

Using Automated Facial Expression Analysis to Explore How Emotions Affect Tourists' Behavioral Intentions in Times of Crisis

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Abstract:

This paper analyzes intention to visit and intentions to recommend a destination in times of a global pandemic. It is hypothesized that negative basic emotions automatically triggered by the crisis will moderate the effect of emotions elicited by cognitive evaluations about a destination differently, depending on whether the destination is one own's country or a foreign country. Specifically, we empirically found that anger moderates the effect of admiration on both intentions to visit and intentions to engage in positive word-of-mouth. By analyzing the different appraisal tendency and type of emotions, we provide specific recommendations for marketing strategies and market segmentation.

Keywords: basic-emotions, artificial-intelligence, tourist-behaviour

1. Introduction

The year 2020 will remain unforgettable for the global economy and the tourism industry in particular, which faced an estimated 80% decrease due to the travel restrictions that were declared by most countries following the outbreak of the COVID-19 pandemic (UNWTO, 2020). From a psychological perspective, the worldwide crisis has generated a collective sense of situational uncertainty, unpredictability, and uncontrollability (Mamun & Ullah, 2020). These appraisals, or goal-directed cognitive processes, are likely to cause three basic emotions strongly linked to survival-instinctive responses, namely fear, sadness, and anger. Indeed, sentiment analyses of news headlines and social media posts related to the pandemic suggest that this topic is laden with a high degree of negative emotions (Aslam et al., 2020; Xue et al., 2020). Though, negative emotions are triggering tourists' risk perception. A high level of perceived risk, as was the case in the COVID-19 pandemic in terms of health risk, has been shown to lead to lower levels of satisfaction, loyalty, attitude toward a destination, and visit intentions (e.g., Casidy and Wymer, 2016; Hasan et al., 2017). Although recent studies have examined how emotions influence decision-making processes in tourism (Ouyang et al., 2017; Micevski et al., 2020), the role played by emotions in influencing tourists' affective, cognitive, and behavioral reactions to tourist destination cues during an ongoing global pandemic has not yet been explored.

With this in mind, the purpose of this paper is to investigate the role of emotions triggered during the COVID-19 crisis on tourism outcomes in order to extend the knowledge of the impact of emotions in the tourism field and offer practical insights for managers to overcome the crisis. Emotions, understood as "organized psychophysiological reactions to news about ongoing relationships with the environment" (Lazarus, 1991 (Smith, 2000 p. 38), are the dominant driver of most meaningful life decisions and therefore an essential factor to understand the process of decision-making (Lerner et al., 2015). It is suggested that the identification of underlying mechanisms of the influence of emotions would allow for predicting patterns of consumer behavior. This is because emotions are linked to core appraisals associated with action tendencies that are predictable to some extent (Lerner et al., 2015). This means that specific insights into how consumers emotionally react to a stimulus and how these reactions affect their attitudes and behavior might shed light on identifying patterns of behavior and common responses, which can be then used to optimize segmentation strategies. Particularly in tourism, understanding how emotional reactions influence tourists' attitudes, intentions and behavior can help, firstly, tourism destinations strategies in the way their competitive advantages are communicated; secondly, tourism scholars in the way that tourism behavior should be conceptualized when they decide for holiday destinations.

We propose that an advertisement promoting a country destination will automatically activate both basic emotions and country stereotypes in a dual-path composed of affective and cognitive paths. Consistent with the SCM, country stereotypes generate secondary emotions (admiration, pity, contempt, envy) further impacting behavioral outcomes. We focus on investigating admiration as recommended by previous tourism research (Micevski et al., 2020) as this is the social emotion with highest impact on tourism outcomes. We empirically show that admiration have direct influence on travel intentions and willingness to recommend, and that its effect is moderated by anger. As the influence of basic emotions is both direct to perceptions as to on-going cognitive process (Lerner & Keltner, 2000), the moderation is explained and linked to specific recommendations for tourism.

