



Original Research Article

The effect of priming, nationality and greenwashing on preferences for wildlife tourist attractions

Tom P. Moorhouse^{a, *}, Neil C. D'Cruze^{a, b}, David W. Macdonald^a^a Wildlife Conservation Research Unit, Department of Zoology, University of Oxford, Recanati-Kaplan Centre, Tubney House, Abingdon Road, Tubney, OX13 5QL, UK^b World Animal Protection, 222 Grays Inn Road, London WC1X 8HB, UK

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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 discerning the likely impacts of WTAs, and choosing to attend those with benefits. We created a novel, experimental survey to examine whether priming tourists to engage with the ethical dimension of their choice of WTA may stimulate them to prefer WTAs that are beneficial for wildlife.

Our experimental survey comprised 10 mock webpages, mimicking promotional materials for existing types of WTA, five designed to represent beneficial (“good”), and five detrimental (“bad”) WTAs. WTAs were presented in random order via an online platform to 3224 respondents - 1614 Chinese in China, and 1610 English speakers in Australia, Canada, UK, and USA - who rated their preference for each. Prior to the survey 1610 respondents, stratified by country, were “primed” by asking them introductory questions about WTAs’ likely impacts.

Primed English-speaking respondents were a mean of 4.1 times more likely to select lower likelihoods of attending bad WTAs, compared with control (unprimed) respondents. Priming had a smaller effect on Chinese respondents, making them 1.5 times more likely to select lower likelihoods of attending bad WTAs. Priming made all respondents more likely to select high likelihoods of attending good WTAs, but the effect was larger for Chinese respondents (2.0 times more likely) than English-speaking respondents (1.2 times more likely).

After the survey respondents were shown ratings of each WTAs’ welfare and conservation impacts, and asked to re-assess each WTA. English speaking respondents were 5–13 times more likely to select lower likelihoods of attending bad WTAs after seeing the ratings, while Chinese respondents were 3–4 times more likely to do so.

We conclude that respondents were able to discern beneficial from detrimental WTAs, and preferred beneficial WTAs when primed to consider the likely impacts of WTAs on wildlife conservation and animal welfare, but that the effect of priming was smaller for Chinese respondents. We recommend prominently hosting accurate information on the likely impacts of WTAs in the fora in which tourists are making their decisions, to direct tourist revenue away from WTAs with poor standards, and towards those that improve individuals’ welfare, and/or support species conservation.

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* Corresponding author.

E-mail addresses: tom.moorhouse@zoo.ox.ac.uk (T.P. Moorhouse), NeilDCruze@worldanimalprotection.org (N.C. D'Cruze), david.macdonald@zoo.ox.ac.uk (D.W. Macdonald).

1. Introduction

Wildlife tourist attractions (WTAs) comprise non-zoo, non-hunting attractions that offer opportunities for tourists to interact with specific taxa of non-domestic animals, either in captive or wild settings, and a large proportion is likely to be detrimental to species conservation and/or individual animals' welfare (Moorhouse et al., 2015). Moorhouse et al. (2015) examined a subset of 24 types of WTA (representing half of the 48 types they identified, including those offering 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), and estimated that these collectively were likely to have negatively impacted the animal welfare status of 230,000–550,000 individual animals (e.g. through inadequate diet and husbandry, constant demands for tourist interaction, or the training required to ensure tourist safety or create performances), and that 120,000–340,000 animals were utilised in WTAs likely to reduce the conservation status of their wild populations (e.g. through sourcing animals via routes that encourage the capture of individuals from the wild). Only six of these WTA types (involving 1500–13,000 individual animals) were likely to have net positive impacts on both species conservation and individual animal welfare. (N.B. the ranges given represent the best overall estimates available; Moorhouse et al., 2015.) These 24 types of WTA 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 (Moorhouse et al., 2015).

In the absence of global regulation, or of any universally accepted accreditation scheme, attempts to raise standards at WTAs rely upon creating a "green market" to reward WTAs that have benefits for wildlife with increased tourist revenue, and penalise, through decreased attendance, those with detrimental standards (e.g. Moorhouse et al., 2017). If tourists were able to perceive the likely impacts of WTAs from activities listed in WTAs' promotional materials, and then choose to avoid those likely to be detrimental to wildlife, this would create an economic incentive for WTAs to raise their standards. The aim of our study was to examine the reactions of tourists to descriptions of WTAs with either beneficial and detrimental impacts, in order to assess what strategies could be used to create such a green market.

Fundamental to the ability of any green market for WTAs to function is that tourists must care sufficiently about WTAs' animal welfare and species conservation deliverables to affect their market choices. At present the percentage of tourists - from any nationality or demographic group - likely to value positive animal welfare and/or species conservation deliverables, and to value these sufficiently to influence their choices, is unknown. Studies suggest that the majority of 'Western' (Northern European and Northern American and/or native English speaking) wildlife tourists appear to accept most uses of animals, so long as they consider the animals' wellbeing to be adequately cared for (Fennell, 2012; Shani, 2009; see Moorhouse et al., 2017; for further discussion), but also that most value WTAs that provide positive conservation, education and animal welfare impacts (e.g. Lück, 2003; Shani, 2012; Ballantyne et al., 2009). The attitudes of Asian wildlife tourists are relatively unstudied, but have been described as differing from Western attitudes (Cong et al., 2014; Tao et al., 2004) – for example Chinese attitudes have been described as giving humans' experiences a hierarchical priority over those of non-human animals (Suntikul et al., 2016; Qingming et al., 2012). This hierarchical world-view and (the Western understanding of) environmentally sustainable behaviour do not have to be contradictory (Suntikul et al., 2016), and a number of studies have found similar attitudes among Western and Chinese wildlife tourists (Buckley et al., 2017), in favour of preserving environments and respecting wildlife (Packer et al., 2014; Suntikul et al., 2016).

The above does not imply that any particular world view is 'correct' with respect to wildlife tourism, but highlights tourists' nationality as a potentially crucial, and understudied, candidate factor influencing their attitudes to, and perception of, standards at WTAs. China is the world's leading outbound tourist market, over double the size of the next largest (the USA) and growing 4% in 2016 to a total expenditure of US\$ 261 billion (Unwto, 2017). Tourists from the USA comprise the second largest outbound market, increasing 8% in 2016 to US\$ 122 billion (Unwto, 2017). Of the eight remaining top 10 outbound tourist countries, three are native English speakers: the UK (fourth, US\$ 64 billion in 2016), Canada (sixth, US\$ 29 billion) and Australia (seventh US\$ 27 billion and the remaining five countries were France (US\$41 billion), Germany (US\$81 billion), South Korea (US\$27 billion) and Hong Kong (US\$24 billion)) (Unwto, 2017).

A suit of additional factors may interact to affect the choices even of tourists who do value animal welfare and conservation deliverables (Moorhouse et al., 2017). First, tourists may lack information needed to align their choices with their values. For example they may be unaware that negative consequences could occur, or not be sufficiently expert to gauge the likely outcomes of their decisions (Moorhouse et al., 2017). Secondly tourists may disengage from the ethical (relating to their values and actions) dimension of their choice (Sezer et al., 2015) and so, by avoiding or disguising the moral implications of the decision, permit themselves to behave in a self-interested manner (Tenbrunsel and Messick, 2004). This could occur due to the extreme attractiveness of the interactions offered by WTAs (e.g. swimming with dolphins, bottle feeding lion cubs) (Shani, 2009; Curtin, 2006; Curtin and Wilkes, 2007), such that tourists' desire to experience the activity outstrips their desire to act in accordance with their values (i.e. the "want self" is gratified at the expense of the "should self", *sensu* Bazerman et al.,

1998), and also because tourists may not wish to concern themselves with such decisions while on holiday (e.g. Becken, 2007; Barr et al., 2010; Thomas, 2005; Mckercher, 1993). Third a number of factors may confuse or mislead tourists. In particular, the reviews left by a self-selected sample of tourists on travel review sites such as TripAdvisor, even for WTAs with objectively poor ethical standards, are overwhelmingly positive (Moorhouse et al., 2015). Similarly many WTAs “greenwash” (i.e. intentionally mislead consumers regarding their environmental outputs, e.g. Seele and Gatti, 2015; TerraChoice Environmental Marketing, 2009). Both may lead tourists to believe that some WTAs have more benign impacts than they actually do (Moorhouse et al., 2017).

