

ABSTRACT

Many wildlife tourist attractions (WTAs) have negative impacts on animal welfare and species conservation. In the absence of regulation, raising standards requires tourists to create market pressure by choosing to attend WTAs with benefits for wildlife. We surveyed respondents from five countries – China, Australia, Canada, UK and USA – to quantify how attitudes to captive animals, and towards WTAs' outputs and standards, may vary with nationality. Our aim was to provide a firm basis for behaviour change interventions to alter current patterns of tourist consumption of WTAs.

All respondents agreed on the importance of conservation and animal welfare, but Chinese respondents were twice as likely to believe that WTAs wouldn't be allowed to exist if they were bad for animals, and that WTAs' promotional materials were reliable indicators of welfare and conservation standards. These findings indicate Chinese respondents had fundamentally similar attitudes to those from the other countries, but differed in how those attitudes were likely to be applied. Chinese tourists may experience more barriers to aligning their actions with their values with respect to WTAs. Removing these barriers may require information campaigns to highlight the lack of regulation, and the unreliability of some WTAs' promotional materials and tourists' reviews.

KEYWORDS

Wildlife tourist attractions; Chinese; English; values and attitudes; behaviour change.

Introduction

With biodiversity globally threatened, wildlife tourism has emerged as a powerful lever at the interface of humanity and wildlife, with vast, and growing, potential to provide income and social benefits for local human populations (Karanth, DeFries, Srivathsa, & Sankaraman, 2012), and to secure habitats, and animal welfare and conservation objectives (Ballantyne, Packer, & Hughes, 2009; Ballantyne, Packer, & Sutherland, 2011; Higginbottom, 2004). However, the willingness of tourists to pay for close interactions with wildlife permits considerable scope for the marketing of wildlife experiences that negatively impact on animals' welfare and their species' conservation status (Moorhouse, Dahlsjö, Baker, D'Cruze, & Macdonald, 2015). An emerging goal of conservation research is to test conservation social marketing interventions (e.g. ConsMark, 2015; Veríssimo, 2013; Wright et al., 2015) aimed at modifying tourists' behaviour and choices to direct

revenue towards outcomes that are beneficial for both tourists and wildlife (e.g. Moorhouse, D'Cruze, & Macdonald, 2017a,b) .

Wildlife tourist attractions (WTAs) are non-zoo, non-hunting wildlife tourism experiences that offer opportunities for tourists to interact with specific taxa of non-domestic animals, either in captive or wild settings (Moorhouse et al., 2017a; Moorhouse, et al. 2015). Numbers of WTAs are growing globally, offering experiences such as direct interactions with tigers, lions and dolphins in captivity, trekking to observe gorillas and gibbons in the wild, visiting bear-bile, sea-turtle and civet coffee farms, viewing rehabilitated or rescued animals, or watching wildlife-based shows such as 'snake charming' or 'dancing' macaques (Moorhouse et al. 2015). Many have detrimental impacts on the animal welfare and species conservation status of their subject animals. Moorhouse et al. (2015) examined a subset of 24 types of WTA (representing half of the 48 types they identified), and concluded that these were attended by an estimated 3.6–6 million tourists per annum, of whom 2.3-3.7 million (~60%) were likely to be supporting, through patronage and whether knowingly or not, attractions that had negative impacts on animal welfare and species conservation. Only six of these WTA types were likely to have net positive impacts on both species conservation and individual animal welfare, and they kept approximately 2-6% of the 563,000 animals involved (Moorhouse et al., 2015).

There is no global regulatory body for WTAs, nor any universally accepted accreditation scheme, and wildlife and welfare laws - and their degree of enforcement - vary between countries. As a result standards at WTAs in many places are governed primarily by tourists' willingness to attend them (Moorhouse et al., 2017a). WTAs offering attractive interactions will remain popular, and profitable, so long as visitors do not object to the animals' conditions and then leave reputationally damaging feedback that could deter future visits (e.g. Moorhouse et al., 2015; Moorhouse et al., 2017a). To raise standards would require tourists to assess a given WTA's likely impacts (e.g. from promotional materials, or other tourists' reviews) and to choose to avoid those venues likely to be detrimental to wildlife. Such choices, carefully made, would create a "green market" to reward WTAs that benefit wildlife with increased tourist revenue, and penalise, through decreased attendance, those with detrimental standards (e.g. Davis, 1992; Moorhouse et al., 2017a,b). At present such a green market does not operate effectively (Moorhouse et al., 2017a,b), which raises the question of whether conservation social marketing interventions could be employed to influence the consumption choices of tourists. The success of such interventions would rely strongly on a clear understanding of the values and beliefs of tourists from different backgrounds. It is vital to understand, for example, the extent to which wildlife tourists value WTAs that offer animal welfare and conservation benefits, and whether tourists experience barriers to choosing in line with their values. For example tourists might be confused about WTAs' impacts,

feel that their choices do not make a difference, or otherwise lack the information required to make a clear decision (Moorhouse et al., 2017a,b). Knowledge of these values and barriers is necessary to understand whether, and what, information and conservation marketing messages could be employed to influence tourists' decisions and raise standards at WTAs.

Our intention in this paper is to provide an evidential basis for behaviour change interventions, designed to promote a functioning green market for WTAs that benefits animal welfare and species conservation. To this end we will quantify the differences, and similarities, in the attitudes and beliefs of different demographic groups towards the use of animals in WTAs.

Literature review

Fundamental to the function of green markets for beneficial WTAs is that tourists must care sufficiently about WTAs' animal welfare and species conservation deliverables to affect their market choices.

As a broad characterisation the majority of Western tourists are likely to accept most uses of animals, so long as they consider the animals' wellbeing to be adequately cared for (Fennell, 2012; Shani, 2009). A number of surveys, however, suggest that most Western tourists will attach additional value to WTAs that provide positive conservation, education and animal welfare impacts (e.g. Ballantyne et al., 2009; Lück, 2003; Shani, 2012), and that the majority would prefer, all else being equal, to attend beneficial rather than detrimental venues (Moorhouse et al., 2017a).

A small number of studies have described the attitudes of the growing numbers of Asian wildlife tourists, and suggested that they may differ from those of Westerners (Cong, Newsome, Wu, & Morrison, 2014; Tao, Eagles, & Smith, 2004). For example Chinese attitudes have been described as giving humans' experiences a hierarchical priority over those of non-human animals (Qingming, Honggang, & Wall, 2012; Suntikul, Tang, & Pratt, 2016). Such a hierarchical world-view and (the Western understanding of) environmentally sustainable behaviour, however, do not have to be contradictory (Suntikul et al., 2016). For example, Buckley, Zhong, & Ma (2017) found that self-selecting visitors to Chinese parks have attitudes similar to those of Western wildlife tourists, and Suntikul et al. (2016) that Chinese safari tourists in Kenya strongly agreed on the importance of preserving environments for future generations and of not unnecessarily disturbing wildlife. Similarly Packer, Ballantyne, & Hughes (2014) found that Chinese and Australian tourists at a nature resort both rated animals not being mistreated as the most important consideration, while the Chinese tourists expressed a greater concern for the environment and had greater interest in learning about the animals.