2. Theoretical Background and Hypotheses

2.1 Secondary emotions and tourism ethnocentrism

The mere presence of a country cue can make consumers react emotionally (Gómez-Díaz, 2019) and cognitively (Herz & Diamantopoulos, 2013). Emotionally because a country cue, which can be colors, symbols, and names or smells related to a country, can evoke emotional images in the brain making a consumer react in an emotional manner. These emotional reactions are not always conscious and not necessarily arisen from cognitive evaluations, they might happen automatically (Damasio, 2000). Cognitively because a country cue can automatically activate country stereotypes, understood as shared beliefs about typical characteristics a country is perceived to have (Herz & Diamantopoulos, 2013). In this way, there are two paths in which a country cue evokes automatic reactions in tourists namely, an affective one, in which basic emotions are triggered and a cognitive one, in which country stereotypes are generated and subsequently eliciting secondary emotions.

There are two distinctive types of effects of the emotions generated. On the one hand, basic emotions are triggered as an immediate – not necessarily conscious – reaction that allows for action or inaction preserving wellbeing; and second, secondary emotions, which arise from cognitive processes based on an ability to evaluate preferences over outcomes and expectations (Damasio, 1999; Ekman, 1992).

Recent tourism studies have shown that country stereotypes positively influence country-related emotions of admiration, which, subsequently affect intentions to visit (Micevski et al., 2020). The BIAS map explains how depending on the configuration of stereotype dimensions, four different emotions can be generated: admiration (high levels of both warmth and competence), contempt (low levels of competence and low levels of warmth), pity (low levels of competence and high levels of warmth) and envy (high levels of competence and low levels of warmth) (Cuddy et al., 2007). Following Micevski et al., admiration can be identified as the most important social emotion that influences tourists to visit a destination, particularly one that is seen as desirable and admirable. Admiration, understood as an emotion arising from “extraordinary and praiseworthy actions, performed by a likeable” (Smith, 2000, p. 185), is expected to positively influence intentions to visit a country and intentions to recommend, depending on how admirable a country is perceived.

However, we believe that the influence of admiration differs depending on whether one's own country or a foreign country is being assessed. This assumption is based on the theory of tourism ethnocentrism (Kock et al., 2019). Even before the pandemic, Kock et al. found that ethnocentrism was increasing in general as well as in the tourism domain (Kock et al., 2019). The authors define the tourism ethnocentrism (TE) phenomenon “as an individual's prescriptive beliefs and felt moral obligation to support the domestic tourism economy” (Kock et al., 2019, p. 428). Following this definition, TE is conceptually different from destination image and country stereotypes as it does not capture tourists' beliefs about the quality and features of a destination. The TE phenomenon has been dramatically reinforced by the pandemic. Thus, we propose the following hypothesis:

H1: The impact of admiration on **(a)** intentions to visit and **(b)** intentions to recommend a destination is higher when tourists evaluate their home country vs. a foreign country.

2.2 The impact of basic emotions

Negative emotions are usually triggered and strongly felt in a collective manner in times of crisis (Madera & Smith, 2009). This is because feelings and thoughts of vulnerability are constantly in our brains, which generates a permanent sense of uncertainty, risk, and emotional exposure (Brown, 2012). It should not be a surprise then that the unprecedented situation of the COVID-19 pandemic would generate a collective sense of situational uncertainty, unpredictability and uncontrollability, and the subsequent basic emotions of fear, sadness and anger (Mamun & Ullah, 2020). However, it is not known into which extend these negative emotions might affect tourists perceptions and decisions. Emotions are the dominant driver of most meaningful decisions and a crucial element to understanding human decision-making processes (Ekman 1992, Frijda 1987, Lazarus 1991, Lerner & Keltner, 2000). Nevertheless, it is yet unclear how negative emotions in an unparalleled situation like a global pandemic would affect tourism.

Given that the COVID-19 crisis has raised health risk perceptions which influenced people's attitudes, decisions, and behavior (Godovykh et al., 2021) and thus, generated a collective and high degree of negative emotions, we expect that the negative emotions, in particular, sadness, fear and anger will have a distinctive moderating effect on the impact of admiration. Specifically:

H2: The impact of admiration on intentions to visit and willingness to recommend is moderated by **(a)** sadness, **(b)** fear, and **(c)** anger.