All the above factors, singly or in combination, could contribute to the failure of green markets for WTAs (e.g. Davis, 1992), but many could be mitigated by the provision of accurate information at the time when tourists are deciding which WTA to visit (Moorhouse et al., 2017). There are increasing calls for information campaigns to target wildlife tourists. Some such information is already being provided by TripAdvisor (the industry leading review site; Chipkin, 2015), which in 2017 linked all of their animal attractions to an “information portal” designed to help tourists to make informed decisions. To be effective, however, such information campaigns must deliver correctly targeted messages through the right communications medium (Challender et al., 2015; Dalberg, 2012). While a lack of information can be a barrier to changing behaviour (Schultz, 2002), information alone will not necessarily motivate individuals to alter their behaviour (Stern, 2000). Persuasive communication may include strategies to change the antecedents of behavioral intentions and thus modify behaviour: typically arguments and interventions to induce favourable attitudes (if one thinks a given action is good and desirable), norms (beliefs about other’s support for that action) and/or perceived control (the feeling that if one wants to do something, they can) (Ajzen and Albarracín, 2007). In the context of the present study, this could include interventions to remove uncertainty regarding WTAs’ impacts, or to indicate that tourists’ choice of WTA can affect WTAs’ standards, and that they are accordingly expected to choose carefully.

To conclude, green markets for WTAs may be influenced by tourists’ underlying values - which may vary between demographic groups - but also by a number of factors potentially able to be mitigated by information campaigns. To raise standards, work is urgently required to investigate whether tourists’ choice of venue can be influenced by information, and what form such information should take. We undertook a novel, experimental survey of respondents from five of the top seven countries providing the largest numbers of outbound international tourists (China, Australia, Canada, the UK and the USA) to test the following hypotheses relevant to the ability of information campaigns to stimulate a green market for WTAs: that respondents would be able to discern, based on activities listed in promotional materials, between WTAs with beneficial and detrimental impacts; that stimulating respondents to consider the likely impacts of their choice - thereby preventing them from disguising any moral implications vis their own values (*sensu* Sezer et al., 2015; Tenbrunsel and Messick, 2004) - would increase their likelihood of preferring WTAs with beneficial, rather than detrimental impacts, and; that greenwashing WTAs’ materials (*sensu* Seele and Gatti, 2015) and the presence of positive reviews from other tourists (*sensu* Moorhouse et al., 2015) could diminish respondents’ ability to evaluate WTAs’ impacts.

2. Methods

2.1. Experimental design

We created an experimental survey with the following objectives:

- 1) To determine whether respondents distinguished, in terms of their stated preferences, between WTAs likely to have negative impacts on the welfare and/or species conservation status of their subject animals (hereafter “bad WTAs”), and those likely to have beneficial impacts (hereafter “good WTAs”) (see Moorhouse et al., 2015; for detailed ratings for types of WTAs used);
- 2) To determine whether “priming” respondents (*sensu* Kahneman, 2011; Kahneman and Frederick, 2002) to consider the intentions and likely impacts of WTAs would stimulate them to prefer good WTAs and avoid bad WTAs;
- 3) To ascertain whether greenwashing the text of bad WTAs may make them more attractive to respondents, thereby counteracting the effect of priming;
- 4) To study whether the presence of positive ratings (stars, as commonly used by review websites) would increase how desirable respondents found WTAs.

All respondents answered six initial questions about their age and occupation and half (“unprimed” respondents) were then immediately given the experimental survey, while the other half (“primed” respondents) were first asked two additional priming questions (details below; Fig. 1).

The experimental survey comprised 10 mock webpages, five advertising “good” WTAs and five “bad” WTAs (details below; Fig. 2; Supplementary Materials). Respondents were asked to rate how much they would like to visit each, imagining they were on holiday nearby, on a five point scale from: “I would definitely visit it” to “I would definitely not visit it”. WTAs were shown in random order and rated sequentially. To test for the effect of greenwashing, half the respondents were shown a version of the survey in which the text for bad WTAs had been altered to claim non-existent animal welfare or species conservation benefits (Fig. 1; Fig. 2; Table 1).

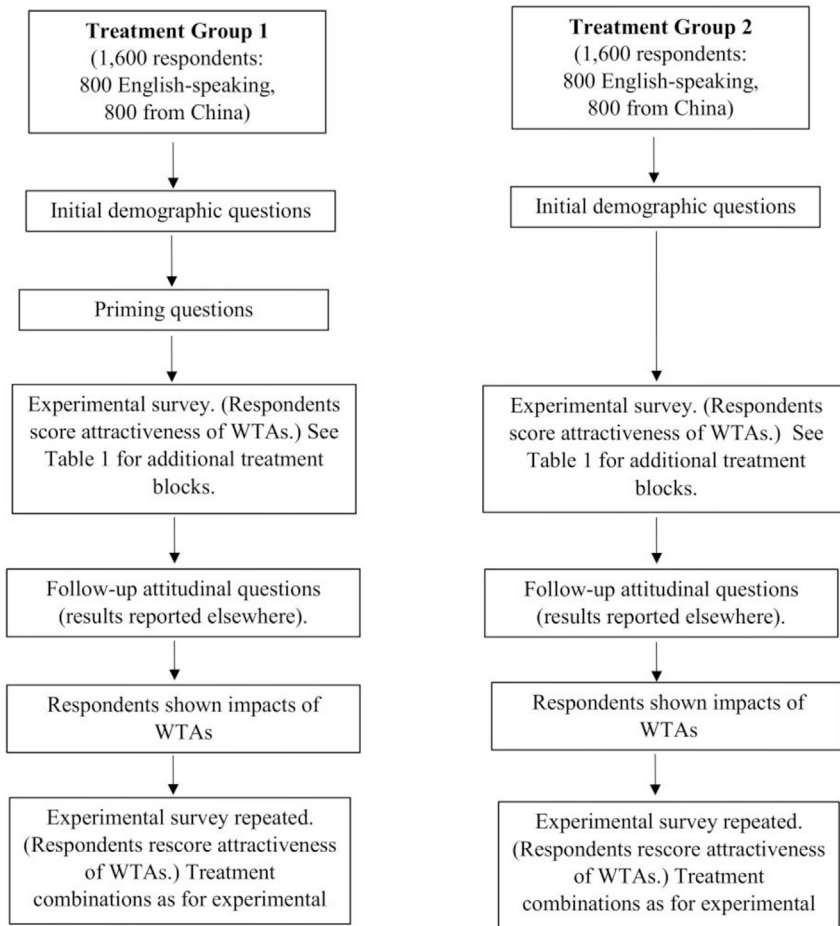


Fig. 1. The principal treatment paths for the experimental survey.

To test for the effect of other tourists' ratings, half the respondents were shown a version of the stimulus in which each WTA had a four-star "TravelHelper" rating (Fig. 2; Table 1). All treatments were fully experimentally blocked, stratified by respondents' nationality (Table 1).

