

An investigation into the use of textual references to sunshine and fresh air in farm holiday advertising

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Abstract

Purpose – Using the context of a farm holiday venue, the purpose of this study is to empirically test whether textual references can have significant influences on potential consumers' affective responses and interest in advertisements.

Design/methodology/approach – In a between-subjects experiment, a reference to sunshine (the underlined phrase in the following narrative) was inserted into a Facebook advertisement for a farm holiday venue: “Relax and Rejuvenate for a couple of days on our farm. Great food, fun, and sunshine . . . See More”.

Findings – Results indicate that a reference to sunshine significantly improves consumers' affective responses to the advertisement and significantly increases their interest (propensity to click “see more”). This study also examines the potential influence of a textual reference to fresh air as well as fresh air in combination with sunshine. No statistically significant results are found with the fresh air reference.

Originality/value – While a number of studies have examined text-based sensory details in marketing stimuli (Magnini and Gaskins, 2010; Torto, 2016), the notion of inserting textual references to fresh air and/or sunshine in advertising has not been empirically examined in the body of the existing literature.

Keywords Affective response to advertising, Advertising cues, Farm holiday, Fresh air, Sunshine

Paper type Research paper

Introduction

The global COVID-19 pandemic has increased consumer interest in nature-based attractions where one can relax and rejuvenate with an abundance of fresh air and sunshine. The question is therefore raised as to whether farm holiday venues should reinforce these important elements in the minds of potential visitors by inserting phrases containing textual references to sunshine or fresh air in their marketing? Would doing so enhance potential consumer interest in the ads?

While a number of studies have examined text-based sensory details in marketing stimuli (Magnini and Gaskins, 2010; Magnini and Karande, 2010; Torto, 2016), the notion of inserting textual references to fresh air and/or sunshine in advertising has not been empirically



examined in our body of existing literature. Consequently, the purpose of this study is to empirically test whether such textual references can have significant influences on potential consumers' affective responses and interest in the ads. A between subjects factorial design experiment is employed for this purpose. The experiment uses the context of Facebook posts by farm holiday providers to test the hypotheses for two primary reasons. First, Facebook witnesses more than one billion active users each day (Banerjee and Chua, 2019). Second, the context of a farm holiday is used because this sector had been growing at a steady pace in many places around the globe pre-pandemic and is now experiencing accelerated growth due to the pandemic (Wojcieszak-Zbierska *et al.*, 2020).

With this in mind, the literature review gives theoretical support for the hypotheses that textual references to sunshine and fresh air in an ad can have a significant influence on affective responses and interest. The literature review is followed by a section describing the research methods employed to conduct the experiment and the presentation of empirical results. This paper then concludes with a discussion of the implications and limitations of this study that might aid in prompting future research extensions.

Literature review and hypothesis development

The effects of a textual reference to sunshine

On a global level, an effective response can be conceptualized as an emotion, feeling, mood or evaluation with a range of potential intensity and arousal-levels (Peter and Olsen, 2002). With regard to responses to marketing stimuli, the specific dimensions of *enjoyable*, *likeable*, *persuasive* and *interesting* can encompass one's affective response (Peck and Wiggins, 2006; Zinkhan and Martin, 1983). Such positive affective responses to advertising have been demonstrated to be antecedents to a number of desirable outcomes such as purchase behavior (Teng *et al.*, 2007) and loyalty (Ha *et al.*, 2011).

Past studies have demonstrated that inserting certain textual sensory detail elements into advertisements can influence consumers' affective responses to the ads. For example, Magnini and Karande (2010) tested the effects of a textual reference to smell in a magazine ad for an ecotourism destination and found significant impacts on affective responses to the ad. In a different context, Magnini and Gaskins (2010) examined the influences of textual references to touch in outdoor destination advertisements and found positive significant influences on female's affective responses to the ads.

According to Torto (2016), textual sensory details in adverts can strengthen potential consumers' ability to imagine seeing, hearing, smelling, tasting and/or touching an advertised item. The primary objective of such "description in advertising is to frame an image of a product in the minds of the consumer . . ." (Torto, 2016, p. 47). Within the context of tourism, if such advertising language is congruent with the traveler's motivation/travel goals, then positive affective responses can be triggered (Byun and Jang, 2015). Because one's motivation to visit a farm holiday venue is typically to experience a natural setting, such congruence exists with the use of a textual reference to sunshine. Along these lines, consumers are increasingly concerned with authenticity (Soligo and Abarbanel, 2020) and such natural elements are woven into the basic fabric of the farm holiday experience.