Moorhouse et al. (2017b) examined how attitudes may translate into the consumption of WTA experiences. They revealed that Chinese respondents preferred types of WTA likely to have negative impacts both on animals' welfare and on the conservation status of their species, while respondents from Australia, Canada, the USA and the UK preferred those likely to have positive impacts. "Priming" respondents, by asking them questions designed to make them consider the likely ethical outputs and standards of WTAs, made respondents from Australia, Canada the USA and UK 2.8-5.2 times more likely to select lower likelihoods of attending detrimental WTAs, relative to "unprimed" respondents, but primed Chinese respondents were only 1.5 times more likely to do so (Moorhouse et al., 2017b). After the survey respondents were shown ratings of each WTAs' likely welfare and conservation impacts, and asked to re-assess them. Respondents from Australia, Canada, the USA and the UK were 5 to 13 times more likely to select lower likelihoods of attending detrimental WTAs after seeing the ratings, while Chinese respondents were only 3-4 times more likely to do so (Moorhouse et al., 2017b).

The respondents surveyed by Moorhouse et al. (2017b) were from five of the top seven outbound tourist countries: China (the largest, US\$ 261 billion), the USA (second largest, US\$ 122), the UK (fourth, US\$ 64 billion in 2016), Canada (sixth, US\$ 29 billion) and Australia (seventh US\$ 27 billion) (source (UNWTO, 2017)) - excluding Germany (third, US\$81 billion) and France (fifth, US\$41 billion) due to limitations of time and funding. Their study concluded that information campaigns aimed at modifying tourists' choices of which WTA venue to select – by stimulating them to consider the impacts of their choice, in order to drive revenue to those with benefits to wildlife – were likely to be less effective for respondents from China than the other countries tested. This conclusion is concerning because the Chinese outbound international market is significantly larger than the markets for Australia, Canada, USA and the UK combined. To stimulate green markets favouring animal conservation and welfare in WTAs, it is important to quantify the underlying values of Chinese tourists and so determine what arguments, if any, may be effective in modifying their consumption decisions with respect to WTAs.

This study examines respondents' answers to three sets of attitudinal questions posed during the survey reported by Moorhouse et al. (2017b). Our aim is to quantify the national differences in respondents' attitudes to the use of animals in WTAs, and in so doing to explain the observed differential effectiveness of priming in modifying consumption preferences. Such data are urgently needed to provide a firm basis for establishing how behaviour change interventions could be tailored to respondents from different demographic groups, in order to stimulate consumption that could support, as opposed to detract from, green markets promoting WTAs with benefits for animal welfare and species conservation.

Methods

Study design and survey methods

We gathered responses as part of an experimental survey examining whether priming respondents to consider the likely impacts of WTAs on wildlife conservation and animal welfare may encourage them to favour beneficial types of WTA over those likely to have detrimental impacts. In the experimental survey respondents were asked to rate how much they would like to attend 10 mock WTAs, the hypothesis being that the half of respondents who were primed to consider the ethical implications of their choice would reveal different preferences to those who remained unprimed. The experimental survey results are reported elsewhere (Moorhouse et al., 2017b), and summarised above, but here we analyse the respondents' answers to three accompanying sets of questions, the first two sets of which were designed to prime respondents - comprising one set of six, and one set of eight questions - and the third set of which comprised follow-up questions after respondents had completed the survey and rated the mock WTAs.

The survey was designed in collaboration with, and conducted by, market-research professionals (Touchstone Partners Limited, <http://www.touchstonepartners.co.uk>) who coordinated respondent recruitment through proprietary market research panels. Our intended sample size was 1,600 native Chinese citizens, in China, and 1,600 citizens of Australia, Canada, the UK and the USA (400 from each country), after removing those that took less than one third of the median response time (a market research industry standard action to exclude disengaged respondents). Panellists were familiar with surveys but not contacted so frequently as to have become unrepresentative of the wider population. Respondents from Australia, Canada, the UK and USA received the survey in English, and Chinese respondents received it translated into Mandarin. The survey was administered remotely, through an online platform. Prior to the survey all respondents were asked six initial questions concerning their occupation, sex, age, occupation, income and how often they take holidays. Their responses formed selection criteria for participation in the full survey. Respondent selection aimed to sample, from each country, the segment of the general population most likely to take regular overseas holidays. To meet these aims respondents with backgrounds in tourism, journalism or marketing were excluded from participating further, as were those whose occupations meant they were unlikely to take overseas holidays (manual or retired workers for Western respondents, and technical workers, unemployed and retired workers for Chinese respondents), those aged under 16 or over 64, and those who, when asked, stated that they took holidays less than once a year.

Priming questions were then shown to half of the respondents (1610 individuals, stratified by country; see Fig. 1). These comprised one set of six and one set of eight statements for which

respondents were asked to indicate their level of agreement (see below). These statements were designed not to impose value judgements on respondents, but to engage them with the possibility that WTAs' reasons for existing, and ethical deliverables, may vary (see Table 1). The third set of questions, asked after respondents had rated the mock WTAs, comprised 14 statements which were assessed by all respondents. We limited the number of such statements to a total of 28 across the whole survey, as a balance between deriving information, sufficiently priming respondents and minimising respondent fatigue over the course of the wider survey.

Our 28 statements were divided across four broad, non-exclusive subject areas: 1) respondents' attitudes to the possible reasons WTAs may have to keep animals; 2) respondents' beliefs about the conditions at, and impacts of WTAs, and the regulation of these; 3) respondents' beliefs about tourists' attitudes and responsibilities, and; 4) respondents' beliefs about the reliability and importance of other tourists' reviews and WTAs' promotional materials when deciding on which WTA to visit. Statements within these subject areas were distributed across three Question Sets (two priming, one follow-up) as shown in Table 1. Statements in subject areas 2-4, were present in both priming and follow-up questions, but statements in subject area 1 were limited only to priming questions because only six statements were available to describe underlying reasons for WTAs to exist (Table 1).

[Insert Table 1 here]

For Question Set 1, respondents were shown a statement that read "People give lots of reasons for keeping non-domestic (wild) animals at tourist attraction. For each of the reasons we show you, please use the sliding scale to show whether or not you think it's a good reason", and were then asked to rate each statement (see Table 1, QS1 N1-6) on a five point likert scale: "Very good reason", "Good reason", "Neither a good nor bad reason", "Bad reason", "Very bad reason". For Question Set 2, respondents were shown a statement that read "Here's a list of things people have said about keeping non-domestic (wild) animals at tourist attractions. For each one please show how strongly you agree or disagree with what was said), and asked to rate each statement (see Table 1, QS2 N1-8) on a five point scale: "Agree strongly", "Agree", "Neither agree nor disagree", "Disagree", "Disagree strongly". For Question Set 3, respondents were shown text that said "Please show whether you agree or disagree with each of these viewpoints", and given the option to select "Agree" or "Disagree" for each statement (see Table 1, QS3 N1-14).

Question Sets 1 and 2 were given to 1613 respondents (807 from China, 207 from Australia, 199 from Canada, 200 from the UK and 200 from the USA) – the primed respondents (T. P.

Moorhouse et al., 2017b) - while Question Set 3 was shown to all 3229 respondents (1615 Chinese, 412 Australian, 401 Canadian, 401 UK, 400 USA).