When they had completed the experimental survey, all respondents were shown objective, evidence-based ratings (drawn from Moorhouse et al., 2015) for the likely conservation and animal welfare impacts of each WTA (Fig. 1; Fig. 2) and were asked to re-score each WTA (Fig. 1).

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 1600 native Chinese speakers, in China, and 1600 native English speakers in 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. English-speaking respondents received the survey in English and Chinese respondents received it translated into Mandarin. The survey was administered remotely, through an online platform.

2.2. Initial questions, respondent selection and "priming" questions

All respondents were asked six initial questions concerning their occupation, sex, age and how often they take holidays. 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 took holidays less than once a year.



Fig. 2. Examples of the experimental WTA pages, showing a) a bear park (good WTA) b) a tiger venue, ungreenwashed bad WTA, c) the tiger venue, greenwashed d-f) the respective pages with ratings for the WTAs' animal welfare and species conservation impacts.

Table 1

The proportion of respondents from each country receiving each combination of treatments. The table should be read left to right, similar to a flowchart. For example, 50% of respondents were primed (column 1); half of these primed respondents (25% of respondents) were shown greenwashed text (column 2); half of the primed respondents shown greenwashed text (12.5% of all respondents) were additionally were shown TravelHelper star ratings (column 3).

Respondents primed or unprimed?	Respondents shown neutral or greenwashed text?	TravelHelper star rating shown?
Primed (50% of respondents from each country)	Greenwashed text (25% of respondents)	No (12.5%) Yes (12.5%)
	Neutral text (25% of respondents)	No (12.5%) Yes (12.5%)
Unprimed (50% of respondents from each country)	Greenwashed text (25% of respondents)	No (12.5%) Yes (12.5%)
	Neutral text (25% of respondents)	No (12.5%) Yes (12.5%)

Primed respondents (see Fig. 1) were asked to assess (on a five point likert scale from “Very good reason” to “Very bad reason”) possible reasons why WTAs keep non-domestic animals (Table 2a) and then to indicate their level of agreement (a five point scale from “Agree strongly” to “Disagree strongly”) with eight statements concerning the impacts of WTA, and tourists' responsibilities (Table 2b). These priming questions did not impose value judgements on respondents, but engaged them with the possibility that WTAs' reasons for existing, and ethical deliverables may vary. Unprimed respondents were not given these questions.

2.3. Experimental survey

Descriptions of WTAs in the experimental survey mimicked promotional materials for types of genuine/real WTAs, within a replicable format. Each WTA's page comprised a single image of an individual animal, overlaid with text (Fig. 2a and b). The text comprised the country and (fictional) province in which the WTA occurs, a title (the fictional name of the WTA), a subtitle indicating the experience on offer, and four bullet points, the first three of which described activities in which tourists could participate and the fourth of which described what tourists could expect to learn by visiting the WTA (Fig. 2a and b; Supplementary Materials). The text provided a concise, accurate account of the activities available to tourists, and the WTA's likely impacts, in a tone resembling that of typical promotional materials. Photographs indicated the setting in which animals were maintained (i.e. captive or wild, restrained or not), showed animals in good physical condition and clean surroundings, to resemble typical promotional images used by WTAs on their webpages.

Of the 10 WTA pages, five described good WTAs and five bad WTAs. Bad WTAs had real-life counterparts that had been previously assessed (see Moorhouse et al., 2015; for ratings) as having negative conservation and animal welfare impacts, and which permitted direct interaction (e.g. handling, petting, feeding) of animals in either wild or captive settings. Good WTAs had real-life counterparts assessed as having benefits for conservation and/or animal welfare, having no adverse impacts on either, and as not permitting direct interaction with the subject animals (*sensu* Moorhouse et al., 2015). Bad WTAs were: bear parks (in which captive bears perform for food from tourists), captive tiger interactions (Fig. 2b), elephant venues that permit riding and elephant performances, dolphinarium which allow dolphin rides, and tourist treks in which wildlife (in this case a sloth) is held captive at various locations for the purpose of being presented to tourists for handling (Fig. 2; Supplementary Materials). Good WTAs were a bear sanctuary (Fig. 2a), a lion sanctuary, an elephant sanctuary, an orang-utan sanctuary and a gibbon trekking experience where proceeds conserve habitat (Supplementary Materials).

To avoid external biases - such as respondents finding particular species more attractive/charismatic (e.g. Macdonald et al., 2015) and therefore being more likely to rate WTAs containing these species more highly - where possible good and bad WTAs were paired: good and bad captive bear and captive elephant WTAs were paired, and the (bad) captive tiger WTA was paired with a (good) captive lion WTA. Trekking with captive sloths was paired with trekking to see wild gibbons. There was no direct analogue for the dolphinarium or orang-utan sanctuary, so these formed a final, unmatched pair.

For greenwashed WTAs (see Table 1), the image and description were identical to the original, except the subtitle was replaced with text that implied that the WTA had animal welfare or conservation benefits, and the final bullet point with text that implied that tourists could learn about these benefits (e.g. Fig. 2c vs Fig. 2b). The text for good WTAs remained unaltered.

For respondents shown “TravelHelper” ratings (Table 1) the WTAs' page was overlaid with a four stars and a fictional number of ratings (all even numbers in the range 564–630) (Fig. 2).

Table 2

Details of the two “priming” questions, possible responses and statements: a) Q1 and b) Q2.

a)	
Priming Q1	People give lots of reasons for keeping non-domestic (wild) animals at tourist attractions. 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
Q1 Responses	Very good reason, Good reason, Neither a good nor bad reason, Bad reason, Very bad reason
Q1 Statements	Animals are kept to entertain tourists Animals are kept to make money from tourists Animals are kept to provide jobs for local people Animals are kept to help conserve their species Animals are kept to educate tourists Animals are kept to give them better living conditions and welfare.
b)	
Priming Q2	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
Q2 Responses	Agree strongly, Agree, Neither agree nor disagree, Disagree, Disagree strongly
Q2 Statements	These attractions are always good for animals I can tell if the animals are being well cared for I'm good at judging whether these attractions help to conserve species The animals in these attractions are usually not well looked after These attractions are usually not good for species conservation Tourists have a duty to make sure they only visit attractions where the animals are well cared for Tourists have a duty to make sure they only visit attractions that help to conserve species These attractions are not always honest about their impacts and intentions

Ratings of WTAs' impacts (derived from Table 1 of Moorhouse et al., 2015) were shown to all respondents after the experimental survey, illustrated by repeating each WTA's page but with the addition of two sliding bars ranging from –3 (severe negative impact) to +3 (very positive impact), rating each WTA's impact on the subject species' welfare and conservation (Fig. 2d–f). Respondents were then shown text stating “Below is the score you gave this attraction the first time you saw it. How would you score it now?” and invited to rescore each WTA using the original scale.

2.4. Data analysis

We recorded respondents' self-selected scores for their likelihood of attending each WTA (hereafter “scores”), as well as their age, sex, whether they were primed or unprimed, and whether they were shown greenwashed or neutral text or TravelHelper stars. We also recorded respondents' rescores for each WTA, after they were shown information about the likely effect of that WTA on animal welfare and conservation (hereafter “informed rescores”). Scores and rescores were ranked from 1 to 5 (“I would definitely not visit it” = 1 to “I would definitely visit it” = 5), and analysed using cumulative link models (repeated measures ordinal logistical regression), employed in Program R using package Ordinal (Christensen, 2015), with a logit link function.

Our first analysis examined the factors affecting the scores of unprimed (control) respondents. Each respondent was treated as a random factor, as was WTA, nested within good or bad WTA types. Available response variables were: respondents' country, their sex and age (entered as a covariate), WTA type (good or bad), whether information was greenwashed, and whether TravelHelper ratings were shown.

