAASA wildlife sanctuaries, and about perceptions of captive primates (i.e. primates as companions, human-wildlife interactions, preferences for primate traits and species). For some questions, respondents were asked to explain the motivation behind their answers (see Appendix 1 for the questionnaire). A permit to conduct this research was granted by the South African Animal Sanctuary Alliance to which *Monkeyland* belongs. This research did not require approval from an ethics committee.

Analysis

The present study was analyzed qualitatively by separating questions into different categories. This allowed us to evaluate the participants' responses in a standardized way, highlighting the main themes emerging from their responses to the questionnaire. Our analytical categories were selected by identifying key themes common in respondents' answers. For example, if a respondent said, "*I like the way they swing*," we thematically categorized this response as "movement". For the open-ended questions, we allowed each visitor one or more answer categories, and a "no answer" option in the event of a null or illegible response. Open-ended questions, and their response options, include:

- "Do you think that a monkey/ape could be a good pet? Why?" We classified responses into the following categories: "wildness", "cuteness", "tameable", "maintenance", "fun", "human-like".
- "Do you think is correct to touch/feed/play with wild animals? Why?" We classified responses into the following categories: "animal welfare", "tameable", "dangerousness", "education", "feeding", "fun", "loveable".
- "Which is your favourite monkey? Why?" All 11 species housed within the sanctuary were used as categories, with the addition of the "other" category (in the case of a non-human primate species not present in *Monkeyland*).
- To determine visitors' preference for particular primate characteristics we classified the responses into the following categories: "beauty", "cuteness", "big", "cleverness", "calm", "fun", "human-like", "small", "movement", "sound".
- "Do you think that a sanctuary like *Monkeyland* is important? Why?" We classified the responses into the following categories: "bad place for wildlife", "conservation", "education", "good place for wildlife", "nice experience", "research".

Results

The main results of this study are presented below. For open-ended questions, we present a few examples to clarify some of the themes expressed by respondents.

Demographics

Out of the 400 visitors who answered the questionnaire, 208 (52,00%) identified as female, 191 (47,75%) identified as male, and 1 tourist (0,25%) did not disclose gender. Within this sample, 25 (6,25%) were children (from 5 to 12 years old), 38 (9,50%) teenagers (from 13 to 18 years old), 147 (36,75%) young adults (from 19 to 34 years old), and 190 (47,50%) older adults (from to 35 years old). Most respondents were from European countries (49,25%) and from Africa (40,00%), with a few from Central and South America (3,25%), North America (11 – 2,75%), Oceania (2,25%), Asia (2,00%), and 2 (0,5%) did not express their nationality. For the educational level, most of the tourists had a degree (23,75% Master's degree, 18,00% Bachelor's degree, 2,5% PhD) or at least had completed high school (22,75%).

Occupation, Past Sanctuary Visits, and Companion Animal Ownership

Respondents to our survey were categorized by occupation, including: management (13,50%), administrative (12,00%), health (7,5%), education (6,25%), unemployed (5,75%), and engineering (5,00%). The majority of the respondents were visiting *Monkeyland* for the first time (75,50%), and most (72,00%) had not been to other SAASA sanctuaries (*Birds of Eden* or *Jukani*) before. From the total number of visitors interviewed, 60,25% declared having at least one companion animal, while 39,75% indicated they did not.

Visitor Attitudes' Toward Non-Human Primates

More than half of our sample (59,5%) indicated the desire to have direct physical contact with a monkey or ape, while the rest of respondents were uninterested in such an encounter. This result did not seem to be strongly influenced by gender (female: 58,74% vs. 41,26%; male: 61,05% vs. 38,95%) or native-born continent (Europe: 53,40% vs. 46,60%; Africa: 65,63% vs. 34,37%), but there is an inverse association with the age (children: 88,00% vs. 22,00%, teenager: 81,58% vs. 18,42%, young: 58,62% vs. 41,38%, adults: 52,38% vs. 47,62%) and a positive association with the possession of a companion animal at home (companion animal owners: 66,10% vs. 33,90%; non-owners: 49,68% vs. 50,32%).