In fact, sunshine is a key ingredient in a natural setting such as a farm holiday venue where patrons retreat to be rejuvenated. Evidence of the influence of sunlight on mental well-being is contained, for example, in studies that demonstrate that the shortening length of the day can affect mental well-being (Partonen and Lönnqvist, 2000). Sunshine increases serotonin and vitamin D levels in humans. Many of the physical and mental benefits associated with sunlight intake are due to the body's circadian rhythm – an internal clock that monitors one's sleep-wake cycles (Rea *et al.*, 2010). Hence, reinforcing the sunshine element through a textual reference to sunshine might strengthen potential

consumers' affective responses to a farm holiday ad; consequently, the following hypothesis is offered:

H1. Using a textual reference to sunshine in a farm holiday advertisement will positively influence an individual's affective response to the ad.

Various advertising elements can induce purchase intentions and purchase behaviors (Alalwan, 2018; Saleem and Abideen, 2011). As seen in Figure 1, however, the messaging in this study's Facebook treatments was briefly followed by the invitation for the reader to click "see more." By using Facebook's postings design this study attempted to be as true to reality as possible. Given the brevity of the marketing stimuli, the propensity to click "see more" is a more realistic assessment of one's interest than asking about the likelihood of visiting the advertised farm venue with the presentation of only brief information. Stated differently, it seems logical that anyone interested in potentially visiting the venue after exposure to the abbreviated Facebook stimulus would click "see more" to learn more before making a decision to visit. In this context, clicking "see more" is a manifestation of interest in the advertised item. Therefore, the logic from the previous section is extended to predict that:

H2. Using a textual reference to sunshine in a farm holiday advertisement will positively influence an individual's interest in the ad.

The effects of a textual reference to fresh air

The same literature and empirical studies anchoring hypotheses 1 and 2 (predictions relating to the sunshine reference) also apply to the use of a textual reference to fresh air. That is, both sunshine and fresh air are critical natural elements engrained in the very fabric of the farm holiday experience.

While research related to fresh air often pertains to the treatment of illness (e.g. Hobday and Cason, 2009; Strange, 1991), it is prudent to recognize that fresh air has a host of benefits in healthy individuals as well. Nowadays, there is a wide range of exercises in fresh air, also called green exercises that generate health benefits. These activities include walking, cycling, horseback riding, woodland activities, fishing, etc. (Pretty et al., 2005, 2007). Such activities conducted in nature-based settings are known to improve physical (Gebhard, 2014;

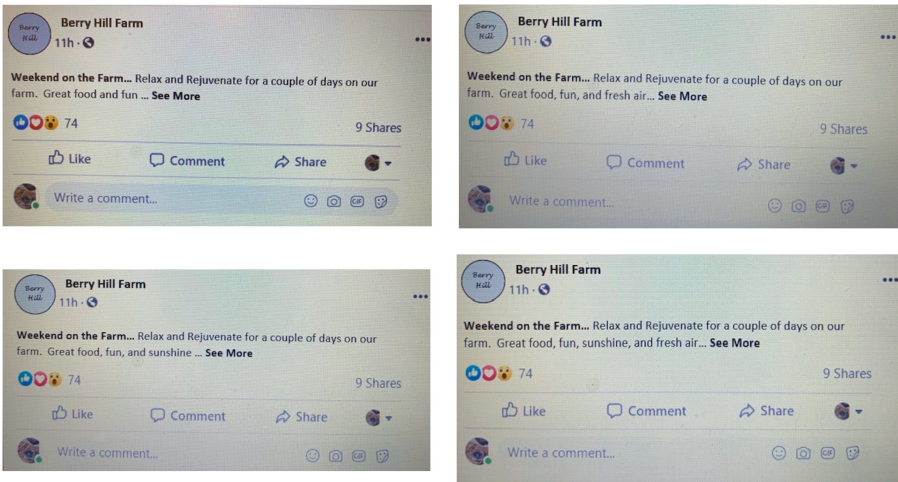


Figure 1.
Experimental
treatments:
Facebook posts

Sandifer *et al.*, 2015), mental (Sandifer *et al.*, 2015; Harshfield *et al.*, 2019) and cognitive health (Berman *et al.*, 2012; Stenfors *et al.*, 2019).

In a recent peer-reviewed study titled “Fresh air, sunshine and happiness: Millennials building health (salutogenesis) in leisure and nature” Young *et al.* (2018, p. 331) asked a sample of undergraduate students to respond to the following two items:

- (1) Please tell us three things that build up your health.
- (2) Now, tell us how these things work for you to build up your health.