Our second analysis examined the effect of priming by comparing the scores of primed and unprimed respondents, conducted separately for good and bad WTAs. We separated WTA types because this avoided interpretive difficulties resulting from including high order interaction terms (e.g. priming*country*WTA), and because this permitted the identity of WTAs (tiger, bear, dolphin, etc.) to be entered as a fixed factor. Available explanatory variables for respondents' scores were: priming, sex, age, country, greenwashing, WTA and TravelHelper.

The third analysis examined the effect of informing respondents about WTAs' impacts. We wished to know: a) whether informed rescores differed from respondents' initial scores, but also; b) whether any effect of priming was evident in informed rescores (i.e. whether the rescores of unprimed and primed respondents were different). To answer a) we compared initial and informed responses separately for primed and unprimed individuals and to answer b) we examined only informed responses in a separate analysis, with priming as an explanatory variable. In both cases good and bad WTAs were analysed separately.

In all analyses *a priori* contrasts for levels of “country” were made with China as the reference level, given the likelihood of differences in the values of “Western” and Chinese tourists (Cong et al., 2014; Tao et al., 2004), to test for differences between respondents from this country and the four predominantly English-speaking nations.

3. Results

3.1. Overview

We gathered full responses from 3224 individuals in March 2017. Of these 1614 were Chinese speakers in China, and 1610 English speakers from Australia (n = 412), Canada (n = 399), the UK (n = 399) and the USA (n = 400). Half of each group, 1614 respondents, were unprimed, while 1610 were primed (Table 2a,b). Half of respondents, 1612 individuals, stratified between groups and primed vs unprimed routes (Fig. 2), were given greenwashed descriptions of bad WTAs and 1614 were shown “TravelHelper” stars (Fig. 2; Table 1).

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. For all bad and good attractions, respectively, 10.3% and 3.0% of respondents selected “I would definitely not visit it”, 12.5% and 8.9% “I would probably not visit it”, 22.4% and 25.9% “I may or may not visit it”, 33.2% and 40.6% “I'd be very likely to visit it”, 21.6% and 21.7% “I would definitely visit it”. Mean time to complete response was 12.5 (s.d. 14.4) minutes.

3.2. Unprimed (control) scores

Unprimed respondents' scores were affected by an interaction between WTA type (levels: good or bad) and the respondents' country, and by an interaction between WTA type and greenwashing (Table 3), in a model in which respondents' ages were entered as a covariate.

China gave lower scores to good compared with bad WTAs: for good WTAs 62.5% selected “I would definitely visit it” or “I'd be very likely to visit it” (hereafter “high scores”) and 11.0% selected either “I would probably not visit it” or “I would definitely not visit it” (hereafter “low scores”); for bad WTAs these figures were 69.0% (high scores) and 9.3% (low scores) (Fig. 3).

Respondents from the USA gave approximately equal scores to good and bad WTAs. For good WTAs 58.4% selected high and 16% low scores; for bad WTAs these figures were 60.1% and 18% (Fig. 3). Effect size for the interaction term of WTA-type (level = good) and country (level = “USA”) was 0.293 (se 0.0988), with China the reference level for the *a priori* contrast.

Table 3

Likelihood ratio tests of factors affecting unprimed respondents' scores of their likelihood of attending WTAs. All statistics are given to three significant figures, except where values are <0.001 for ease of presentation.

Source	d.f.	LR statistic	P
Sex	1	0.398	0.528
Age	1	23.9	<0.001
Travelhelper	1	0.717	0.397
Type * Greenwash	1	5.91	0.0151
Type * Country	4	318	<0.001

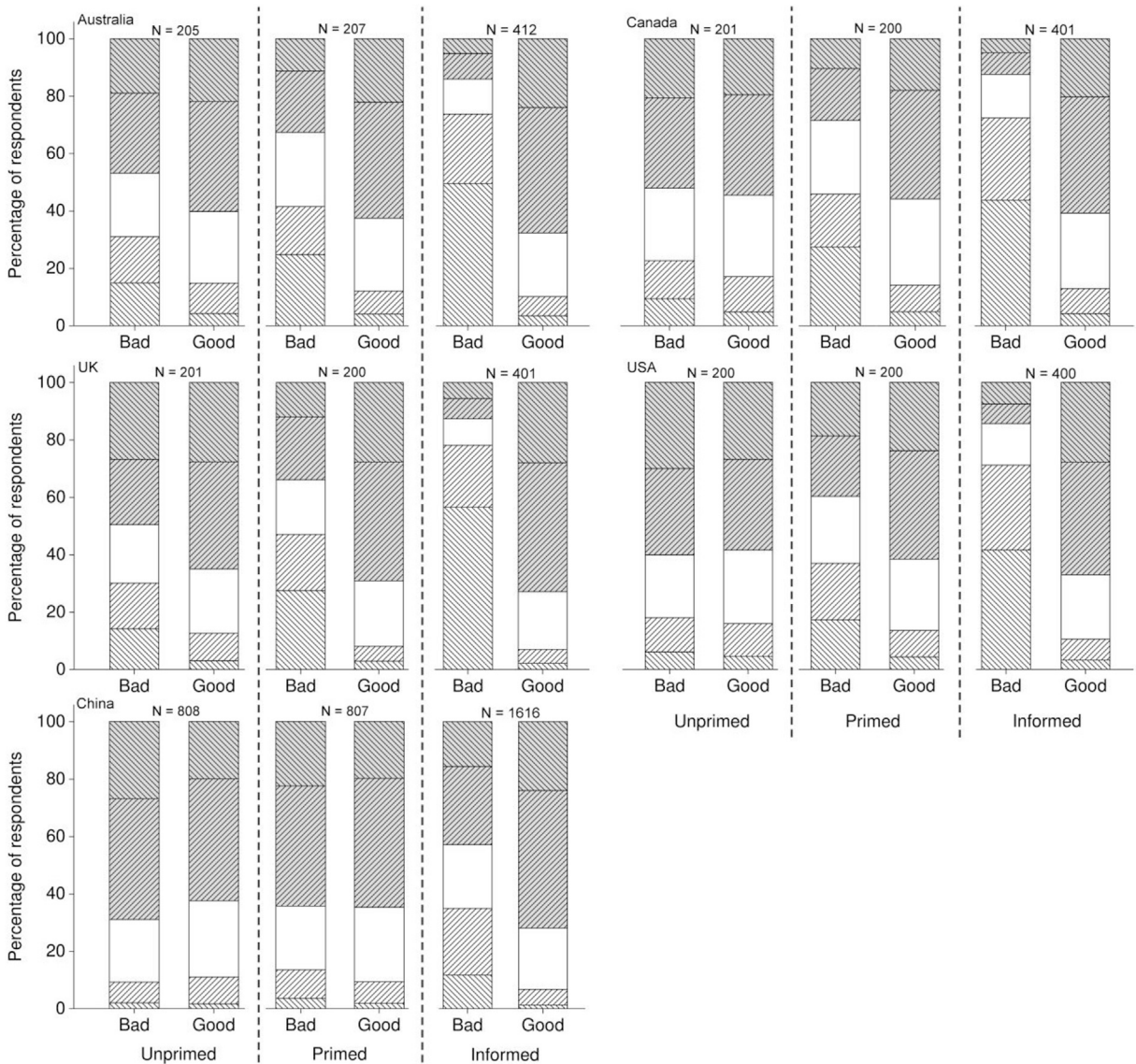


Fig. 3. The effect of experimental treatments (x axis) on the percentage of respondents selecting a given likelihood of attending good and bad WTAs. Percentages are stacked for clarity. For a given bar, the regions, bottom to top, represent the percentage of respondents selecting, “I would definitely not visit it,” “I would probably not visit it” (both hashed without shading), “I may or may not visit it” (unshaded), “I’d be very likely to visit it,” and “I would definitely visit it” (both hashed and shaded). Responses are divided by respondents’ country of origin.