3. Methodology

3.1 Sample and procedure

We collected data from 70 participants in Colombia (55.7% male, $M_{AGE} = 39.8$, $SD = 15.6$) and 37 participants in Austria (56.8% female, $M_{AGE} = 34.0$, $SD = 14.1$). Overall, respondents indicated that they travel 3.9 times per year (excluding business trips and day trips) on average, of which 1.3 trips are long-distance. With regard to travel companions, 46.2% predominantly travel with their family, 25.5% with their partner, 18.9% with friends, and 7.5% alone.

In a between-subjects design, participants in both countries were randomly assigned to one of two conditions with different stimulus materials, namely tourism destination advertisements. In one condition, their own country (Austria/Colombia) was promoted in the video, whereas a foreign country located on another continent and in a different stage of economic development (Colombia/Austria) was portrayed in the other condition. We used existing official promotional videos produced by the respective national tourist offices.

Participants' faces were recorded using their webcam for the entire duration of each tourist advertisement (i.e., approximately two minutes). We then conducted a post-processing analysis on the recorded videos using *iMotions*, a biometric software that is capable of inferring emotions based on facial expressions. The tool employs artificial intelligence (AI) to scan a video frame-by-frame and automatically detects changes in a person's facial features (e.g., brows, eyes, and lips) to calculate the likelihood and magnitude of the seven basic emotions, namely joy, surprise, anger, sadness, disgust, fear, and contempt, at any point in time. The software uses the AFFDEX algorithm by Affectiva Inc. (El Kaliouby & Robinson, 2005), which builds on the Emotional Facial Action Coding System (EMFACS) mappings developed by Ekman and colleagues since the 1970s (Ekman & Friesen, 2003; Ekman & Rosenberg, 1997).

After having watched the tourism ad in either condition (domestic or foreign country), participants completed an online questionnaire consisting of three main parts, followed by demographic questions. The first part covered respondents' self-reported basic and secondary emotions after watching the video. The main reason for assessing participants' basic emotions

in the questionnaire in addition to the automated facial expression analysis was to explore whether there were any surprising deviations between the two measurement methods. The assessment of basic and secondary emotions was deliberately undertaken at the beginning of the questionnaire to ensure recall and to avoid potential priming effects by the questions specific to the destination. The next part pertained to tourists' behavioral intentions with regard to the shown destination (positive word-of-mouth intentions and intentions to visit). In the last stage, respondents were asked about their stereotypical perceptions of the country shown in the ad.

3.2 Measurement

The data collected through automated facial recognition was aggregated to arrive at a proportion (in %) of each of the seven basic emotions that a given participant displayed while watching the tourism ad. The software also calculates a person's degree of engagement, which is a measure of overall responsiveness. Although the proportion of emotional expressions was rather small in *absolute* terms (because people are mostly attentive and passive when watching a video, in contrast to when interacting with another person, for example), the data still allows for a *relative* comparison between the experimental conditions and country samples.

In the questionnaire, respondents were asked to which extent they experienced the seven basic emotions (joy, surprise, fear, disgust, sadness, anger, contempt) and the secondary emotions (admiration, pity, envy) while watching the ad on five-point scales. To capture, word-of-mouth intentions, we adapted three items ($\alpha = .92$) from Papadimitriou et al. (2018). Finally, willingness to visit was measured with four items ($\alpha = .91$) developed by Kock et al. (2016).

4. Results

In Table 1 and 2 at the end of the paper we report means, standard deviations, and group comparisons between the two experimental conditions for both country samples. We used non-parametric Mann-Whitney U tests for the comparisons because of the data's non-normal distribution.