Data analysis

We recorded respondents' self-selected level of agreement with each statement, as well as their age, country, sex and - for responses to Question Set 3 only - whether they were primed or unprimed (i.e. whether they had previously answered Question Sets 1 and 2). For Question Sets 1 and 2, responses were ranked from 1-5 (for QS1, "Very good reason" =5 to "Very bad reason" = 1; for QS2, "Agree strongly" =5 to "Disagree strongly"=1), and for Question Set 3 responses were coded 1="Agree" 0 = "Disagree"). Responses were analysed separately for each of the 28 statements, using cumulative link models (repeated measures ordinal logistical regression), employed in Program R using package Ordinal (Christensen, 2015), with a logit link function.

The principal explanatory variable was respondents' country, with five levels (China, Australia, Canada, UK and USA), in which China formed the reference level for *a priori* treatment contrasts. Additional explanatory variables were respondents sex and age and, for the Question Set 3 only, whether respondents were primed or unprimed (i.e. whether they had first answered Question Sets 1 and 2).

Results

Overview

For Question Sets 1 and 2 we received responses from 1,612 respondents (802 from China, 207 from Australia, 199 from Canada, 200 from the UK, and 200 from the USA). For Question Set 3 we received responses from 3,224 individuals: 1614 from China, 412 from Australia, 399 from Canada, 399 from the UK and 400 from the USA. Of all respondents, 57.0% were female and 43.0% male, 1.7% were teenagers >16 years old, 24.3% in their twenties, 38.9% in their thirties, 20.4% in their forties, 11.6% in their 50s and 3.1% in their 60s.

Reasons for WTAs to keep animals

Respondents' degree of agreement with reasons for WTAs to keep animals (all QS1 Statements) varied between countries (Fig. 2; Table 2), in analyses in which their sex and age was also entered. Wald tests of the *a priori* contrasts for country revealed that Chinese respondents selected significantly lower levels of agreement than respondents from other countries with the statements "to help conserve their species" (70.3% compared with 86.8% agreed; Table 2) and "to give them better living conditions and welfare" (64.7% compared with 73.8% agreed), with the exception of

Canada for the welfare statement (Table 2; Fig. 2). Chinese respondents were substantially more likely than other respondents to agree with the reasons “to entertain tourists” (41.9% compared with 18.9% agreed), “to make money from tourists” (28.6%, compared with 15.4% agreed) and “to provide jobs for local people” (52.9% agreed, compared with 29.2%) (Table 2; Fig. 2). For the statement “to educate tourists” Chinese respondents were less likely to select higher levels of agreement than Australian or USA respondents, but did not differ from those from Canada and the UK (Table 2; Fig. 2).

In separate analyses of non-Chinese responses only, agreement with each statement was affected by country (Likelihood ratio test >13.58, d.f. = 3, $P < 0.004$ in all cases, in analyses in which respondents’ sex and age was also entered), with the exception of “to help conserve their species” (LRT = 5.467 d.f. = 3, $P > 0.141$). However the mean odds ratio for the effect of country, across all statements, was 1.05 (range 1.03-1.59). By comparison, in separate analyses, the mean odds ratio for the effect of China, relative to responses pooled across all the remaining countries, was 2.36 (range 1.44-3.46) across all statements, implying that the variation in attitudes among respondents from Australia, Canada, the USA and UK was approximately half the size of the difference between these respondents and the Chinese respondents.

[Insert Figure 2 here]

[Insert Table 2 here]

Beliefs about the impacts of WTAs on animals, and tourists’ role in regulating them

For the statement “These attractions are always good for animals” Chinese respondents selected substantially higher levels of agreement (48.6% high and 12.4% low agreement) than did respondents from the other countries (16.8% selected high agreement, and 55.5% low agreement; Fig 3a; Table 3a). Evidence for a difference in attitude for the statement “The animals in these attractions are usually not well looked after” was equivocal: while respondents from Australia, Canada, the USA and UK selected lower levels of agreement than did Chinese respondents, this difference was not significant for Canada or the UK (Fig. 3b; Table 3a); but Chinese respondents selected higher agreement (38.5% high and 20.7% low) than did those from Australia and the USA (26.8% high, 32.2% low) (Fig. 3b). There was no evidence for differences in the level of agreement for the statement “These attractions are usually not good for species conservation” (Table 3a): a mean of 34.1% of respondents agreed and 24.5% disagreed, across all nationalities (Fig. 3c). There was no evidence for national differences in attitudes between respondents from Australia, Canada, the USA and UK for any of the above statements (Fig. 3a-c; effect of country, in an analysis that excluded Chinese respondents, LRT < 2.01, $P > 0.57$).

[Insert Figure 3 here]

[Insert Table 3 here]

For the statement “Animals in captivity have better lives than in the wild” >68% of respondents from all countries disagreed. Respondents from Canada and the UK selected lower agreement (a mean of 21.3%) than those from China (31.2%; Table 3b), but there was no difference between Australian, North American (a mean of 30.5%) and Chinese respondents (Fig. 4a; Table 3b). Similarly, respondents from all countries selected high levels of agreement with the statement “My choice of which attraction to visit can impact on standards at these places”, notwithstanding that respondents from Australia and the USA chose slightly higher levels of agreement (82.6%) than did Chinese respondents (76.3%; Fig. 4c). Chinese respondents, however, were substantially more likely to agree with the statement “If these attractions were bad for animals they wouldn’t be allowed to exist” than were respondents from the other countries (Fig. 4b; Table 3b): 81.5% of Chinese respondents agreed with this statement, compared with a mean of 34.5% (range 20.4%-32.8%) for the remaining countries (Fig. 4b; Table 3b). In summary the beliefs of respondents were similar for all statements, except for “These attractions are always good for animals” and “If these attractions were bad for animals, they wouldn’t be allowed to exist” with which Chinese respondents were approximately three times and twice as likely to agree, respectively, than respondents from the other countries.

[Insert Figure 4 here]

Beliefs about tourists’ responsibilities

For the QS2 statement “Tourists have a duty to make sure they only visit attractions that help to conserve species” a mean of 73.6% of all respondents selected high levels, and 6.3% low levels, of agreement (Fig. 3h). There was no evidence that Chinese respondents’ attitudes differed from those from other countries, with the exception that USA respondents had lower levels of agreement (62.0% high levels and 10.5% low levels; Table 4a; Fig. 3h). For the QS2 statement “Tourists have a duty to make sure they only visit attractions where the animals are well cared for”, Chinese respondents selected marginally lower levels of agreement (75.2% high agreement, 4.6% low agreement) than other respondents (a mean of 81.1% high, 5.3% low agreement) (Fig. 3g; Table 4a).

[Insert Table 4 here]

Levels of agreement with the QS3 statements “As it's the only chance I get to see these animals, I don't worry about welfare standards at these places” and “As it's the only chance I get to see these animals, I don't worry what effect an attraction has on species conservation” were low (Fig. 4d-e): a mean of 19.4% and 19.8% of all respondents agreed, respectively, and there was no evidence supporting differences between respondents from different countries for these statements (effect of country LRT = 6.69 and 3.21, $P = 0.153$ and 0.522 , respectively). Similarly, levels of agreement were low for the statement “It is not my responsibility to police how animals are treated at these attractions” (Fig. 4h): a mean of 29.9% of respondents agreed across all countries, and only respondents from the UK had significantly lower levels of agreements than Chinese respondents (74.8% and 67.5%, respectively; Table 4b).