Respondents from Australia, Canada and the UK gave higher scores to good than bad WTAs. For good WTAs, 60.2%, 54.5% and 65.0% of respondents, respectively, gave high scores and 10.5%, 17.1% and 12.6%, respectively, gave low scores. For bad WTAs these figures were 46.8%, 52.0%, 49.6% (high scores) and 31.0% 22.7% and 30.1% (low scores), respectively (Fig. 3). Effect

sizes for the interaction term of WTA-type (level = good) with country (levels = “Australia”, “Canada” and “UK”) were 1.301 (0.0980), 0.562 (0.096) and 1.397 (0.101), respectively, with China the reference level for the *a priori* contrast (Fig. 3).

Greenwashed information lowered the probability of respondents selecting high scores for good WTAs (Table 3; effect size of greenwashing on good WTAs, -0.149 ; odds ratio 0.86). There was no evidence for a significant main effect of TravelHelper ratings on respondents' scores (Likelihood Ratio Test, LR = 0.61, df = 1, $p > 0.4$), nor of an interaction of TravelHelper with whether a WTA was good or bad in a separate model in which this term was entered (LR = 0.02, df = 1, $p > 0.8$).

3.3. Effect of priming on scores for bad WTAs

Primed respondents gave lower scores to bad WTAs than did unprimed respondents (Fig. 3). The main effect of priming, however, interacted with country, WTA and greenwashing in a model also containing the sex and age of respondents (Table 4a).

The size of the negative effect of priming on scores for bad WTAs differed between countries (Table 4a). Of primed Chinese respondents 4.7% fewer gave high scores and 4.2% more gave low scores, compared with unprimed respondents (Fig. 3; Fig. 4). For the remaining (English-speaking), countries a mean of 18.5% (range 14.3–20.4% across countries) fewer gave high scores and 17.4% (range 10.5–23.2%) more gave low scores than unprimed respondents (Fig. 3; Fig. 4). The odds ratios for the effect of priming on Chinese respondents was 0.68 (CIs 0.57–0.82), implying that primed Chinese respondents were 1.5 times more likely to select lower scores (Fig. 3; Fig. 4). The odds ratios for the effect of priming on Australian, Canadian, UK and USA respondents were 0.36 (CIs 0.23–0.56), 0.19 (0.12–0.30), 0.22 (0.13–0.36) and 0.27 (0.17–0.41), respectively, implying that primed respondents from these countries were a mean of 4.1 (range 2.8–5.2) times more likely to select lower scores (Fig. 3; Fig. 4).

The effect of priming was reduced by greenwashing (Table 4a). Of primed respondents shown normal and greenwashed text, a mean of 46.9% (normal) and 51.1% (greenwashed) selected high scores and 31.0% (normal) and 25.4% (greenwashed) low scores. Unprimed respondents' scores did not vary with greenwashing: 59.8 (normal) and 61.3% (greenwashed) selected high scores and 17.5% and 17.2% low scores, respectively. The effect size for the interaction of priming*greenwashing was 0.363 (se 0.153), and the corresponding odds ratio 1.43, indicating that greenwashing reduced the size of the effect of priming by approximately 30%.

All bad WTAs' scores were lower when respondents were primed, but the size of the reduction - compared with unprimed respondents - varied with the WTA in question (Fig. 5a).

3.4. Effect of priming on scores for good WTAs

For good WTAs primed respondents selected higher scores than did unprimed respondents, but the main effect of priming interacted with WTA and greenwashing in a model in which the main effects of sex, age and Travelhelper were also entered (Table 4b, Fig. 3). There was no evidence for an interaction of priming and country in a separate model in which this was included (LR = 0.1205, d. f. = 4, $p > 0.99$). Compared with unprimed respondents, a mean of 2.6% more (range 1.3–4.1% across all countries; Fig. 4) primed respondents selected high scores, and a mean of 2.9% fewer, (range 1.6–4.5%; Fig. 4), selected low scores.

Unprimed respondents shown greenwashed text gave slightly lower scores to good WTAs than those shown normal text: 59.4% selected high and 14.5% low scores (greenwashed), compared with 62.6% and 11.7% (normal). Primed respondents' scores were approximately equal for greenwashed and normal text: 63.7% and 63.3% gave high scores and 10.3% and 11.0% low scores, respectively. The effect size for the interaction of priming*greenwashing was 0.345 (se 0.168), and the corresponding

Table 4

Likelihood ratio tests of the effect of priming on respondents' scores of their likelihood of attending a) bad WTAs and b) good WTAs. All statistics given to three significant figures, except for values < 0.001 .

a)			
Source	d.f.	LR statistic	P
Sex	1	5.82	0.0158
Age	1	53.4	<0.001
Travelhelper	1	0.131	>0.71
Priming * Greenwash	1	5.60	0.0180
Priming * Country	4	50.9	<0.001
Priming * WTA	4	113	<0.001
b)			
Source	d.f.	LR statistic	P
Sex	1	0.0189	0.891
Age	1	14.5	<0.001
Travelhelper	1	<0.001	>0.99
Priming * Greenwash	1	4.22	0.0400
Priming * WTA	4	33.7	<0.001

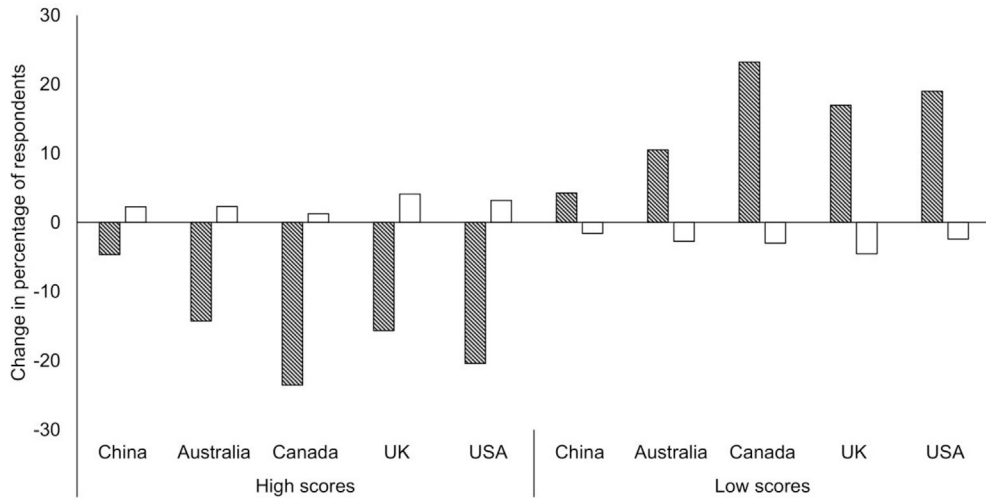


Fig. 4. The difference in percentage of respondents selecting “high scores” (“I’d be very likely to visit it,” and “I would definitely visit it”) and “low scores” (“I would definitely not visit it,” “I would probably not visit it”) between unprimed and primed respondents for good WTAs (unshaded bars) and bad WTAs (shaded, hashed bars). Bars represent the change in percentages for primed respondents, relative to unprimed respondents.