The theme of fresh air emerged in a number of the study’s responses; for example (Young *et al.*, 2018, p. 335):

Travelling and being outdoors - fresh air, adventures, freedom . . .

Outdoors: provides fresh air, alone time and peacefulness

I love fresh air, the bit of fitness and the escape for a few hours every time I am out there

To reiterate, these discussions underscore the notion that the anchoring of [hypotheses 1](#) and [2](#) also applies to the context of a textual reference to fresh air. Therefore, the following hypotheses are offered:

- H3.* Using a textual reference to fresh air in a farm holiday advertisement will positively influence an individual’s affective response to the ad.
- H4.* Using a textual reference to fresh air in a farm holiday advertisement will positively influence an individual’s interest in the ad.

Research methods

Design

A between-subjects factorial experiment was constructed to test the research hypotheses. In the experiment, subjects were randomly exposed to 1 of the 4 Facebook screenshots contained in [Figure 1](#). As such, in this experiment, the manipulated variables were the textual reference to sunshine (present/absent/interaction with textual reference to fresh air) and the textual reference to fresh air (present/absent/interaction with textual reference to sunshine). As seen in [Figure 1](#), other than the manipulated textual reference, all other details in the Facebook post such as number of shares and number of likes were kept constant because such factors can influence consumer sentiment (Mochon *et al.*, 2017). As detailed next, all other variables (dependent variables and covariates) were measured as opposed to manipulated.

Measurement of dependent variables

Consumers’ affective response to the advertisement: In concert with previous studies (Magnini and Karande, 2010; Peck and Wiggins, 2006; Zinkhan and Martin, 1983), consumers’ affective responses to the advertisement were operationalized using four items: enjoyable, interesting, likeable and persuasive on 7-point Likert-type scales anchored with *strongly disagree* (1) and *strongly agree* (7). In this study, the four items demonstrated excellent reliability with a Cronbach’s alpha of 0.9 (Nunnally and Bernstein, 1994). Therefore, the responses to the four items were averaged to derive a composite “affective response” score.

Consumers’ interest in the advertisement: As seen above, consumers’ interest in the Facebook advertisement was already captured by the affective response scale with the “interesting” scale item. Nevertheless, as an additional means of gaging a respondent’s interest, the following item was included on the survey: “You might click ‘see more”’ (“strongly disagree” = 1; “strongly agree” = 7).

Measurement of covariates

COVID-19 safety. Because the data were collected during the COVID-19 pandemic, the perceived risk associated with visiting the advertised farm holiday venue could influence the results of this study. Therefore, the following item was included as a covariate in the modeling: “This venue is probably safer from the risk of COVID-19 than many other travel destinations” [“strongly disagree” = 1; “strongly agree” = 7].

Consumers’ gender. Because Facebook usage habits can be influenced by gender (Hoy and Milne, 2010; Thompson and Loughheed, 2012; Tifferet and Vilnai-Yavetz, 2014), respondents were asked to indicate their gender on the survey instrument.

Connectedness to nature. It is plausible that one’s connectedness to nature could influence one’s response to sunshine and/or fresh air references. Consequently, Mayer and Frantz’s (2004) connectedness to nature scale was included in the survey (see Appendix). The 14 items exhibited excellent reliability with a Cronbach’s alpha of 0.91 (Nunnally and Bernstein, 1994). Hence, the responses to the 14 items were averaged to derive a composite “connectedness score.”

Manipulation of independent variables

Ad’s sunshine reference. The ad’s sunshine reference was either present or absent (See Figure 1).

Ad’s fresh air reference. The ad’s fresh air reference was either present or absent (See Figure 1).

Interaction effect. Potential interaction was tested with a treatment that contained both a sunshine reference and a fresh air reference (see Figure 1).

Pretest: suitability of treatment conditions and experimental realism

In concert with experimental design guidelines recommended by Perdue and Summers (1986), a convenience sample of 18 respondents pretested the survey. The purpose of this pretest was to help ensure that it be possible to manipulate the treatment conditions as intended while also retaining experimental realism. In terms of manipulations, if the overall look and feel of the experimental Facebook post (See Figure 1) produced results on the dependent measures (affective response and intent) that were overly negative or overly positive regardless of the presence or absence of the sunshine/fresh air reference then that overall look/feel could potentially mask any effects of the sunshine/fresh air reference(s). Pretest results confirmed that the experimental manipulations could be perceived as intended because the dependent variables (DVs) across the four posting conditions in the pretest produced mid-range sentiment: affective response = 4.43 (SD = 1.66) and interest = 4.89 (SD = 1.9).