For the statements “You have to put up with poorer welfare conditions because that's the way they are in those countries” and “You have to put up with poorer welfare conditions because the attractions provide an important source of revenue and employment”, a higher percentage of Chinese respondents agreed (49.8% and 42.5% respectively) than did respondents from any of the other countries (a mean of 37.7% and 32.8%, respectively) (Fig. 4f-g; Table 4b). Similarly Chinese respondents were more likely to agree with the statement “It's wrong for us to apply our standards to these places” (61.1% agreed) than were respondents from the other nations (a mean of 32.7% agreed) (Fig. 4i; Table 3b). In summary there was broad agreement among respondents regarding their responsibilities and concerns, but disagreement for the statements “You have to put up with poorer welfare [for both reasons given]” and “It's wrong for us to apply our standards to these places”, for which an additional 9.8-11.9% and 28.4%, respectively, of Chinese respondents were more likely to agree, than were respondents of other nationalities.

Beliefs about the reliability of tourists' reviews and WTAs' promotional materials

For the QS2 statement “These attractions are not always honest about their impacts and intentions”, Chinese respondents selected lower levels of agreement (55.0% high, 9.8% low agreement) than did other respondents (a mean of 65.8% high, 8.4% low agreement) (Table 5a; Fig 3d). There was little evidence for a difference between Chinese respondents and those from the other nations: while Chinese respondents selected higher agreement than other nationalities for the statements “I can tell if the animals are being well cared for” and “I'm good at judging whether these attractions help to conserve species” (67.8% high, 5.6% low, compared with 54.6% high, 15.6% low; 51.4% high, 10.0% low, compared with 40.9% high, 20.6% low agreement, respectively), Wald tests indicated that these differences were not statistically significant (Fig. 3e,f; Table 5a).

[Insert Table 5 here]

[Insert Figure 5 here]

For the QS3 statement “I carefully read other tourists' reviews before deciding which attractions to visit” 92.3% of Chinese respondents agreed, compared with a mean of 79.8% (range 74.5-84.3%) for other respondents (Fig. 5d; Table 5b). The majority of respondents disagreed with the statement “I'm not worried about attractions not having the benefits for animals they claim to have”, but marginally more Chinese respondents disagreed (82.9% versus 78.7%) (Fig. 5a; Table 5b). The majority of respondents agreed that “Tourists' reviews are a good measure of how well attractions look after their animals”, but with higher agreement for Chinese respondents (86.3% versus 67.2%) (Fig 5e; Table 5b).

Chinese respondents' level of agreement with the QS3 statements “I can rely on attractions' promotional materials (leaflets, advertising etc.) to tell me what their welfare standards are like” and “I can rely on attractions' promotional materials (leaflets, advertising etc.) to say whether they are good for species conservation” were markedly different to those of other nationalities: 71.6% and 74.6% of Chinese respondents agreed, respectively, versus a mean of 34.9% (range 31.7%-38.8%) and 38.3%, (range 37.4%-39.8% agreed, respectively) (Fig. 5c,c; Table 5b).

Discussion

Our survey results reveal substantial underlying agreement, but also some marked differences, in attitudes to WTAs between Chinese respondents and those from Australia, Canada, the USA and the UK. Respondents from all countries agreed strongly with reasons for keeping animals predicated on helping to conserve species and giving animals better living conditions and welfare - notwithstanding that agreement for these statements was higher among Australian, Canadian, North American and British respondents (86.8% and 73.8% agreed, respectively) than among Chinese respondents (70.3% and 64.7% agreed, respectively) - and the lowest agreement was with reasons based on making money from tourists and entertaining tourists (Fig. 2). The majority (a mean of 78.4%; Fig. 4c) of all respondents agreed that their choice of attraction could impact on standards at WTAs, disagreed that they had no responsibility to police how animals are treated (a mean of 70.1% disagreed; Fig. 4h), and agreed that they have a duty to visit only attractions that help to conserve species and / or where animals are well cared for (78.1% and 73.6% of respondents agreed, respectively; Fig. 3g-h). For all these latter questions there was no substantial difference in the levels of agreement, which was within 6% between respondents from any country. Similarly,

levels of agreement with the statements “As it’s the only chance I get to see these animals I don’t worry about [conservation or welfare impacts]”, were below 20% for each country, and 71% of all respondents disagreed that animals in captivity have better lives than in the wild. For each of these statements there was little evidence for variation in responses between countries (Fig. 4d-e; Table 3b,4b).

Taken together the above findings indicate that 70-80% of respondents, regardless of nationality, believed that captivity was not necessarily beneficial for animals, and expressed concern about the effects of WTAs on animal welfare and species conservation; they also believed that standards at WTAs could be influenced by tourists’ choices and that tourists have a responsibility to select only WTAs that care for their animals and benefit species conservation. Similarly 80.8% of respondents expressed concerns about attractions not having the benefits for animals they claim to have (Fig. 4a) and 86.1% agreed that they carefully read tourists’ reviews before deciding which attractions to visit (Fig. 5d). Our results, therefore, indicate that the majority of respondents, regardless of nationality, had a clear preference for WTAs to provide animal welfare and species conservation benefits, agreed that tourists had a duty to support those that do, and also were concerned about attending WTAs that falsely claim to provide benefits.

The above findings provide encouraging support for the conclusion that the underlying ethical values of the majority of our respondents did align with those needed to create a green market - in which revenue is preferentially driven to WTAs that have animal welfare or species conservation benefits. This conclusion is partially supported by analyses in Moorhouse et al., (2017b) demonstrating that primed respondents from all countries (i.e. those who were asked to answer the QS1 and QS2 sets of statements) were less likely to select higher likelihoods of visiting detrimental WTAs. However, the effect was more pronounced for respondents from Australia, Canada, the USA and UK (who were between 2.8 and 5.2 times more likely to have a reduced preference for detrimental WTAs) than for Chinese respondents, who showed a greater unprimed preference for detrimental as opposed to beneficial attractions, and a smaller response to priming (1.5 times more likely have a reduced preference for detrimental WTAs) (Moorhouse et al., 2017b). The findings of Moorhouse et al. (2017b) indicate the presence of important differences between Chinese respondents and those from the other nations and, despite fundamental agreement on a number of issues, our present study also found that these respondents’ opinions differed in a number of ways:

First, although the highest agreement among all respondents for reasons for WTAs to keep animals was with reasons predicated on providing species conservation and animal welfare benefits, Chinese respondents' level of agreement with these were lower than were those of respondents of other nationalities (see above). Chinese respondents also demonstrated significantly higher

agreement with “to entertain tourists” (41.9% agreed versus 18.9 % from other countries; Fig. 2a), “to make money from tourists (28.6%% versus 15.4%; Fig. 1b) and “to provide jobs for local people” (52.9% versus 29.2%; Fig. 2c). These observations can be interpreted as supporting conclusions from previous studies describing Chinese attitudes to animals as hierarchical, such that if animals are entertaining or otherwise useful to humans, this may be considered beneficial (Qingming et al., 2012; Suntikul et al., 2016).