With regards to the question “Do you think that a monkey/ape could be a good pet? Why?” most visitors indicated no (84,75% vs 13,75%, 6 visitors did not answer), and the reason was mainly related to primates' nature as wild animals (77,88%). Examples of responses indicating this trend include: “*Because they are wild animals and thus should be kept in their natural habitat*” (18 years old, female),” and, “*Totally unacceptable to have any wild animal as a pet*” (69 years old, male).

Among the respondents who believed that a non-human primate can be a good companion animal, the most frequently mentioned categories of responses to the question “why?” were: tameability (34,37%), cuteness (21,87%), human-like (20,31%), and fun (18,75%). Two responses indicated the belief that primates can be good companion animals, stating “*It will be very nice if trained well*” (40 years old, male), and “*They are so cute. I think that they can be loveable and become your best friend*” (25 years old, female).

Next, we considered visitor perception towards direct interactions with primates. In particular we asked on our survey whether it is correct to have any form of hands-on interaction

(touch, feed or play) with wild animals, and 89,50% of visitors replied it was not correct. We observed that the majority of respondents who previously showed a desire to touch a monkey (59,25% of the 400 visitors) were aware that this practice is not correct (86,07% vs. 11,39%), because may have negative effects on animal welfare (57,35%), or because wild animals can behave dangerously towards the humans (30,88%). Some sample responses along this line of inquiry include: *"Petting/touching can alter the animal's natural wild responses and could influence their responses to 'wild' situations affecting their survival"* (48 years old, male), and *"Touching, feeding, playing with wild animals could be very dangerous"* (36 years old, female).

The reasoning given by respondents behind why they do not support touch interactions with primates matched the reasoning given by respondents who did not want to touch a primate, and believed such an encounter to be incorrect (total of 151). The motivations of visitors who wanted to touch a primate, and believed it a permissible encounter (6,75% of the entire sample), reasoned that primates need love (22,22%), that they can be tamed (18,52%), that it is funny (11,11%), or that it has an educational purpose (11,11%). Two examples of this mindset include: *"Only wild animals who can't be released back into the wild. Helps to teach people to love and respect animals"* (32 years old, female), and *"Animals need love, attention and affection too"* (22 years old, female).

Concerning visitors' preferences for particular primate species, we asked, "Which is your favorite monkey? Why?" We found differences among the visitors before and after the guided tour. Before the tour, the majority of the visitors (52,00%) did not express a preference (no answer and "I don't know" or "all") and the most mentioned species category (47,92%) was "other" (i.e. monkeys or apes that are not present in *Monkeyland*), *Lemur catta* (19,79%), *Hylobates lar* (9,37%), and *Chlorocebus pygerythrus* (8,33%). Independent from species preference, the most cited characteristics or features were: cuteness (30,00%), human-like (21,43%), beauty (20,00%), and cleverness (15,71%). After the tour, most visitors cited a preference for *Lemur catta* (21,50%) or did not show a specific preference (21,50%), and the other most mentioned species were *Hylobates lar* (14,50%), "other" (9,5%), *Saimiri boliviensis* (9,00%). Again, independent from species preference, the most cited characteristics or features were: cuteness (20,16%), beauty (18,55%), fun (15,32%), cleverness (13,71%), human-like (8,87%), and movements (8,87%). A few examples of the visitors' preference on animal species: *"My favourite monkeys are Gibbons because how human like they are and friendly they are toward humans"* (11 years old, female), *"Vervet monkey; very cute"* (33 years old, female), and *"Ring tailed lemur. Because of the Madagascar movie"* (13 years old, female).

Impression of Sanctuary

Visitors' answers to "Do you think that a sanctuary like Monkeyland is important? Why?" were not significantly influenced by the guided tour. While 355 replied "yes", 46,76% of this total were surveyed before their visit and 53,24% after their visit. Common themes identified in the responses to this question include education (52,74% before and 47,26% after), conservation (44,90% before and 55,10% after), good place for wildlife (33,01% before and 66,99% after) and nice experience (61,29% before and 38,71% after). Some sample responses regarding the perceived importance of *Monkeyland* include: *"It is important in order to save the species"*

(48 years old, female), “It gives them a safe home” (52 years old, male), “Yes, to raise awareness of the danger these animals could be in if don’t take care of the environment” (17 years old, female).