In the Colombian sample, the automated emotional analysis indicates that participants more strongly displayed overall engagement as well as both positive and negative emotions while watching the Colombian advertisement compared to the Austrian advertisement, with the only exception being expressions of contempt. However, these differences do not appear to be statistically significant. The relative dominance of the Colombian promotional video in triggering emotional responses is also reflected in the self-reported emotions, although here too, differences are mostly not statistically significant. Fear is the only emotion that Colombian participants reported feeling more strongly while watching the Austrian ad, and the difference is significant ($U = 494.00$; $p < .05$). With regard to secondary emotions, viewers of the Colombian advertisement felt significantly more admiration ($U = 299.00$; $p < .01$), while viewers of the Austrian advertisement reported stronger feelings of envy ($U = 409.00$; $p = .05$). When it comes to the behavioral outcomes, Colombians were more likely to recommend ($U = 295.00$; $p < .01$) as well as visit ($U = 267.50$; $p < .01$) their own country as tourists in comparison to the foreign country.

In the Austrian sample, the results of the automated facial expression analysis are mostly consistent with those in the Colombian sample. In particular, participants displayed more emotions on average and were significantly more engaged ($U = 79.50$; $p < .01$) when watching the advertisement promoting their home country. In line with the Colombian data, contempt was the only emotion that was expressed more strongly in the foreign country condition (at the .10 level of significance). What is contradictory to our previous findings when it comes to self-reported emotions, however, is that Austrians in the domestic condition scored *higher* on fear

than those who watched the Colombian video. Furthermore, there were no significant differences in terms of secondary emotions. Finally, Austrians were significantly more likely to recommend ($U = 26.00$; $p < .01$) as well as visit ($U = 100.50$; $p < .05$) their own country. This last finding is again consistent with our findings in Colombia.

In a next step, we conducted a series of regression analyses to assess the effect of admiration on intentions to visit the destination ($H1a$) and word-of-mouth intentions ($H1b$). In the Colombian sample, admiration had a significant effect on intentions to visit ($b = .27$, $t = 3.28$, $p < .01$ $R^2 = .28$) and recommend ($b = .29$, $t = 3.22$, $p < .01$ $R^2 = .27$) the country as a tourism destination only among those participants who watched the Austrian advertisement. This provides support for $H1a$ and $H1b$. In the Austrian sample, however, admiration was neither a significant determinant of intentions to visit nor of word-of-mouth intentions in both conditions.

To test $H2$, we conducted moderation analyses using SPSS PROCESS (Hayes, 2013). Due to their different measurement scales, the independent and moderator variables were standardized. Overall, anger moderates the relationship between admiration and intentions to engage in positive word-of-mouth ($\beta = .60$, $p < .01$). In particular, the positive influence of admiration on word-of-mouth intentions is reinforced when participants displayed stronger emotions of anger while watching the tourism ad for a foreign country. Similarly, anger also accentuates the positive effect of admiration on intentions to visit the tourist destination, albeit only at the .10 level of significance ($\beta = .35$, $p = .08$). This provides support for $H2c$. Both interaction effects are graphically displayed in Figure 1 and 2.

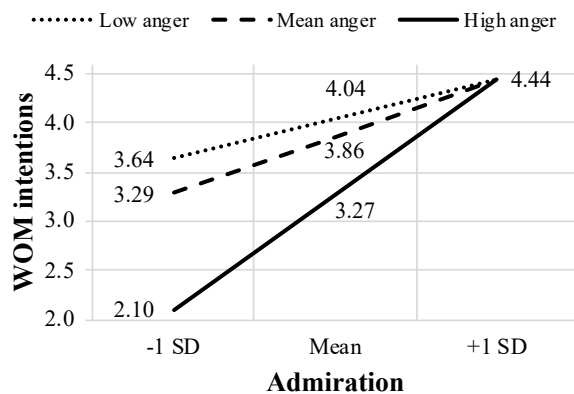


Fig. 1 Interaction between admiration and anger in predicting word-of-mouth intentions