Second, Chinese respondents appear less alert to the potential for negative impacts from WTAs: 48.6% agreed and 12.4% disagreed that “these attractions are always good for animals”, compared with 16.8% (agreed) and 55.5% (disagreed) for the other nationalities, respectively (Fig. 3a). This evidence, however, was contradicted by Chinese respondents also being more likely to agree that “...animals in these attractions are usually not well looked after” (38.5% agreed, 20.7% disagreed, versus 28.7% and 30/3% from other countries; Fig. 3b). A potential explanation for this seeming contradiction may be that a WTA in which animals are “not well looked after” may nonetheless still be perceived as being “good for animals” in a broad sense (e.g. good for the species, good for the animals to be useful, or by comparison with what would be the case in the absence of the WTA), especially given that conceptions of the nature and importance of animal welfare may differ between Chinese respondents and those from the other countries.

Third, our results suggest a broad unwillingness among Chinese respondents to challenge the status-quo regarding WTAs' standards. Despite substantial agreement with the statement “My choice of attraction to visit can impact on standards...” (76.3% agreed; Fig. 4c), large proportions of Chinese respondents also agreed that “It’s wrong for us to apply our standards to these places” (61.1%, versus 32.7% of the other nationalities; Fig. 4i) and that “You have to put up with poorer welfare...because that’s how they are in these countries” (49.8% versus 29.5%; Fig. 4f) and “You have to put up with poorer welfare...because the attractions provide an important source of employment” (42.5% versus 23.1%; Fig. 4g).

Last, Chinese respondents indicated a far greater belief than respondents from the other countries in the existence of regulating mechanisms that might prevent them from inadvertently attending WTAs with impacts of which they might not approve. Agreement with the statement “If these attractions were bad for animals they wouldn’t be allowed to exist” was 81.5%, compared with 37.4% for other countries (Fig. 4b). Similarly 71.6% and 74.6% of Chinese respondents, respectively, agreed that they could rely on attractions' promotional materials to tell them what their welfare and conservation standards were like (c.f. 34.9% and 38.3% for other countries; Fig. 5c), and agreement with “tourists’ reviews are a good measure of how well attractions look after their animals” was 86.3% of Chinese respondents and 67.2% of the remaining countries (Fig. 5e), both of which statements are demonstrably inaccurate (Moorhouse et al. 2015; Moorhouse et al. 2017a).

Recognition is growing that wildlife protection solutions must include strategies for influencing people's behaviour (Balmford and Cowling 2006; Wright et al. 2015). Social marketing remains an underused tool (Veríssimo 2013; Wright et al. 2015), a recognition encapsulated in the 2014 founding of the SCB Conservation Marketing Working Group (ConsMark 2015). A lack of information can be a barrier to changing behaviour (Schultz 2002), but information alone will not necessarily motivate individuals to alter their behaviour (Stern 2000). To be effective, social marketing campaigns must understand the factors that influence consumers' behaviour, and deliver the correct message through the right communications medium (Challender et al. 2015; Dalberg 2012). In the context of our own research, Moorhouse et al. (2017b) found that the same information had a different degree of impact on the preferences of Chinese respondents, compared with those from other nationalities. The present study offers a potential explanation for this observation, by highlighting that Chinese respondents experienced additional barriers, which may have prevented their choices from aligning with their stated values.

We speculate that to stimulate the same degree of preference change for WTAs shown by the other nationalities will require additional arguments to be made to Chinese tourists. These arguments should be aimed at convincing them of the fallibility (and often non-existence) of putative regulation of standards at WTAs (Moorhouse et al. 2017a), and that any responsibility they may feel to support beneficial WTAs accordingly requires a willingness to assert their own values. We recommend these additional arguments while recognising that the questions in the current study were intended to highlight what attitudinal differences existed between respondents from different countries, and have not been tested to discern whether providing this information would be effective in real world situations. Our study, therefore, has located a plausible basis for conservation marketing interventions, which now require separate testing to discern whether they are likely to be effective.

Our findings with respect to respondents' values broadly accord with existing studies of Western wildlife tourists. Existing studies indicate that Western tourists are particularly likely to value WTAs with animal welfare or species conservation benefits (e.g. Ballantyne et al., 2009; Lück, 2003; Shani, 2012), but that they will also accept most uses of animals, so long as they consider the animals' wellbeing to be adequately cared for (Fennell, 2012; Shani, 2009). With respect to Asian wildlife tourists our findings may offer a solution to the seemingly contradictory conclusions of existing studies. The few previous studies of Chinese wildlife tourists' attitudes describe Chinese tourists as having different attitudes to Westerners (Cong et al. 2014; Tao et al. 2004), which leads to them disrespecting wildlife (Qingming et al. 2012; Suntikul et al. 2016), but also as having a similar regard to Westerners for the benefits of both species conservation and animal welfare (Buckley et al. 2017; Packer et al. 2014; Suntikul et al. 2016). We provide a

potential solution, which is that while both Chinese and Western wildlife tourists in fact have similar ethical values regarding the desirable treatment of wildlife in tourism, the additional set of beliefs held by Chinese tourists could cause the impact of their choices to differ from their values.

The validity of all of our conclusions relies upon our respondents providing an accurate representation of the attitudes of tourists from their respective countries. Respondents were selected on the basis that they undertook at least one holiday per annum, and had incomes that would permit holidays to the type of international destinations likely to provide WTA experiences. The survey was administered online, which is likely to skew the respondent population towards those living in large towns and cities, and towards the relatively young (24% of our respondents were in their 20s, 39% in their 30s, 20% in their 40s, 12% in their 50s and 3% 60 or over). In the context of our study such skew is unlikely to make the respondents unrepresentative of the population of interest (overseas holiday travellers, who likely to be relatively affluent and to live close to international travel terminals). It remains uncertain whether being on holiday, as opposed to self-administering the survey at home, might have affected respondents' choices. Tourists in-country presented with a similar choices could anticipate attending the WTAs within the week, and also may operate in a different moral space from in their daily lives (Thomas, 2005): tourists may not see holidays as a context in which they should be responsible for ethical decisions (Barr, Shaw, Coles, & Prillwitz, 2010; Becken, 2007). We have no estimate for the size of any effect these differences would have, and an accurate estimate would require a similar study to be conducted on tourists in-country.

While we have drawn distinctions between the attitudes of Chinese respondents and those of the other nationalities, these distinctions are of degree, not of kind, and many of the beliefs discussed above, which may lead to tourists not being fully cognisant of the full impacts of their choice of WTA on the welfare of the animals involved, or on their species conservation status, have previously been discussed in the context of Western tourists' consumption of WTA experiences by Moorhouse et al. (2017a). Here the distinction is not intended as a basis for disapproval of any ethical outlook or demographic group, but as a categorisation useful to direct the content of social marketing campaigns to align tourists' choices with their fundamental values (an action likely to benefit both wildlife and tourists; Moorhouse et al, 2017a).

Conclusions

Social marketing campaigns are increasingly needed to reduce or redirect consumer demand for wildlife products and experiences. Such campaigns require a thorough understanding both of consumers' values and the barriers (e.g. social norms, beliefs, or a lack of information) that could prevent them from representing those values in their choices. Our study aimed to add to an existing

body of knowledge concerning the values and beliefs of Western and Chinese wildlife tourists. Our objective in doing was to provide an evidential basis to underpin future behaviour change interventions aimed at promoting a functioning green market for wildlife tourist attractions (WTAs), which could benefit both animal welfare and species conservation. Specifically, we wished to explain previous research findings, which demonstrated that information about the impacts of WTAs had less effect on the preferences of Chinese respondents than on the preferences of respondents of other nationalities (Moorhouse et al., 2017b).

