An Examination of Alignment of Hotel Brand Differentiation and Customer Priorities: A Case Study of Three Unique Destinations

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Abstract

Purpose – *Marketers spend millions to distinguish their properties from the competition via varying marketing paraphernalia; however, online hotel reviews may trump these marketing efforts and create reputational inferences for potential visitors that can run counter to existing corporate branding and positioning. This research has three objectives: 1. To examine the alignment of hotel brand differentiation and customers' perspective through online reviews. 2. To explore whether online reviews are typically general in nature or alternatively, match the uniqueness of the hotels being reviewed. 3. To examine the types of hotels that successfully maintain distinctiveness in online reviews.*

Method – *This study examines online hotel reviews of nine distinctive properties for three different destinations, namely, beach, big city, and eco-tourism locations. The text analysis model is generated to examine 25,579 hotel reviews across three destinations. Text processing and machine learning models were implemented to analyse the online reviews to find similarities and differences between the reviews of the selected distinct locations. The supervised machine learning method is created to predict the correct hotel category based on the text of the review.*

Findings – *The study finding suggests that despite the destination of type of hotel, customers care more about concepts such as 'service', 'room', and 'staff'. Big city luxury hotels were the only contradiction as they focused on their location and customers echoed that in their reviews, but the eco and beach resorts do not offer online reviews that are distinctive from each other.*

Limitations – *As far as limitations are concerned, we only selected the top 5 hotels in each category, and the findings might be biased toward more expensive hotels. For future studies, we would like to use the same methodology on different hotel prices in the same category and see if the results are the same or not.*

Implications – *The study provides evidence into the evolving status of ethical funds. The growing acceptance and popularity of such funds coincide with significantly greater cash inflows into the funds, which may continue to impact the volatility behavior of such assets. Furthermore, the growing worldwide attraction and acceptance of ethical funds may generate sufficient cash inflows so that these funds behave the same way as non-ethical funds in the future.*

Originality – *This research contributes to the literature as it uniquely uses processing and machine learning techniques to compare User-generated Content (UGC) such as online reviews to corporate marketing messaging and brand positioning across three different types of hotels and destinations. Additionally, a new theoretical model of User-generated Content Influence (UGCI) is proposed.*

Introduction

In today's "brand-centric" marketplace, brand managers have become obsessed with finding ways to differentiate their products and/or services from competitors. Customer feedback is a significant component of this differentiation, and online reviews have become the "go-to" tool for many consumers as they attempt to distinguish between competitive offerings in their decision-making process (Browning, et al. 2013; Piramanayagam and Kumar 2020; Chen and Xie 2008; Nguyen et al. 2020; Tran and Vu 2019). Nowhere is this more apparent than in the hotel and tourism sector as one hotel industry survey found that 81% of potential guests consider online reviews to be important, 95% had read an online review before taking their most recent trip, and 49% of potential guests will not make a reservation with a hotel that doesn't have online reviews (Ady and Quadri-Felitti 2015). Hoteliers and tourism professionals also recognize the impact of online reviews, and they often utilize user-generated content (UGC) to formulate strategies that can ultimately improve service quality, customer satisfaction levels, hotel occupancy rates, and overall profitability (Berezina, et al. 2015; Piramanayagam and Kumar 2020; Hu and Trivedi 2020; Tran et al. 2022).

With so many 'would-be consumers' seeking out hotel reviews, invariably brand reputation will be influenced by this form of user-generated content-UGC (Chakraborty

and Bhat 2018; Xun, 2014). One study reported that 90% of travelers will avoid booking hotels labeled as "dirty" in online reviews (ReviewPro 2011) and a 2022 BrightLocal.com study found that only 3% of consumers said they would consider using a business with an average star rating of two or fewer stars (Pittman 2022). Reviews allow customers to reduce the risk associated with service and experiential consumption based solely on advertising (Xiang and Gretzel 2010; Zhang et al. 2010). This notion of brand confirmation and/or disconfirmation is at the heart of our research study. We examine the congruency between how consumers depict a brand in online reviews and the corporate messaging hotel brands place in the marketplace. Extant literature points to the salience of online reviews and their resulting impact on brand profitability (Liu and Zhang 2020). At the same time, researchers also point out the ability of UGC to influence the information industry professionals to communicate on their websites and via marketing paraphernalia (Casaló, et al. 2015). If these two messages are completely different, existing research suggests that consumers are more likely to believe the customer review and less likely to believe the corporate branding, thereby further eroding the potential impact of corporate branding in the marketplace (Bae and Lee 2011; Southern 2018). Alternatively, if there is a synergy between the messaging communicated on corporate websites and that present in existing UGC, this in turn lends itself to more credibility for corporate branding and positioning.