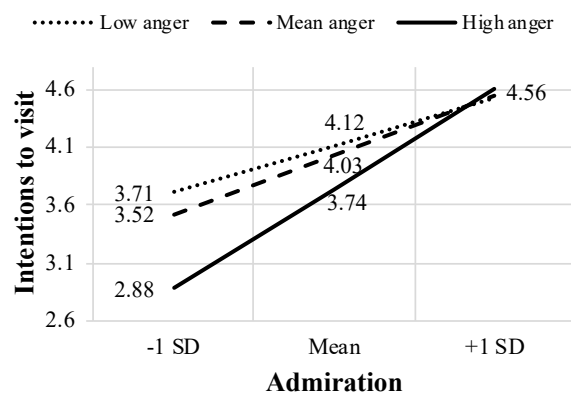


Fig. 2 Interaction between admiration and anger in predicting intentions to visit

5. Discussion

Our first finding that admiration is stronger among respondents who were exposed to a tourism ad promoting their own country compared to a foreign country can possibly be explained by social identity theory (Tajfel & Turner, 1979), according to which individuals tend to favor the in-group while discriminating against the out-group. Recognizing other individuals or symbols (such as the ones shown in the tourism ad) as culturally similar to oneself often leads to positive self-stereotyping and in-group favoritism (Fiske & Taylor, 1991; Hilton & von Hippel, 1996). This premise is likely to be particularly pronounced among ethnocentric consumer segments, which could be an interesting opportunity for future research.

The COVID-19 pandemic has intensified the social identity phenomenon. Even before the pandemic research showed that people exposed to a threat become more collectivistic (Cashdan

& Steele, 2013). In this sense, nationalism is not only more evident in political decisions, but also in the choice of holiday destinations. The pandemic has forced many people to spend their holidays in their own country, which has also changed the status of their own country as a tourist destination. Consequently, tourists are increasingly opting for domestic destinations in an attempt support the own economy, a phenomenon which is referred to as tourism ethnocentrism (Kock et al., 2019). In addition, risk perceptions due to the pandemic triggered by emotions such as fear and anxiety have made long-distance travel less attractive. Common findings from previous research indicate a negative correlation between risk perceptions and tourists' behavioral intentions (Godovykh et al., 2021). Nevertheless, when analyzing the impact of admiration on behavioral outcomes, this difference between the perceptions of a local vs. foreign country did not translate on an influence on tourists' behavior as admiration affected only the group exposed to a foreign country. This finding can be explained through the activation of the stereotype, which in case of a foreign country, can be seen as the only information accessible and therefore the most likely path to be activated when a decision is to be made. Stereotypes work as a tool for cognitive efficiency as a shortcut to rapid information processing. Through stereotypical thinking the brain condenses complex information for categorization and judgment (Levy et al., 1998). In our sample, people in Colombia are not highly familiar with Austria, as it was reflected in country familiarity used as control variable. Therefore, the stereotypical judgments associated with Austria and the emotions resulting from stereotypes can be more relevant. Thus, it can be expected that the admiration generated by stereotypes had a stronger effect on behavioral intentions, a finding that is consistent with previous tourism research (Micevski et al., 2020).

Our results also support the interaction effect of basic negative emotions, specifically anger. Following Lerner and Keltner (2001), anger is a high certainty emotion with a high sense of control that generates a tendency to perceive adverse events as brought about by others and under human control, in which the perception of risk is lower. It is also an antecedent of frustration that can have a substantial effect depending on individual predispositions towards an aversive event. Therefore, it might appear to be contra intuitive to understand why anger can have a positive moderating effect on the impact of admiration. However, this can be explained by imagining how frustrated an individual can be, that under specific circumstances of anger, he or she admires a country and has the intentions to visit it. It is also important to notice the different types of effects that negative emotions can have under an unprecedented situation such as a global pandemic. This is why it is important to consider individual emotional states for segmenting targets in order to specify the type of message in tourism marketing campaigns, which will be further elaborated in the managerial implications.