Our research reveals clear similarities in the fundamental attitudes of Chinese, North American, Canadian, Australia and British tourists toward the use of animals by WTAs. Respondents of all nationalities strongly preferred WTAs to provide animal welfare and species conservation benefits, agreed that tourists had a duty to support those that do, and also were concerned about attending WTAs that falsely claim to provide benefits. We discovered, however, profound differences in how those attitudes are likely to be applied. Chinese respondents differed in having a far greater unwillingness to question standards at WTAs, coupled with a strong belief in the trustworthiness of WTAs' promotional materials and in the reliability of other tourists' reviews as assessments of welfare and conservation standards, and a belief that higher authorities regulate standards at WTAs.

Our data suggest that to align Chinese tourists consumption choices to their values, they, and the substantial proportions of the other nations' tourists who are likely to share their beliefs and attitudes, may require additional arguments to be made. These arguments should aim to inform tourists of the inherent lack of regulation among WTAs, the high incidence of greenwashing among WTAs' promotional materials (estimated as 22-60% of WTAs; Moorhouse et al., in prep) and that other tourists' reviews are not an adequate measure of either animal welfare or conservation standards (Moorhouse et al. 2015; 2017a). Our findings form a plausible basis for conservation marketing interventions, but the effectiveness of the messages now requires separate testing, initially potentially via online surveys and then, if their effectiveness is confirmed, in real world situations. If confirmed as successful such social marketing messages, when added to information specifically describing the impacts of WTAs, would be expected to substantially increase the likelihood of achieving a green market for WTAs.

Acknowledgements

This research was funded by World Animal Protection, and conducted in close collaboration with Tim Baker and Jon Darby of Touchstone Partners Ltd., for whose expertise and professionalism throughout we are extremely grateful.

Literature cited

- Ballantyne, R., Packer, J., & Hughes, K. (2009). Tourists' support for conservation messages and sustainable management practices in wildlife tourism experiences. *Tourism Management*, 30(5), 658-664.
- Ballantyne, R., Packer, J., & Sutherland, L. A. (2011). Visitors' memories of wildlife tourism: Implications for the design of powerful interpretive experiences. *Tourism Management*, 32(4), 770-779. doi:10.1016/j.tourman.2010.06.012
- Barr, S., Shaw, G., Coles, T., & Prillwitz, J. (2010). 'A holiday is a holiday': practicing sustainability, home and away. *Journal of Transport Geography*, 18(3), 474-481.
- Becken, S. (2007). Tourists' perception of international air travel's impact on the global climate and potential climate change policies. *Journal of Sustainable Tourism*, 15(4), 351-368.
- Buckley, R., Zhong, L., & Ma, X. (2017). Visitors to protected areas in China. *Biological Conservation*, 209, 83-88.
- Challender, D. W., Harrop, S. R., & MacMillan, D. C. (2015). Towards informed and multi-faceted wildlife trade interventions. *Global Ecology and Conservation*, 3, 129-148.
- Christensen, M. R. H. B. (2015). Analysis of ordinal data with cumulative link models - estimation with the R-package ordinal. Retrieved from https://cran.r-project.org/web/packages/ordinal/vignettes/clm_intro.pdf
- Cong, L., Newsome, D., Wu, B., & Morrison, A. M. (2014). Wildlife tourism in China: a review of the Chinese research literature. *Current Issues in Tourism*, 1-24. doi:10.1080/13683500.2014.948811
- ConsMark. (2015). 6 Month Progress Report. Retrieved from https://conbio.org/images/content_groups/ConsMark/01.04.2016_-_ConsMark_progress_report_Final.pdf
- Dalberg, W. (2012). Fighting illicit wildlife trafficking. Retrieved from http://www.dalberg.com/documents/WWF_Wildlife_Trafficking.pdf
- Davis, J. J. (1992). Ethics and environmental marketing. *Journal of Business Ethics*, 11(2), 81-87.
- Fennell, D. A. (2012). Tourism, animals and utilitarianism. *Tourism Recreation Research*, 37(3), 239-249.
- Higginbottom, K. (2004). Wildlife tourism: an introduction. In K. Higginbottom (Ed.), *Wildlife tourism: impacts, management and planning*. (pp. 1-11). Altona Vic, Australia.: Common Ground Publishing Pty Ltd.
- Karant, K. K., DeFries, R., Srivathsa, A., & Sankaraman, V. (2012). Wildlife tourists in India's emerging economy: potential for a conservation constituency? *Oryx*, 46(03), 382-390. doi:10.1017/S003060531100086X
- Lück, M. (2003). Education on marine mammal tours as agent for conservation—but do tourists want to be educated? *Ocean & Coastal Management*, 46(9), 943-956.
- Moorhouse, T., D'Cruze, N. C., & Macdonald, D. W. (2017a). Unethical use of wildlife in tourism: what's the problem, who is responsible, and what can be done? *Journal of Sustainable Tourism*, 25(4), 505-516. doi:10.1080/09669582.2016.1223087

- Moorhouse, T. P., D'Cruze, N. C., & Macdonald, D. W. (2017b). The effect of priming, nationality and greenwashing on preferences for wildlife tourist attractions. *Global Ecology & Conservation*, 12, 188-203.
- Moorhouse, T. P., Dahlsjö, C. A., Baker, S. E., D'Cruze, N. C., & Macdonald, D. W. (2015). The customer isn't always right—conservation and animal welfare implications of the increasing demand for wildlife tourism. *PloS one*, 10(10), e0138939.
- Packer, J., Ballantyne, R., & Hughes, K. (2014). Chinese and Australian tourists' attitudes to nature, animals and environmental issues: Implications for the design of nature-based tourism experiences. *Tourism Management*, 44, 101-107.
- Qingming, C., Honggang, X., & Wall, G. (2012). A cultural perspective on wildlife tourism in China. *Tourism Recreation Research*, 37(1), 27-36.
- Schultz, P. W. (2002). Knowledge, information, and household recycling: examining the knowledge-deficit model of behavior change. In T. Dietz & P. C. Stern (Eds.), *New tools for environmental protection: education, information, and voluntary measures*. (pp. 67-82). Washington: National Academy Press.
- Shani, A. (2009). *Tourists' attitudes toward the use of animals in tourist attractions: and empirical investigation*. (Doctoral Dissertation), University of Central Florida Orlando, Florida.
- Shani, A. (2012). A quantitative investigation of tourists' ethical attitudes toward animal-based attractions. *Turizam: znanstveno-stručni časopis*, 60(2), 139-158.
- Stern, P. (2000). Toward a coherent theory of environmentally significant behavior. *Journal of social issues*, 56(3), 407-424.
- Suntikul, W., Tang, C., & Pratt, S. (2016). An Exploratory Study of Chinese Tourists on Kenya Safari Tours. *Journal of China Tourism Research*, 12(2), 232-251.
- Tao, C.-H., Eagles, P. F. J., & Smith, S. L. J. (2004). Profiling Taiwanese Ecotourists Using a Self-definition Approach. *Journal of Sustainable Tourism*, 12(2), 149-168.
doi:10.1080/09669580408667230
- Thomas, M. (2005). 'What happens in Tenerife stays in Tenerife': Understanding women's sexual behaviour on holiday. *Culture, health & sexuality*, 7(6), 571-584.
- UNWTO. (2017). Chinese tourists spent 12% more in travelling abroad in 2016 [Press release]. Retrieved from <http://media.unwto.org/press-release/2017-04-12/chinese-tourists-spent-12-more-travelling-abroad-2016>
- Veríssimo, D. (2013). Influencing human behaviour: an underutilised tool for biodiversity management. *Conservation Evidence*, 10, 29-31.
- Wright, A. J., Veríssimo, D., Pilfold, K., Parsons, E., Ventre, K., Cousins, J., . . . McKinley, E. (2015). Competitive outreach in the 21st century: why we need conservation marketing. *Ocean & Coastal Management*, 115, 41-48.