Regarding a check of experimental realism, participants were asked to respond to this item: “The screenshot of the Facebook post looks like a real Facebook post” anchored with *strongly disagree* (1) and *strongly agree* (7). Pretest results confirmed adequate realism of the Facebook post used in this experiment: realism = 5.41 (SD = 1.18).

Main study procedures

The data were collected throughout the United States by placing an online survey on Amazon’s MTurk consumer panel. To help ensure the quality of the collected data, only MTurk’s master-level respondents were invited to participate [1]. Other than the need to be a master-level respondent, the need to be at least 18 years of age (which is already built into the MTurk panel), no other participation criteria were issued.

Data collection was carried out over a two week period spanning late October and early November 2020. Those responding to the survey invitation were randomly exposed to one of

the four Facebook screenshots contained in [Figure 1](#) followed by the survey questions. A total of 243 responses were initially collected. Two data quality screening procedures reduced the total useable sample size to 214. Specifically, 22 sub-par responses were removed due to poor performance on the reverse-coded questions in the connectedness to nature scale; and 7 responses were removed of those who disagreed that the Facebook post looked real. The final cell sizes for each experimental treatment are listed in [Table 1](#).

Of the respondents, 42% were female. The two largest age cohorts were 26–35 years (32%) and 36–45 years (31%). The most frequently reported Facebook usage rate was once per day (26%) followed by 2–3 times per week (19%). While two respondents (<1%) indicated that they never use Facebook, the results of the hypothesis testing reported in this study remain unchanged with/without these respondents.

Results

To test [hypotheses 1](#) and [2](#), a multivariate analysis-of-covariance (MANCOVA) model was calculated. In the MANCOVA model, the independent variable (IV) was the sunshine reference (present vs. absent). As described in the previous section, covariates in the model were gender, perceived COVID-19 safety and connectedness to nature. The two dependent variables (DVs) in the model were affective response and interest. It is prudent to note that this MANCOVA model satisfied all of the assumptions necessary to perform such analysis. For instance, the IV was categorical, and the DVs were interval. Second, there were more observations than DVs in the experimental cells with no outliers. Third, the assumption of homoscedasticity was satisfied.

[Hypotheses 1](#) and [2](#) predict that using a textual reference to sunshine in a farm holiday advertisement positively influences an individual's affective response to the ad ([H1](#)) and interest ([H2](#)). As indicated in [Table 2](#), MANCOVA results (Wilks' Lambda = 0.945, $F_{(2, 103)} = 2.90$, $p = 0.06$, partial $\eta^2 = 0.055$) demonstrate statistically significant effects of the sunshine reference on affective response ($F_{(1, 104)} = 3.634$, $p = 0.059$, partial $\eta^2 = 0.035$) and interest ($F_{(1, 104)} = 5.464$, $p = 0.021$, partial $\eta^2 = 0.052$). **Therefore, [H1](#) and [H2](#) are supported.**

To test [hypotheses 3](#) and [4](#), a second MANCOVA model was calculated. In the MANCOVA model, the IV was the fresh air reference (present vs. absent). As described in the previous section, covariates in the model were gender, perceived COVID-19 safety and connectedness to nature. The two DVs in the model were affective response and interest. Like the previously described MANCOVA, this model also satisfied all of the assumptions necessary to adequately perform the analysis.

[Hypotheses 3](#) and [4](#) predict that using a textual reference to fresh air in a farm holiday advertisement positively influences an individual's affective response to the ad ([H3](#)) and interest ([H4](#)). As depicted in [Table 3](#), MANCOVA results (Wilks' Lambda = 0.99, $F_{(2, 104)} = 0.063$, $p = 0.939$, partial $\eta^2 = 0.001$) do not reveal statistically significant effects of the fresh air reference on affective response ($F_{(1, 105)} = 0.124$, $p = 0.726$, partial $\eta^2 = 0.001$) or interest ($F_{(1, 105)} = 0.084$, $p = 0.772$, partial $\eta^2 = 0.001$). **Therefore, [H3](#) and [H4](#) are not supported.**

Treatment condition	Cell size
Both textual references – absent	53
Textual sunshine reference – present	52
Textual fresh air reference – present	56
Both textual references – present	53