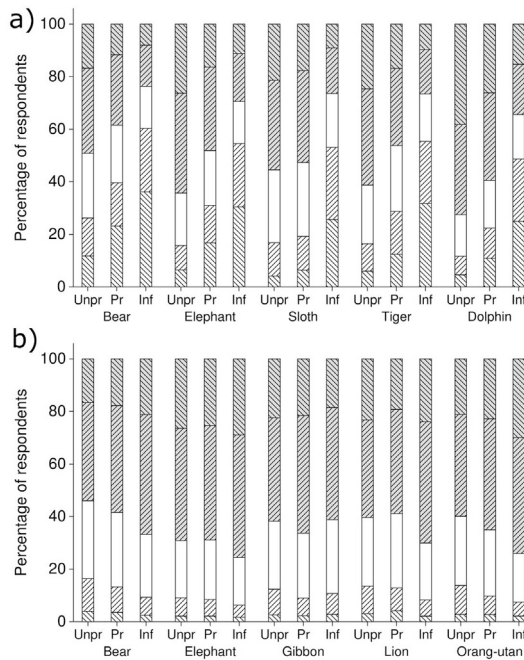


Fig. 5. How the effect of experimental treatments (x axis: unprimed = Unpr, primed = Pr, informed = Inf) on the percentage of respondents selecting a given likelihood of attending a) bad and, b) good WTAs varies between different WTAs. Percentages are stacked for clarity. For a given bar, the regions, bottom to top, represent the percentage of respondents selecting, “I would definitely not visit it,” “I would probably not visit it” (both hashed without shading), “I may or may not visit it” (unshaded), “I’d be very likely to visit it,” and “I would definitely visit it” (both hashed and shaded). Responses are divided by WTA (defined by the WTA’s subject animal).

odds ratio 1.41, indicating that greenwashing diminished the expected difference between primed and unprimed respondents’ scores by approximately 30%.

The effect of priming on respondents’ scores varied between different good WTAs, such that - compared with unprimed respondents - primed respondents gave higher scores to bear, gibbon and orang-utan WTAs, but approximately equal scores to elephant and lion WTAs (Fig. 5b).

3.5. Effect of information and priming on rescores of bad WTAs

Respondents' informed rescores of bad WTAs were lower than their initial scores, whether they were originally primed or unprimed (Fig. 3) - but the difference was greater for unprimed respondents (Fig. 6). A mean of 35.2% fewer unprimed respondents selected high scores and 42.0% more selected low scores when informed, compared with 21.6% fewer and 30.9% more for primed respondents (Fig. 6). To avoid interpretive complications arising from the prior effect of priming, we analysed the difference between initial scores and informed rescores separately for unprimed and primed respondents.

The effect of information (an explanatory variable comparing original scores with the subsequent rescores) interacted with country and WTA for both unprimed and primed respondents (Table 5a,b; Fig. 5; Fig. 6). The odds ratio for the effect of information on unprimed Chinese respondents was 0.247 (Table 6), implying that informed respondents were approximately four times less likely to select high scores than uninformed respondents, but the mean odds ratio for the remaining countries was 0.075 (range 0.061–0.091) (Table 6; Fig. 6), indicating they were approximately 13 times less likely to select high scores. For primed respondents these figures were 0.334 (three times less likely) for Chinese respondents and 0.194 (range 0.148–0.242; approximately five times less likely) for the remaining countries (Table 6; Fig. 6).

The size of the difference between initial scores and informed rescores varied between WTAs, but was negative in all cases (Fig. 5a). There was no evidence for any interaction between information and Travelhelper or greenwash in models in which these terms were included (Table 5a,b).

Examining the effect of priming only on rescores (i.e. excluding the original scores from analysis), primed respondents had lower scores than unprimed respondents, but the effect was modified by the interaction priming*WTA ($LR = 14.99$, d. f. = 4, $p < 0.005$), in a model also containing the effects of sex, age and greenwashing. A mean of 18.2% of primed respondents gave high scores and 67.9% low scores, compared with 20.3% and 64.2%, respectively, for unprimed respondents. Coefficients for the *a priori* contrasts of priming*WTA were all negative (range -0.708 to -0.998), indicating that the size, but not direction, of the effect of priming varied between WTAs. There was no evidence for any interaction between priming*country or priming*-greenwash separate models in which these terms were included (effect of country, $LR = 8.9533$, d. f. = 4, $p = 0.06228$; effect of greenwash, $LR = 1.9124$, d. f. = 1, $p > 0.16$).

3.6. The effect of priming and information on respondents' rescores of good WTAs

Respondents' informed rescores for good WTAs were higher than their initial scores, regardless of whether they were originally primed or unprimed (Fig. 2; Fig. 6).

For unprimed respondents the effect of information interacted only with country and WTA (Table 5c,d; Fig. 5; Fig. 6). The odds ratios for the *a priori* contrasts for information*country reveal that informed (vs uninformed) Chinese respondents were approximately 2.4 times more likely to give higher scores (Table 6; Fig. 6), but informed respondents from the other countries were only 1.33 (range 1.32–1.52) times more likely to select higher scores (Table 6; Fig. 6). Unprimed respondents' informed rescores indicated higher likelihoods of attending bear, elephant, lion and orang-utan WTAs, compared with their original scores, but an approximately equal likelihood of attending the gibbon WTA (Fig. 5b).

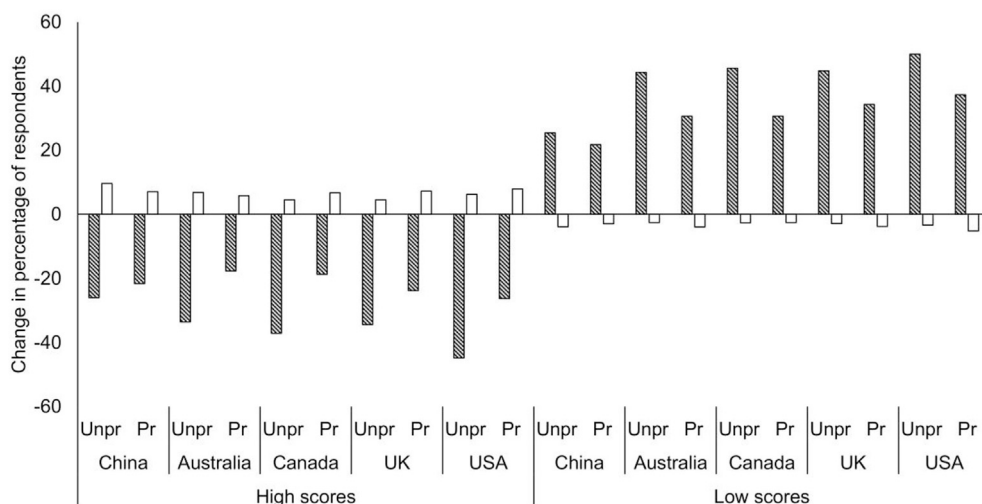


Fig. 6. The difference in percentage of respondents selecting “high scores” (“I’d be very likely to visit it,” and “I would definitely visit it”) and “low scores” (“I would definitely not visit it,” “I would probably not visit it”) between uninformed and informed respondents for good WTAs (unshaded bars) and bad WTAs (shaded, hashed bars). Bars represent the change in percentages for informed respondents, relative to uninformed respondents, separated for unprimed (Unpr) and primed (Pr) respondents.