Discussion

Our survey’s sample population was fairly balanced between males and females, with most respondents being both young and older adults. The majority of nationalities represented in our survey were European and African. As education level, most respondents had at least a high school diploma. Visitors’ occupations were diversified in the sample, with the most declared categories being management and administrative positions. About 75% of visitors were visiting *Monkeyland* for the first time, and had never visited other SAASA sanctuaries. More than half of the respondents have at least one companion animal.

More than half of the surveyed visitors expressed desire to touch a monkey or an ape; this result did not seem to be influenced by gender or nationality, whereas we found age and companion animal ownership did influence responses. When asked, “Do you think that a monkey/ape could be a good pet? Why?” most visitors said “no”, most often citing primates inherent “wild” nature as a reason. Among the visitors who believe that a primate can be good pet, the most cited reasons were tameability and cuteness. Then, when asked if it is correct to have any form of physical interaction with wild animals, 89,5% responded “no” mainly explaining that wildlife can be dangerous to interact with, or citing animal welfare issues.

Visitors surveyed before the tour expressed a preference for “other” primate species than those present at *Monkeyland*, and those surveyed after the tour expressed a preference for “other” and the ring-tailed lemur (*Lemur catta*). Independent from species preference or time of tour, the most cited characteristic was cuteness. The majority of the respondents (355) thought that “a sanctuary like Monkeyland is important”, and this result was not significantly influenced by the guided tour.

Visitor-Primate Relations

From our surveyed *Monkeyland* visitors, we have discovered that the desire to touch a primate is directly dependent on the visitor’s age, and whether or not they own a companion animal, while gender and nationality was not found to have an influence. Children and teenagers expressed more willingness to make physical contact with monkeys or apes, and this can be justified by their naïve curiosity toward the natural world and wild animals. Similarly, visitors with pets are perhaps more accustomed and/or inclined to interact with wild animals. Over the years, many studies have been published on this topic, but with conflicting results (Kellert, 1984a; Kellert, 1984b; Kellert & Berry, 1987; Eagles & Demare, 1999, Prokop & Tunnicliffe, 2008; Pirrone et al., 2019). It therefore seems that the specific contexts of such studies present substantial differences in the factors determining human perception towards animals.

When tourists were asked for their opinion on whether a primate would make a good companion animal or not, most respondents replied that they do not, on account of their wild

nature. This result is promising since research shows that keeping monkeys or apes as companion animals can lead to serious consequences for their welfare (Soulsbury et al., 2008). In fact, in many countries it is prohibited to keep primates as companion animals (Quiroga & Estrada, 2003). Some of our respondents indicated, conversely, that primates may be good companion animals due to their perceived tameability, cuteness, resemblance to humans, and funny nature. This perception can be influenced not only by circuses and entertainment shows, but also by the mass media (e.g. films, TV programs, social networks, advertisings) and by the portrayal of monkeys and apes in domestic contexts or close proximity to humans (Lee & Priston, 2005; Ross et al., 2008; Ross et al., 2011; Schroepfer et al., 2011; Leighty et al., 2015; Clarke et al., 2019).

These factors that influence the public's attitude toward non-human primates are most likely the same ones that led some *Monkeyland* visitors (6.75% of the entire sample) to say that they would like to interact directly with a monkey or ape, believing this interaction is justifiable. The motivations behind such a response included: "they need love", primates can be tamed, because it is funny, or it has educational value.

However, the vast majority of visitors (around 90%) said that physical interaction with wild animals was not justifiable, considering risks to animal welfare and human health. Respondents are therefore aware both of the fact that close encounters can have negative effects on both parties (Stazaker & Mackinnon, 2018). Many studies have demonstrated the risk of zoonoses passed between humans and nonhuman animals, especially in tourism settings (Wallis & Lee, 1999; Goldberg et al., 2007; Muehlenbein et al., 2010).

In general, our results are comparable with those obtained by Muehlenbein's *Monkeyland* visitor research (2017), for illuminating motivating factors which promote or prevent touch encounters with primates, as well as general impressions of primates and their desirability as companion animals (Muehlenbein 2017). In fact, in both studies, tourists showed a search for sensitivity and awareness on issues in the moral and ecological issues on wildlife.