Table 1.
Cell sizes of treatment
conditions

Table 2.
MANCOVA results:
sunshine hypotheses

Variables	<i>F</i> -value	Significance	Effect size	
<i>Predicting affective response (H1)</i>				
Sunshine	3.63	0.059	0.035	<i>M</i> _{Absent} = 4.96, SD = 1.43; <i>M</i> _{Present} = 5.30, SD = 0.98
Gender	9.55	0.003	0.087	
COVID-19 safety	16.72	0.000	0.059	
Connectedness to nature	5.48	0.021	0.052	
<i>Predicting interest (H2)</i>				
Sunshine	5.46	0.021	0.052	<i>M</i> _{Absent} = 5.06, SD = 1.79; <i>M</i> _{Present} = 5.67, SD = 1.34
Gender	6.32	0.014	0.059	
COVID-19 safety	10.75	0.001	0.097	
Connectedness to nature	13.63	0.000	0.120	

Table 3.
MANCOVA results:
Fresh air hypotheses

Variables	<i>F</i> -value	Significance	Effect size	
<i>Predicting affective response (H3)</i>				
Fresh air	0.124	0.726	0.001	<i>M</i> _{Absent} = 4.96, SD = 1.43; <i>M</i> _{Present} = 4.87, SD = 1.25
Gender	6.41	0.001	0.104	
COVID-19 safety	13.13	0.000	0.112	
Connectedness to nature	20.48	0.000	0.164	
<i>Predicting interest (H4)</i>				
Fresh air	0.084	0.772	0.001	<i>M</i> _{Absent} = 5.06, SD = 1.79; <i>M</i> _{Present} = 4.95, SD = 1.84
Gender	6.41	0.013	0.058	
COVID-19 safety	4.00	0.048	0.037	
Connectedness to nature	2.33	0.000	0.183	

As previously explained, even though it was not hypothesized, potential interaction effects between the sunshine reference and fresh air reference were also examined. The posting with both elements absent produced an effective response of 4.96 in comparison to 4.84 with both elements present. In terms of the ad's ability to generate interest, the condition with both elements absent generated an interest level of 5.06; whereas, the condition with both present garnered an interest level of 5.13. Neither of these mean differences is statistically significant. As such, it appears that the presence of the fresh air reference nullifies the statistically significant findings found when testing the stand-alone sunshine reference.

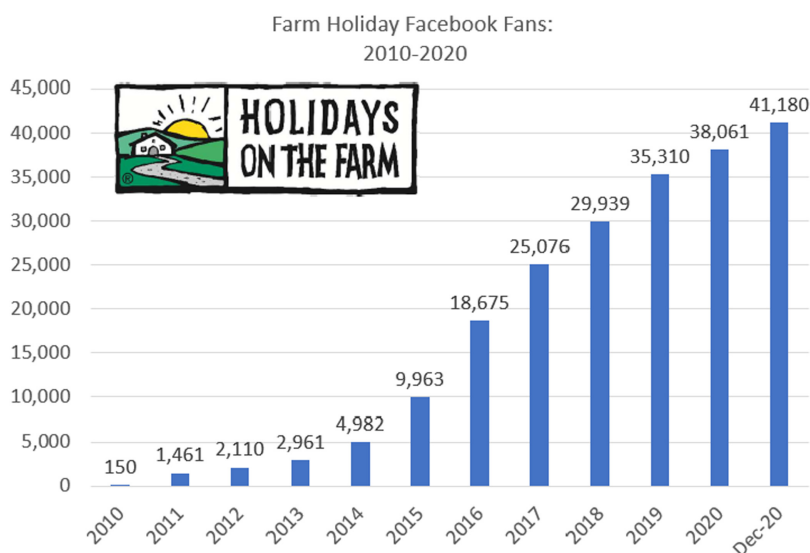
Conclusions and implications

From a research perspective, the results of this study provide several contributions to our existing knowledge. While there are multiple dimensions in potential visitors' cognitive image of rural destinations (Peña *et al.*, 2012), this study examines how textual elements of ads can influence potential visitors' perceptions. This study, therefore, extends the body of

research that explores the use of text-based sensory details in marketing stimuli (Magnini and Gaskins, 2010; Magnini and Karande, 2010; Torto, 2016). Similarly, this research makes a modest contribution to the body of literature that examines the important roles of fresh air and sunshine to both one's physical and mental well-being (Harshfield *et al.*, 2019; Young *et al.*, 2018).