6. Managerial Implications

Emotions influence how consumers decide and behave in a purchasing situation, particularly in situations associated with hedonic experiences such as tourism (Micevski et al., 2020). Emotions can be motive in itself for travelling or can influence individual intents to visit, recommend or talk about a destination (White & Scandale, 2005). However, emotions are highly complex and play a different role and have a varying influence depending on the specific travel stage (pre-visit, on-site and post-visit), and therefore, it is difficult to specify their impact from a comprehensive perspective. This is why it is important that tourism managers assess not only the stereotypical evaluations that their country brand is associated with, but also the possible emotions these stereotypical evaluations trigger and the situational emotions their target audiences are at. In a global crisis such as the one brought by the COVID-19, negative emotions of people can manifest in a different manner, therefore, it is important to consider that rather than stereotypical destination image campaigns for instance, tourists might need to have

more certainty about the specific commitments of a destination about safety and security. Admiration has a strong impact on behavioral intentions, which is why triggering admirable evaluations, which are not normally seen in other destinations can be an alternative to foster competitive advantages. For example, if marketers predict that people in their target group feel angry, they could develop strategies for creating social media groups or activities in order to develop a sense of understanding and empathy.

Table 1. Descriptive statistics and group comparisons (Colombian sample)

Variable	Domestic (Colombian) advertisement (N = 40)		Foreign (Austrian) advertisement (N = 30)		Mann-Whitney <i>U</i> (<i>p</i>)
<i>Basic emotions (facial recognition)</i>					
% of anger	<i>M</i> = .35	<i>SD</i> = 1.99	<i>M</i> = .08	<i>SD</i> = .26	<i>U</i> = 586.50 (.74)
% of sadness	<i>M</i> = .25	<i>SD</i> = 1.32	<i>M</i> = .00	<i>SD</i> = .00	<i>U</i> = 555.00 (.13)
% of disgust	<i>M</i> = 1.10	<i>SD</i> = 5.79	<i>M</i> = .22	<i>SD</i> = .69	<i>U</i> = 544.00 (.29)
% of joy	<i>M</i> = 1.70	<i>SD</i> = 5.24	<i>M</i> = .25	<i>SD</i> = .77	<i>U</i> = 553.50 (.43)
% of surprise	<i>M</i> = .14	<i>SD</i> = .63	<i>M</i> = .00	<i>SD</i> = .02	<i>U</i> = 558.00 (.26)
% of fear	<i>M</i> = .04	<i>SD</i> = .17	<i>M</i> = .00	<i>SD</i> = .00	<i>U</i> = 555.00 (.13)
% of contempt	<i>M</i> = .12	<i>SD</i> = .35	<i>M</i> = .57	<i>SD</i> = 2.55	<i>U</i> = 599.50 (.99)
% of engagement	<i>M</i> = 7.90	<i>SD</i> = 11.64	<i>M</i> = 5.47	<i>SD</i> = 10.07	<i>U</i> = 508.00 (.27)
<i>Basic emotions (self-reported)</i>					
Anger	<i>M</i> = 1.05	<i>SD</i> = 0.32	<i>M</i> = 1.00	<i>SD</i> = .00	<i>U</i> = 585.00 (.39)
Sadness	<i>M</i> = 1.58	<i>SD</i> = 1.01	<i>M</i> = 1.30	<i>SD</i> = .70	<i>U</i> = 529.50 (.28)
Disgust	<i>M</i> = 1.00	<i>SD</i> = .00	<i>M</i> = 1.00	<i>SD</i> = .00	<i>U</i> = 600.00 (1.00)
Joy	<i>M</i> = 4.18	<i>SD</i> = 1.06	<i>M</i> = 4.00	<i>SD</i> = .91	<i>U</i> = 508.00 (.24)
Surprise	<i>M</i> = 3.40	<i>SD</i> = 1.13	<i>M</i> = 3.10	<i>SD</i> = 1.30	<i>U</i> = 532.00 (.41)
Fear	<i>M</i> = 1.03	<i>SD</i> = .16	<i>M</i> = 1.33	<i>SD</i> = .80	<i>U</i> = 494.00 (< .05)
Contempt	<i>M</i> = 1.00	<i>SD</i> = .00	<i>M</i> = 1.00	<i>SD</i> = .00	<i>U</i> = 600.00 (1.00)
<i>Secondary emotions (self-reported)</i>					
Admiration	<i>M</i> = 4.42	<i>SD</i> = .79	<i>M</i> = 3.07	<i>SD</i> = 1.78	<i>U</i> = 299.00 (< .01)
Pity	<i>M</i> = 1.09	<i>SD</i> = .52	<i>M</i> = 1.13	<i>SD</i> = .57	<i>U</i> = 477.50 (.51)
Envy	<i>M</i> = 1.12	<i>SD</i> = .55	<i>M</i> = 1.50	<i>SD</i> = 1.01	<i>U</i> = 409.00 (.05)
<i>Behavioral intentions</i>					
WOM intentions	<i>M</i> = 4.76	<i>SD</i> = .38	<i>M</i> = 3.97	<i>SD</i> = 1.00	<i>U</i> = 295.00 (< .01)
Willingness to visit	<i>M</i> = 4.83	<i>SD</i> = .35	<i>M</i> = 4.10	<i>SD</i> = .92	<i>U</i> = 267.50 (< .01)