Question	Priming or follow-up?	Statement	Subject area category / beliefs about:			
			WTAs' reasons for keeping animals	WTAs' impacts, and their regulation	Tourists' responsibilities	Reliability of reviews, and adverting
QS1 N1	Priming	Animals are kept to entertain tourists	X			
QS1 N2	Priming	Animals are kept to make money from tourists	X			
QS1 N3	Priming	Animals are kept to provide jobs for local people	X			
QS1 N4	Priming	Animals are kept to help conserve their species	X			
QS1 N5	Priming	Animals are kept to educate tourists	X			
QS1 N6	Priming	Animals are kept to give them better living conditions and welfare	X			
QS2 N	Priming	These attractions are always good for animals		X		
QS2 N	Priming	The animals in these attractions are usually not well looked after		X		
QS2 N	Priming	These attractions are usually not good for species conservation		X		
QS2 N	Priming	Tourists have a duty to make sure they only visit attractions where the animals are well cared for			X	
QS2 N	Priming	Tourists have a duty to make sure they only visit attractions that help to conserve species			X	
QS2 N	Priming	These attractions are not always honest about their impacts and intentions				X
QS2 N	Priming	I can tell if the animals are being well cared for				X
QS2 N	Priming	I'm good at judging whether these attractions help to conserve species				X
QS3 N1	Follow-up	Animals in captivity have better lives than in the wild		X		
QS3 N2	Follow-up	If these attractions were bad for animals they wouldn't be allowed to exist		X		
QS3 N3	Follow-up	My choice of which attractions to visit can impact on standards at these places		X		
QS3 N4	Follow-up	As it's the only chance I get to see these animals, I don't worry about welfare standards at these places			X	
QS3 N5	Follow-up	As it's the only chance I get to see these animals, I don't worry what effect an attraction has on species conservation			X	
QS3 N6	Follow-up	It's wrong for us to apply our standards to these places			X	
QS3 N7	Follow-up	It is not my responsibility to police how animals are treated at these attractions			X	
QS3 N8	Follow-up	You have to put up with poorer welfare conditions because that's the way they are in those countries			X	
QS3 N9	Follow-up	You have to put up with poorer welfare conditions because the attractions provide an important source of revenue and employment			X	

QS3 N10	Follow-up	Tourists' reviews are a good measure of how well attractions look after their animals	X
QS3 N11	Follow-up	I carefully read other tourists' reviews before deciding which attractions to visit	X
QS3 N12	Follow-up	I can rely on attractions' promotional materials (leaflets, advertising etc) to tell me what their welfare standards are like	X
QS3 N13	Follow-up	I can rely on attractions' promotional materials (leaflets, advertising etc) to say whether they are good for species conservation	X
QS3 N14	Follow-up	I'm not worried about attractions not having the benefits for animals they claim to have	X

Table 1. Showing how the experimental statements were divided between subject area categories, and priming or follow-up questions (i.e. questions presented prior to, or following the main survey of (T. P. Moorhouse et al., 2017), respectively).

Table 2. Wald tests for QS1 statements, assessing respondents' attitudes to WTAs reasons for keeping animals. For each statement the reference level for the Wald test was Chinese respondents' answers. All statistics are presented to three significant figures.

Question	Statement	Value	Australia	Canada	United Kingdom	United States of America
QS1 N1	To entertain tourists	Estimate	-1.23	-1.25	-1.72	-0.770
		z-value	8.47	-8.35	-11.24	-5.15
		P	<0.001	<0.001	<0.001	<0.001
QS1 N2	To make money from tourists	Estimate	-0.886	-1.03	-1.29	-0.569
		z-value	-6.16	-6.90	-8.51	-3.77
		P	<0.001	<0.001	<0.001	<0.001
QS1 N3	To provide jobs for local people	Estimate	-1.00	-1.05	-1.27	-0.569
		z-value	-6.95	-6.97	-8.45	-3.76
		P	<0.001	<0.001	<0.001	<0.001
QS1 N4	To help conserve their species	Estimate	0.805	0.712	0.991	1.12
		z-value	5.49	4.66	6.47	7.06
		P	<0.001	<0.001	<0.001	<0.001
QS1 N5	To educate tourists	Estimate	0.346	0.205	0.110	0.863
		z-value	2.42	1.38	0.753	5.68
		P	0.0155	0.168	0.451	<0.001
QS1 N6	To give them better living conditions and welfare	Estimate	0.304	0.220	0.540	0.712
		z-value	2.11	1.46	3.67	4.63
		P	0.0353	0.146	<0.001	<0.001

Table 3. Wald tests for a) QS2 and Qb) S3 statements, assessing respondents' attitudes to WTAs impacts and their regulation. For each statement the reference level for the Wald test, was Chinese respondents' answers. All statistics are presented to three significant figures.

a)

Question	Statement	Value	Australia	Canada	United Kingdom	United States of America
QS2 N	These attractions are always good for animals	Estimate	-1.68	-1.95	-1.99	-1.59
		z-value	-11.3	-12.3	-12.8	-9.94
		P	<0.001	<0.001	<0.001	<0.001
QS2 N	The animals in these attractions are usually not well looked after	Estimate	-0.393	-0.192	-0.243	-0.336
		z-value	-2.75	-1.30	-1.64	-2.18
		P	<0.005	0.195	0.101	0.0296
QS2 N	These attractions are usually not good for species conservation	Estimate	-0.0260	0.200	0.148	0.0858
		z-value	-0.182	1.35	1.01	0.560
		P	0.856	0.176	0.312	0.575

b)

Question	Statement	Value	Australia	Canada	United Kingdom	United States of America
QS3 N	Animals in captivity have better lives than in the wild	Estimate	-0.124	-0.525	-0.430	0.149
		z-value	-1.01	-3.83	-3.23	1.204
		P	0.312	<0.001	<0.001	0.228
QS3 N	If these attractions were bad for animals they wouldn't be allowed to exist	Estimate	-1.95	-2.13	-2.21	-1.91
		z-value	-16.0	-16.8	-17.3	-15.2
		P	<0.001	<0.001	<0.001	<0.001
QS3 N	My choice of which attractions to visit can impact on standards at these places	Estimate	0.275	0.173	0.0701	0.532
		z-value	1.97	1.24	0.517	3.44
		P	0.0487	0.214	0.605	<0.001