Table 5

Likelihood ratio tests of factors affecting respondents' informed rescores of their likelihood of attending a) bad WTAs, unprimed respondents, b) bad WTAs, primed respondents, c) good WTAs unprimed respondents and d) good WTAs, primed respondents. Shaded rows represent interaction terms excluded from the final model for each analysis. All statistics given to three significant figures except where <0.001.

a)			
Source	d.f.	LR statistic	P
Sex	1	11.1	<0.001
Age	1	25.9	<0.001
Greenwash	1	0.0353	0.851
Travelhelper	1	1.76	0.185
Information*Country	4	626	<0.001
Information*WTA	4	37.4	<0.001
Information*Travelhelper	1	3.30	0.0692
Information*Greenwash	1	0.213	0.644
b)			
Source	d.f.	LR statistic	P
Sex	1	12.4	<0.001
Age	1	15.7	<0.001
Greenwash	1	7.82	0.00518
Travelhelper	1	0.00371	0.951
Information*Country	4	289	<0.001
Information*WTA	4	61.4	<0.001
Information*Travelhelper	1	0.301	0.584
Information*Greenwash	1	0.154	0.694
c)			
Source	d.f.	LR statistic	P
Sex	1	0.0318	0.859
Age	1	17.3	<0.001
Greenwash	1	3.30	0.0691
Travelhelper	1	1.12	0.290
Information*Country	4	24.5	<0.001
Information*WTA	4	90.0	<0.001
Information*Travelhelper	1	0.789	0.374
Information*Greenwash	1	0.425	0.514
d)			
Source	d.f.	LR statistic	P
Sex	1	0.00610	0.938
Age	1	5.74	0.0166
Greenwash	1	0.507	0.476
Travelhelper	1	0.159	0.691
Country	4	17.0	0.00192
Information*WTA	4	131	<0.001
Information*Greenwash	1	0.762	0.383
Information*Country	4	5.33	0.256
Information*Travelhelper	1	1.55	0.214

Table 6

Odds ratios for the effect of information on primed and unprimed respondents (given as increasing likelihood of attending WTA). All figures given to three significant figures.

Country	Bad		Good	
	Unprimed	Primed	Unprimed	Primed
China	0.247	0.334	2.37	1.91
Australia	0.0693	0.242	1.52	2.00
Canada	0.0909	0.216	1.14	1.55
United Kingdom	0.0608	0.168	1.32	1.89
United States of America	0.0770	0.148	1.36	1.83

For primed respondents the effect of information interacted only with WTA (Table 5b; Fig. 6). There was no evidence for the interaction information*country in a separate model (LRT = 5.3254, d. f. = 4, P > 0.25). Rescores indicated higher likelihoods of attending bear, elephant, lion and orang-utan WTAs, compared with respondents' original scores, but a lower likelihood of attending the gibbon WTA (Fig. 5b).

Analysing only respondents' rescores (excluding original scores from analysis), primed respondents' rescores were slightly higher than those of unprimed respondents, but the effect was modified by the interaction priming*WTA (LR = 24.93, d. f. = 4,

$p < 0.001$) in a model also containing the terms sex, age and greenwashing: a mean of 69.7% selected high likelihoods and 11.2% low likelihoods of attending, compared with 66.4% and 7.8%, respectively, for unprimed respondents. Coefficients for the *a priori* contrasts of priming*WTA reveal that primed respondents gave higher scores to bear, elephant, gibbon and orangutan WTAs (coefficient range 0.095–0.3222), but lower scores to the lion WTA (coefficient -0.091) than did unprimed respondents. There was no evidence for any interaction between priming*country in a separate model in which this term was included (LR = 4.3186, d. f. = 4, $p > 0.36$).

4. Discussion

Our survey was designed to elicit a genuine assessment of how much respondents would like to visit each WTA, based only on the activities on offer and likely outputs: good and bad treatment groups were not explicitly identified as such, WTAs were presented in random order and WTAs' pages were identical in format, differing in that good WTAs' text indicated positive animal welfare or species conservation outcomes, and that direct contact with animals was not permitted. Nevertheless, primed respondents were significantly less likely to select high likelihoods of attending bad WTAs, and more likely to attend good WTAs, than were unprimed respondents. Directly informing respondents about WTAs' likely impacts substantially further diminished respondents' scores for bad WTAs and increased scores for good WTAs.

Of English-speaking respondents, unprimed respondents from Australia, Canada and the UK preferred "good" attractions - an additional 10.4% selecting high scores and 14.5% fewer selecting low scores, compared with bad WTAs - while respondents from the USA indicated no preference (Fig. 3). The principal effect of priming was to substantially decrease selected likelihoods of attending bad attractions: primed respondents were a mean of 4.1 (range 2.8–5.2) times more likely to give lower scores to bad WTAs, such that an overall mean of 18.5% fewer gave high scores and 17.4% more gave low scores, compared to unprimed respondents (Fig. 3; Fig. 4). Priming also slightly increased the attractiveness of good WTAs, such that primed respondents were a mean of 1.17 (range 1.12–1.20) times more likely to give them higher scores (Fig. 3; Fig. 4).

For priming to influence respondents' preferences required them to value benefits to animal welfare or species conservation, and to be able to distinguish between good and bad WTAs on this basis. The difference in primed and unprimed scores for bad attractions implies that an approximate minimum of 20% of unprimed respondents may have had the (latent) ability to distinguish good from bad WTAs, but either did not consciously perceive the differences or did not feel that the difference was an important factor determining their preferences. We speculate that priming made the ethical (i.e. relating to the expression of underlying values) component of these respondents' choices sufficiently salient to be incorporated into their preference of WTAs to attend. This speculation accords with the view of Strack and Deutsch (2004) and Kahneman and Frederick (2002), that social behaviour arises from two distinct systems of information processing: a reflective system and an impulsive system that operate in parallel but asymmetrically, such that the impulsive system is always engaged in processing whereas the reflective system may be disengaged (Strack and Deutsch, 2004). Priming respondents may have engaged the reflective system, in which "knowledge about the value and the probability of potential consequences is weighed and integrated to reach a preference for one behavioral option" (Strack and Deutsch, 2004, p222), potentially leading respondents to choose in accordance with the "should self" in preference to the "want self" (*sensu* Bazerman et al., 1998).

Preferences of Chinese respondents differed markedly from those of English speakers (Fig. 3; Fig. 4). Unprimed Chinese respondents preferred bad WTAs to good (Fig. 3), and primed Chinese respondents were only 1.5 times more likely to select lower scores for bad WTAs; approximately half of the lowest effect size among the other four countries (Fig. 4). The underlying preference for bad WTAs and smaller effect of priming combined such that primed Chinese respondents selected higher likelihoods of attending bad WTAs than did unprimed respondents from any other country (Fig. 3). Potential explanations for this difference are cultural - different underlying attitudes regarding the use of animals (e.g. Qingming et al., 2012; Suntutikul et al., 2016) - or relate to Chinese respondents experiencing barriers (e.g. in the form of beliefs, or of knowledge gaps) to expressing their underlying attitudes (Budeanu, 2007). Responses to the initial priming questions and follow up survey are analysed in detail elsewhere, but in brief indicate that all respondents, whether Chinese or English-speaking, agreed on the importance of conservation activities and of safeguarding animals' individual welfare, but also that Chinese respondents were less likely to question WTAs' standards, or to apply their own ethical standards to them, and were more likely to believe that WTAs that were genuinely bad for animals would have been disallowed from operating (e.g. by some external regulating authority) (Moorhouse et al., in prep).

The effect of directly informing respondents about WTAs' animal welfare/species conservation outcomes was substantially larger (a mean of five times larger for bad WTAs and twice as large for good WTAs) than the effect of priming, but the size of the effect varied with whether respondents had first been primed, and between English-speaking and Chinese respondents.

Unprimed English-speaking respondents were approximately 13 times less likely to select high scores for bad WTAs and 2.4 times more likely to select higher scores for good WTAs (Fig. 3; Fig. 6) when informed. For primed respondents these figures were 5.2 times and 1.8 times, respectively (Fig. 6). The comparatively smaller size of the effect of information on primed respondents derives from their preferences having already been altered by priming: analysis only of informed rescors shows that primed respondents selected lower rescors for bad WTAs and higher scores for good WTAs (but in all cases the difference was <4% of respondents), than did unprimed respondents.