Zoo-Anthropological Implications of Species Preferences

In the survey conducted before attending the tour, some visitors did not answer the question regarding their preferred species of primate, while others mentioned a preference only for great apes. This may be due both to a limited knowledge of primates and to the influence of mass media on people's attitudes towards wild animals.

It emerged from our study that the ring-tailed lemur (*Lemur catta*) appeared to be the most popular species among the *Monkeyland* visitors. This primate is at serious risk of extinction, due to habitat loss, bushmeat hunting, climate change, and even pet trade. A species endemic to the forests of Madagascar, in recent years lemurs have found worldwide popularity amongst the public, surely influenced by the release of the animated film *Madagascar* in 2005. Among the main protagonists of the film is King Julien, an anthropomorphized, talking ring-tailed lemur who captured the attention of viewers with his catchy song: "*I like to move, move it*". Nowadays, lemurs are among the most present primate species portrayed on social media (Willemsen et al., 2015). Social media, the entertainment industry, and the internet in general has had a significant impact on users' perceptions and attitudes towards lemurs. Just as in the case of the slow loris, another primate popularized on social media through 'viral' videos, the portrayal of lemurs in domestic settings can impact the public's perception of their suitability as companion animals and conservation status (Clarke et al., 2019).

There are thousands of ring-tailed lemurs held in captivity around the world, both as companion animals in peoples' homes and at tourist attractions (LaFleur et al., 2019; Reuter et al., 2019). Some Malgasian tourist attractions (i.e. restaurants, hotels, zoos, reserves, sanctuaries) may even exploit primates for economic gain, contributing to the development of an illegal wildlife trade. *Lemur catta* can offer an excellent example to study the possible negative effects on animal welfare and conservation, due to its mass popularity.

From our results, it emerged that the quality of "cuteness" is a determining factor in the way people perceive wild animals, further influenced by their portrayal in mass media. Although it has previously been documented how, among other factors, the level of education and occupation type can influence the attitudes toward wildlife (Kellert & Berry, 1987; Eagles & Demare, 1999; Prokop, 2008), in this study we found no significant differences in this area. Likewise, geographical origin of respondents did not have substantial effects on the types of answers we received.

Generally speaking, the aesthetic attractiveness of primates plays an important role in influencing people's perception of and preference for particular species (Woods, 2000). According to one study, it would seem that animals larger in size are those favored by people who visit a zoological attraction (Ward et al., 2008). Furthermore, surveys conducted in zoos have shown that visitors prefer mammals rather than reptiles and birds; the majority justifying this choice mammals are "funny" and "cute" (Carr, 2016). The "cuteness" is a feature considered socially attractive, especially for some cultures as in the case of Japan (Cheok, 2010). In this context, cuteness as desirable refers not only to real animals, but also to animated animal characters such as the monkeys of *Super Monkey Balls* videogame (Pajares, 2003). Returning to the case of a viral video of a Slow Loris (*Nycticebus* spp.) interacting with a human, the most cited characteristic in their comments was the loris' "cuteness" (Nekaris et al., 2013).

Sanctuaries and Future Research

Monkeyland is a free-roaming attraction offering primates a sanctuary to recover from often difficult and tragic past lives under human management. The practice of encounters in *Monkeyland* is strictly "hands-off", such that visitors are prevented from any kind of touch interaction (e.g. contact and feeding) with the primates. In this study, the majority of visitors responded positively to the question "Do you think that a sanctuary like *Monkeyland* is important? Why?", both before and after the guided tour. The reasons behind these positive responses are diverse, involving different aspects such as education, conservation, animal welfare and experience. This reveals that the practices of *Monkeyland* is setting a good example for other primate sanctuaries, in that their no-touch and no-feed rule demonstrates appropriate encounters between visitors and primates in ways which safeguards both parties' wellbeing.

As documented previously (Price et al., 1994, Lukas and Ross, 2014), the keeping of monkeys in a sufficiently large, free-roam space— in which they can move at will, choose whether to be close to people or not, and to have the freedom to form social groups— is a model example of ideal wildlife tourism attractions. Moreover, the guided tour element at such an attraction positively influences visitors' knowledge of primate species. Although the structure of a sanctuary such as *Monkeyland* is logistically difficult to replicate in many countries, it can

still inspire the tourism industry's shift towards responsible and environmentally-minded tourism.