The findings of this study are important not only to extend the theoretical knowledge of sensory detail elements in advertising, but also because they have practical value for those marketing nature-based attractions such as farm holiday venues. Table 4 provides an example from an Austrian network of farm holiday providers: less than 1,000 Facebook fans in 2010 and more than 41,000 in 2020. Therefore, any research that addresses how to increase affective responses and interest in Facebook posts appears to be highly germane to the industry. It is prudent to note that an important feature associated with the use of textual references in Facebook advertising is that the marketing tactic does not cost any money - in comparison to running a Facebook campaign without such textual references.

With regard to limitations, as with all experimental designs conducted in the social sciences, the findings and accompanying interpretations are limited by the nature of the stimuli, respondents and instruments. Therefore, there are a number of future research extensions possible in this area of inquiry. It would be informative to investigate, for example, whether a textual fresh air reference would produce significant results if nested within a different advertising context; for instance: for a park, nature preserve, or mountain resort/spa as opposed to a holiday farm venue. Specifically, perhaps the fact that some olfactory cues associated with a working farm have undesirable smells could have nullified the potential effect of the textual fresh air reference in the current study. Stated differently, the image of fresh or pure air might not be readily associated by some potential guests with farm tourism settings. As such, the testing of textual fresh air references in other nature-based settings is ripe for exploration. Similarly, Cetron *et al.* (2020, p. 130) indicate that "people around the world are increasingly sensitive to environmental issues such as air



Source(s): Lackinger, 2020

Table 4.
Growth of Facebook
presence in the farm
holiday sector
(Austrian example)

pollution ...” Therefore, future research should consider examining whether this increasing sensitivity might make consumers more responsive to textual fresh air references through time.

The effect sizes reported in this study are not large. Modest effect sizes are not an uncommon phenomenon in the study of grounded cognition (Juhász *et al.*, 2011) or in the service literature (De Matos *et al.*, 2007; Magnini and Kim, 2016). Fritz *et al.* (2012) posit that observed effects in most experimental research in the service sciences are prone to be modest or even small. Interestingly, in this current study, the main effects of the reference to sunshine demonstrated larger effect sizes on both DVs when the models were calculated in the absence of the connectedness to nature covariate. Because there is theoretical justification for including this covariate, the models were calculated with its inclusion.

The current study purposefully collected data across a two-week period and from every region of the USA to circumvent any potentially heightened effects of the textual references as a result of respondents participating in the study during or following a day of rainy or cloudy weather. Nevertheless, future research extensions might consider testing the textual references in all four seasons and in areas of the world with particularly short/long daylight hours. In a similar vein, it would be interesting to investigate the strength of the textual reference influences after the pandemic has receded or come to a close. Because COVID-19 safety was controlled for in these research models as a covariate, it is thought that the significant findings reported in the current study are not driven solely by the pandemic conditions but are instead effects that can be harnessed by nature-based venue marketers across time, but further research would be prudent.

Lastly, much work remains to be done with regard to examining the influences of sunshine and fresh air references as components of marketing stimuli. For instance, while the current study examined textual references, there are evidently other ways by which these elements can be infused into marketing. Therefore, future research should extend this current work beyond textual references to examine graphics-based and verbal-based elements in advertisements for nature-based attractions.

Note

1. This master’s qualification is earned by MTurk panel members by demonstrating a high degree of data quality in past projects. More detail about master’s qualifications can be found here: <https://www.mturk.com/worker/help> (accessed December 20, 2020). Restricting data collection to master-level respondents is significantly more costly than not doing so because a premium price is paid for master-level responses.

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Appendix

Mayer and Frantz's (2004) connectedness to nature scale.

You often feel a sense of oneness with the natural world around you.

You think of the natural world as a community to which you belong.

You recognize and appreciate the intelligence of other living organisms.

You often feel disconnected with nature (reverse coded).

When you think of your life, you imagine yourself to be part of a larger cyclical process of living.

You often feel a kinship with animals and plants.

You feel as if you belong to the Earth as equally as it belongs to you.

You have a deep understanding of how your actions affect the natural world.

You often feel part of the web of life.

You feel that all inhabitants of Earth, humans and nonhumans, share a common "life force".

Like a tree can be part of a forest, you feel embedded within a broader natural world.

When you think of your place on Earth, you consider yourself to be a top member of a hierarchy that exists in nature (reverse coded).

You often feel like you are only a small part of the natural world around you, and that you are no more important than the grass on the ground or the birds in the trees.

Your personal welfare is independent of the welfare of the natural world (reverse coded).

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