Note: All self-reported items were measured on five-point scales.

Table 2. Descriptive statistics and group comparisons (Austrian sample)

Variable	Domestic (Austrian) advertisement (N = 18)		Foreign (Colombian) advertisement (N = 19)		Mann-Whitney <i>U</i> (<i>p</i>)
<i>Basic emotions (facial recognition)</i>					

% of anger	$M = .09$	$SD = .36$	$M = .10$	$SD = .30$	$U = 170.00 (.96)$
% of sadness	$M = .03$	$SD = .10$	$M = .00$	$SD = .00$	$U = 152.00 (.14)$
% of disgust	$M = .05$	$SD = .13$	$M = .01$	$SD = .04$	$U = 159.50 (.56)$
% of joy	$M = 2.41$	$SD = 4.08$	$M = .29$	$SD = .44$	$U = 151.00 (.47)$
% of surprise	$M = .78$	$SD = 3.29$	$M = .08$	$SD = .23$	$U = 170.00 (.96)$
% of fear	$M = .09$	$SD = .32$	$M = .07$	$SD = .19$	$U = 170.00 (.96)$
% of contempt	$M = .14$	$SD = .61$	$M = .70$	$SD = 1.60$	$U = 136.00 (< .10)$
% of engagement	$M = 14.62$	$SD = 21.33$	$M = 3.91$	$SD = 9.26$	$U = 79.50 (< .01)$

Basic emotions (self-reported)

Anger	$M = 1.00$	$SD = .00$	$M = 1.11$	$SD = .32$	$U = 153.00 (.16)$
Sadness	$M = 1.33$	$SD = .59$	$M = 1.11$	$SD = .32$	$U = 140.50 (.17)$
Disgust	$M = 1.00$	$SD = .00$	$M = 1.05$	$SD = .23$	$U = 162.00 (.33)$
Joy	$M = 4.33$	$SD = .69$	$M = 4.11$	$SD = 3.88$	$U = 149.00 (.47)$
Surprise	$M = 2.33$	$SD = 1.19$	$M = 2.37$	$SD = 1.07$	$U = 164.00 (.83)$
Fear	$M = 1.33$	$SD = .84$	$M = 1.00$	$SD = .00$	$U = 142.50 (< .10)$
Contempt	$M = 1.00$	$SD = .00$	$M = 1.00$	$SD = .00$	$U = 171.00 (1.00)$

Secondary emotions (self-reported)

Admiration	$M = 3.94$	$SD = .94$	$M = 3.63$	$SD = .76$	$U = 138.00 (.28)$
Pity	$M = 1.06$	$SD = .24$	$M = 1.11$	$SD = .46$	$U = 171.00 (1.00)$
Envy	$M = 1.78$	$SD = 1.22$	$M = 1.37$	$SD = .50$	$U = 153.50 (.54)$

Behavioral intentions

WOM intentions	$M = 4.69$	$SD = .45$	$M = 2.84$	$SD = 1.21$	$U = 26.00 (< .01)$
Willingness to visit	$M = 4.25$	$SD = 1.01$	$M = 3.47$	$SD = 1.18$	$U = 100.500 (< .05)$

Note: All self-reported items were measured on five-point scales.

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