Table 4 .Wald tests for a) QS2 and Qb) S3 statements, assessing respondents’ attitudes to tourists’ responsibilities. For each statement the reference level for the Wald test,was Chinese respondents’ answers. All statistics are presented to three significant figures.

a)

Question	Statement	Value	Australia	Canada	United Kingdom	United States of America
QS2 N	Tourists have a duty to make sure they only visit attractions where the animals are well cared for	Estimate	0.469	0.560	0.759	0.263
		z-value	3.12	3.60	5.00	1.70
		P	0.00183	<0.001	<0.001	0.0900
QS2 N	Tourists have a duty to make sure they only visit attractions that help to conserve species	Estimate	0.0241	-0.143	0.184	-0.328
		z-value	0.160	-0.914	1.23	-2.08
		P	0.873	0.361	0.217	0.0373

b)

Question	Statement	Value	Australia	Canada	United Kingdom	United States of America
QS3 N	As it's the only chance I get to see these animals, I don't worry about welfare standards at these places	Estimate	-0.275	-0.114	-0.309	-0.0586
		z-value	-1.85	-0.766	-1.99	-0.386
		P	0.0645	0.444	0.0462	0.700
QS3 N	As it's the only chance I get to see these animals, I don't worry what effect an attraction has on species conservation	Estimate	-0.210	-0.0773	-0.184	-0.0977
		z-value	-1.44	-0.530	-1.24	-0.649
		P	0.149	0.596	0.214	0.517
QS3 N	It's wrong for us to apply our standards to these places	Estimate	-0.981	-0.872	-1.34	-1.25
		z-value	-8.47	-7.42	-10.8	-9.97
		P	<0.001	<0.001	<0.001	<0.001
QS3 N	It is not my responsibility to police how animals are treated at these attractions	Estimate	-0.105	-0.197	-0.321	-0.205
		z-value	-0.858	-1.55	-2.48	-1.58
		P	0.391	0.121	0.0131	0.114
QS3 N	You have to put up with poorer welfare conditions because that's the way they are in those countries	Estimate	-0.884	-0.884	-1.27	-0.917
		z-value	-7.24	-7.06	-9.41	-7.14
		P	<0.001	<0.001	<0.001	<0.001
QS3 N	You have to put up with poorer welfare conditions because the attractions provide an important source of revenue and employment	Estimate	-0.652	-0.701	-1.04	-0.854
		z-value	-5.26	-5.45	-7.52	-6.30
		P	<0.001	<0.001	<0.001	<0.001

Table 5. Wald tests for a) QS2 and Qb) S3 statements, assessing respondents' attitudes to the reliability of online reviews and WTAs' promotional materials. For each statement the reference level for the Wald test, was Chinese respondents' answers. All statistics are presented to three significant figures.

a)

Question	Statement	Value	Australia	Canada	United Kingdom	United States of America
QS2 N	These attractions are not always honest about their impacts and intentions	Estimate	0.453	0.666	0.616	0.489
		z-value	3.10	4.34	4.12	3.14
		P	0.00193	<0.001	<0.001	0.00169
QS2 N	I can tell if the animals are being well cared for	Estimate	-0.585	-0.737	-0.232	-0.264
		z-value	-4.03	-4.79	-1.56	-1.66
		P	<0.001	<0.001	0.119	0.0972
QS2 N	I'm good at judging whether these attractions help to conserve species	Estimate	-0.362	-0.675	0.0695	-0.399
		z-value	-2.49	-4.40	0.473	-2.58
		P	0.0128	<0.001	0.636	0.00982

b)

Question	Statement	Value	Australia	Canada	United Kingdom	United States of America
QS3 N	Tourists' reviews are a good measure of how well attractions look after their animals	Estimate	-1.29	-1.21	-0.853	-0.995
		z-value	-10.2	-9.29	-6.31	-7.37
		P	<0.001	<0.001	<0.001	<0.001
QS3 N	I carefully read other tourists' reviews before deciding which attractions to visit	Estimate	-1.43	-1.17	-0.804	-0.994
		z-value	-9.60	-7.42	-4.75	-5.98
		P	<0.001	<0.001	<0.001	<0.001
QS3 N	I can rely on attractions' promotional materials (leaflets, advertising etc) to tell me what their welfare standards are like	Estimate	-1.51	-1.62	-1.51	-1.27
		z-value	-12.7	-13.1	-12.5	-10.5
		P	<0.001	<0.001	<0.001	<0.001
QS3 N	I can rely on attractions' promotional materials (leaflets, advertising etc) to say whether they are good for species conservation	Estimate	-1.52	-1.48	-1.47	-1.33
		z-value	-12.8	-12.2	-12.2	-10.9
		P	<0.001	<0.001	<0.001	<0.001
QS3 N	I'm not worried about attractions not having the benefits for animals they claim to have	Estimate	0.359	0.577	0.191	0.535
		z-value	2.58	4.18	1.29	3.75
		P	0.0100	<0.001	0.198	<0.001

Figure Legends

Figure 1. The design of the experimental survey, showing treatment groups.

Figure 2. The effect of QS1 statements – all assessing respondents' attitudes to WTAs' reasons for keeping animals - on the percentage of respondents selecting . Percentages are stacked for clarity. For a given bar, the regions, bottom to top, represent the percentage of respondents selecting, “Very bad reason”, “Bad reason” (both hashed without shading), “Neither a good nor bad reason” (unshaded), “Good reason” and “Very good reason” (both hashed and shaded). Responses to each individual statement are shown in separate panels. Responses per panel are divided by respondents' country of origin (x axis).

Figure 3. The effect of QS2 statements on the percentage of respondents selecting a given level of agreement. Percentages are stacked for clarity. For a given bar, the regions, bottom to top, represent the percentage of respondents selecting, “Disagree strongly”, “Disagree” (both hashed without shading), “Neither agree nor disagree” (unshaded), “Agree” and “Agree strongly” (both hashed and shaded). Responses to each individual statement are shown in separate panels. Panels a-c show responses to statements concerning WTAs' impacts and tourists' role in their regulation. Panels d-f (shaded) show responses to statements concerning the reliability of WTAs' promotional materials and tourists' reviews. Panels g-h show responses to statements concerning tourists' duties. Responses per panel are divided by respondents' country of origin (x axis).

Figure 4. The effect of QS3 statements on the percentage of respondents selecting a given level of agreement. Percentages are stacked for clarity. For a given bar, the regions, bottom to top, represent the percentage of respondents selecting, “Agree” (both hashed and shaded) and “Disagree” (unshaded). Responses to each individual statement are shown in separate panels. Panels a-c (shaded) show responses to statements concerning WTAs' impacts and tourists' role their regulation. Panels d-i show responses to statements concerning tourists' responsibilities. Responses per panel are divided by respondents' country of origin (x axis).

Figure 5. The effect of QS3 statements on the percentage of respondents selecting a given level of agreement. Percentages are stacked for clarity. For a given bar, the regions, bottom to top, represent the percentage of respondents selecting, “Agree” (both hashed and shaded) and “Disagree” (unshaded). Responses to each individual statement are shown in separate panels. All panels show

responses to statements concerning the reliability of WTAs' promotional materials and tourists' reviews. Responses per panel are divided by respondents' country of origin (x axis).