Unprimed Chinese respondents were 4.0 times less likely to attend bad and 2.4 times more likely to attend good WTAs when informed; 3.0 times and 1.9 times, respectively for primed respondents. The size of the effect of information on Chinese

respondents was equivalent to the size of the effect of priming on English speaking respondents: *informed* Chinese respondents selected higher scores for bad WTAs than did *primed* (not informed) English-speaking respondents (Fig. 3).

Greenwashing by WTAs that claim non-existent or exaggerated benefits to wildlife may direct revenue to WTAs with standards of which tourists might otherwise disapprove (Moorhouse et al., 2017). In our study greenwashing, modelled by altering the subtitle and final line of each bad WTA (Fig. 2c), reduced the size of the effect of priming by approximately 30%, such that the reduction in scores for bad attractions and the increase in scores for good attractions were 30% less than in its absence. Greenwashing did not eradicate respondents' perception of the difference between good and bad WTAs, plausibly because respondents judged standards at WTAs on a suite of information, including prior experience outside of the study, and on the image and nature of advertised activities (i.e. good WTAs not permitting direct contact with animals), not just on the two greenwashed lines of text. Estimates for the prevalence of greenwashing by WTAs are currently few, but data from Moorhouse et al. (2017) suggests that 25–60% of venues involving lions, tigers, elephants and dolphins may greenwash. While there is a possibility that our findings may convince unscrupulous operators of the benefits of greenwashing, this risk is balanced by the potential benefits of highlighting the damaging consequences of greenwashing for green markets, and convincing tourists to have a high degree of scepticism regarding WTAs' promotional claims, especially if the venue permits the handling of animals (Moorhouse et al., 2015).

There was no evidence that TravelHelper stars altered respondents' perception of WTAs. We did not vary the number of TravelHelper stars between WTAs, only their presence or absence, and any given respondent received only one treatment (i.e. saw all of the WTAs with stars or without). We set the number of stars to four as this was the limit suggested by Moorhouse et al. (2015) below which WTAs have a higher probability of having detrimental impacts animals. That the TravelHelper stars had no effect may imply that a medium-high rating was regarded by respondents as neutral, neither detracting from nor endorsing a given WTA.

There was little variation in responses across different bad WTAs in our study. WTAs involving dolphins, tigers and elephants attracted higher scores overall than sloths and bears – an expected outcome given that some mammalian taxa are perceived as being more charismatic than others (Macdonald et al., 2015), and respondents may find interactions with these taxa more desirable than with others – but the relationship between unprimed, primed and informed respondents remained consistent (Fig. 5). For good WTAs, primed respondents gave higher scores to three, but equal scores to two others, compared with unprimed respondents. This finding does not invalidate our results since priming resulted only in marginally increased scores for good WTAs, compared with substantially decreased scores for bad WTAs (Fig. 3), and these smaller increases may have been more susceptible to respondents' preferences for different species. Informed respondents gave higher scores to all good WTAs apart from that involving gibbons. This WTA differed in that the rating for welfare impacts was “neutral” rather than positive (Supplementary Materials). Plausibly, informed respondents prioritised welfare impacts when scoring WTAs, or interpreted “neutral” as a negative. Overall, however, the responses between individual good or bad WTAs were sufficiently consistent that our findings are likely to be applicable across a range of different real world institutions and species.

Our intention in creating WTAs for the experimental survey was to mimic the promotional materials of WTAs likely to be encountered by tourists in real life, but within a replicable design. In the absence of publicly available, independent audits of individual venues, tourists must rely on external cues, typically promotional materials, to judge WTAs' standards. Our study relied upon categorising types of WTAs as “good” and “bad” on the basis of the desk-audit by Moorhouse et al. (2015), and permitting respondents to discriminate between types of WTAs based on a) the welfare or conservation benefits they claim and b) whether they permitted handling of the animals by tourists. The latter distinction was used for a number of reasons: first because such handling correlates with negative impacts on animals' welfare; second because the promise of a close interaction with wildlife (e.g. ‘selfies’ with tigers, bottle feeding lion cubs, riding dolphins) is attractive to tourists and so likely to be disallowed only by venues that have a genuine intention to prioritise the welfare of their animals (Moorhouse et al., 2015, 2017), and; third, because this cue would be available to tourists even if WTAs greenwash. Standards do vary between individual venues within a given type of WTA, but if tourists could be stimulated only to attend those that explicitly do not permit close interaction with animals, our expectation is that this would constitute a step towards globally improving standards.

In designing our WTAs we used a single image overlaid with four bullet points. In real life many WTAs have multiple pages, sophisticated imagery and extensive explanations about their business (e.g. ALERT, 2015; Tiger Kingdom FAQ, 2016). We were unable to accommodate such variations within our experiment and so it remains a possibility that more sophisticated websites advertising potentially exploitative WTAs may prove convincing, even to informed tourists. The fact that greenwashing in our study only partially reduced the effect of priming, however, could suggest that primed or informed tourists may still be able discern such WTAs' impacts and choose accordingly.

It remains uncertain whether tourists on holiday would respond to priming to the same extent as our respondents, who self-administered the survey at home, and who would have had no expectation of visiting any WTA in the near future. 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 (Becken, 2007; Barr et al., 2010) – all of which may mean that to in-country tourists the attractiveness (to tourists' “want self”, Bazerman et al., 1998) of WTAs is increased, and the likelihood of tourists engaging with the consequences of their choice (the “should self”) is decreased (see Moorhouse et al., 2017 for further discussion). The effectiveness of priming and informing tourists on holiday is likely to be determined by a balance between the strength of their underlying values, their moral context, and the accessibility, and therefore potentially increased

desirability, of WTA experiences. 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.

It is unknown how long the effects of priming might persist in real-world situations. Within our survey its effect was detectable even after respondents had been directly informed of the WTAs' impacts: English-speaking respondents selected lower informed rescoring for bad WTAs and higher rescoring for good WTAs if they were primed than if they were unprimed. The impact of priming, therefore, remained for at least the length of the survey (a mean of 12.5 min across respondents), but may not persist across a number of days. If, however, accurate information designed to promote similar changes in preferences, were prominently available in the fora in which real tourists were making their choice of WTA (e.g. online booking or review sites), our findings imply that a substantial proportion could be stimulated to choose WTAs with higher ethical standards.

5. Conclusions and recommendations

Our results indicate that respondents were able to discern beneficial from detrimental WTAs, and preferred beneficial WTAs when primed to consider the likely impacts of WTAs on wildlife conservation and animal welfare. Wildlife protection solutions must increasingly include strategies for influencing people's behaviour (Balmford and Cowling, 2006; Wright et al., 2015), and social marketing is 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). The ready availability to the public of significant quantities of disinformation concerning the impacts of WTAs (i.e. greenwashing; Moorhouse et al., 2017), argues for the provision of accurate, evidence-based guidance to be made at-least-equally available. Testing of our approach in country is needed, but our study demonstrates substantial potential for accurate information, hosted prominently in the fora which tourists currently use for making their purchasing decisions, to support a green market, driving funds to WTAs that create animal welfare and/or conservation benefits, and away from exploitative venues. The industry leading review site, TripAdvisor began hosting guidance, provided by a number of stakeholders in early 2017, but our study indicates that prominent exposure across many websites could have potential to modify tourists' behaviour and thereby improve standards at WTAs.

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Appendix A. Supplementary data

Supplementary data related to this article can be found at <https://doi.org/10.1016/j.gecco.2017.11.007>.

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