Conclusion

This research demonstrates a general awareness amongst visitors on the importance of animal welfare in the human interactions with captive wildlife, in agreement with the “hands off” policy of *Monkeyland*. Even if many (59,50%) express the desire of touching a monkey or ape, most of the tourists thought that a monkey would not be a good pet. The results about species preference underline the possible influence of mass media on the human attitude towards charismatic species such as non-human primates. Moreover, as previously documented in literature behind the concept of “cuteness”, the most cited motivation for the species selection, it would be an altered vision of wildlife, that may allow people to underestimate the species conservation status or enhance their desire for pet ownership. In general, the guided tours seem to have a positive effect on people's knowledge, in particular for the non-human primate species. Further research is needed in order to deepen other aspects of visitors-wildlife relations, especially in touristic settings.

Declaration of Interest

This research was conducted at Monkeyland, a site where two authors have volunteered. Despite this, the authors declare that there is no conflict of interest regarding the publication of this article.

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Table

Table. 1 – Visitors' preference for particular primate species. Considered variables include: gender (female and male), age: child (under 12), teenager (13-18), young (19-34), and adult (over 35), continent of origin (i.e., nationality), and guided tour (before or after the visit inside the sanctuary). The “other” category included the non-human primate species that are not present in *Monkeyland*.

Species	Female	Male	Age	Continent	Guided tour
<i>Alouatta caraya</i>	0	4	young (3); adult (1)	Africa (4)	after (3); before (1)
<i>Ateles geoffroyi</i>	4	11	adult (16); young (13);	Africa (11); South America (2);	after (11); before (5)
<i>Chiropotes chiropotes</i>	/	/	/	/	/
<i>Chlorocebus pygerythrus</i>	7	11	adult (11); young (5); child (1); teenager (1)	Africa (8); Europe (8); South America (2)	after (10); before (8)
<i>Hylobates lar</i>	14	24	adult (16); young (13); teenager (5); child (4)	Europe (22); Africa (12); South America (2); North America (2)	after (29); before (8)
<i>Lemur catta</i>	39	23	young (30); adult (16); teenager (9), child (7)	Africa (32); Europe (21); Asia (3); North America (2); Oceania (2); South America (2)	after (43); before (19)
<i>Saimiri boliviensis</i>	10	11	children (6); adult (6); young (5), teenager (4)	Africa (12); Europe (6); South America (2); Asia (1)	after (18); before (3)
<i>Sapajus apella</i>	10	6	young (8); adult (6); child (1); teenager (1)	Africa (8); Europe (6); South America (1); Oceania (1)	after (11); before (5)
<i>Semnopithecus entellus</i>	2	1	adult (2); teenager (1)	Africa (2); Europe (1)	after (3)
<i>Trachypithecus obscurus</i>	2	0	teenager (1); adult (1)	Africa (2)	after (2)
<i>Varecia variegata</i>	2	3	adult (4); child (1)	Africa (5)	after (4); before (1)
other (ape or monkey)	24	23	adult (28); young (15); teenager (3); child (1)	Europe (28); Africa (12); Asia (3); Oceania (2); North America (1); South America (1)	before (37); after (10)

612 **Appendix**

613 Written survey, anonymously, used for the present study.

614

Age:..... **Gender:** **Nationality:**

Job/Profession: **Educational level:**

1) **Have you already been in Monkeyland?** ☐ YES ☐ NO

2) **Have you already been in Birds of Eden or Jukani?** ☐ YES ☐ NO

3) **Have you got a domestic animal (pet) at home?** ☐ YES ☐ NO

4) **Would you like to touch a monkey?** ☐ YES ☐ NO

5) **Do you think that a monkey/ape could be a good pet?** ☐ YES ☐ NO

6) **Why YES or NO at Nr. 5?**

.....

7) **Do you think is correct to touch/feed/ play with wild animals?** ☐ YES ☐ NO

8) **Why YES or NO at Nr. 7?**

.....

9) **Which is your favourite monkey? Why?**

.....

10) **Do you think that a sanctuary like Monkeyland is important? Why?**

.....

Survey filled before or after the guided tour? ☐ BEFORE ☐ AFTER