We explore the similarities between UGC via online reviews and the actual brand messaging that hotels have used on their websites. Using reviews from TripAdvisor.com, we utilize text processing techniques to analyze reviews of 15 hotels across 3 different types of destinations (namely beach, big city, and eco), with the specifical goal of investigating the synergy between online reviews given by the consumer and website branding offered by individual hotels. To date, there has been limited work that focused on the impact of online reviews and customer priorities on corporate branding and the reciprocal relationship between the two (Tran et al. 2022). This study contributes to the existing body of research by exploring the connection and congruency in the language used in the character development of a hotel's brand positioning as seen from its website versus identified customer priorities and supporting/contradicting character dimensions discussed in online reviews.

Literature Review

Online Reviews

According to socialtoaster.com, user-generated content (UGC) is important to consumers and businesses alike. Online reviews are a popular form of UGC and have become an important source of information for both potential tourists and industry professionals alike (Godes et al. 2005; Liu and Zhang 2020). According to one study, eighty-four percent of Millennials say UGC influences their purchase behavior, and 70% of consumers, in general, say they consult UGC before purchasing a brand (Austen 2018).

The trends are the same within the tourism industry where most potential travelers surf the web for hotel reviews before clicking the "Book Now" button. In 2017 alone Trip Advisor reviews and scores influenced around $546 billion in travel spending (Oxford Economics 2017). Hospitality professionals know that hotel reviews can affect click-through rates, hotel occupancy, and revenue generation (Hotelnewsresource.com 2018).

Findings from the 2021 Trip Advisor annual statistics study found that 87% of TripAdvisor users feel more confident in their decision when they read the reviews, and 98% say they find them "accurate of the actual experience" (Hawkins 2021). Yet online reviews are more than just an opinion on a product/service's performance. They speak to satisfaction with a brand and act as a proxy for how much a potential consumer can trust corporate advertising and branding. Consumers today are 12 times more likely to trust an online review than corporate marketing, and 79% of consumers trust online reviews just as much as personal recommendations (Hawkins 2021), with consumers valuing these reviews more than the opinions of industry experts (Gavilan et al. 2018). These reviews are an easy way for consumers to share with others information about how they perceive confirmation or disconfirmation between what they expected from a brand in terms of product quality and what they received from that brand (Chatterjee 2001; Hu et al. 2017).

Consumers often utilize online reviews as they engage in the consumer decision-making process because reviews offer information above and beyond what is available via corporate marketing (Lee et al. 2008; Moriuchi 2016; 2018; Tran et al. 2022). Extant research tells us that consumers are willing to pay up to 20% more for services with a five-star rating compared to those with a four-star rating (Comscore.com 2017), indicating that online reviews and other forms of UGC are being used as a way of narrowing the playing field (Gavilan et al. 2018; Nguyen et al. 2020; Tran & Vu 2019) which adds to the salience of using UGC in the development of marketing strategy (Crowdriff.com 2017).

The reliance on reviews is so entrenched that companies are now willing to offer compensation to individuals who post fake reviews (both favorable reviews about their hotel and unfavorable ones against their competition) to bolster their brand reputation (Choi et al. 2017; Hawkins 2021). This has led the Federal Trade Commission (FTC) to issue notices to over 700 companies in 2021 warning them about using fake reviews and advising them that the penalty for such offenses runs upward of $47,000 in fines (FTC.gov 2021). The FTC estimates that about 8% of Yelp reviews and a quarter of Google reviews are fake (Hawkins 2021), suggesting that companies understand the direct influence of online reviews on their brand reputation, credibility, positioning, and ultimately bottom line.

Brand Positioning

Today's marketplace is cluttered and complex. To simplify the decision-making process, consumers often will organize products/services into specific categories thereby relating them to each other and offering a unique positioning for each of these product/service offerings in their minds (Kotler and Armstrong 2020). According to Alzate et al. (2022), positioning is the process of designing an organization's offering and image to occupy a distinctive place in the consumer's market's mind. It is formed "by a complex set of consumer perceptions, images, and emotions associated with the brand's products and how they compare with competing products. Therefore, to position a product, companies need to understand how consumers perceive products in its category" (p.1).

Brand positioning is driven primarily by marketing activities, integrated marketing communications (IMC), and the marketing mix (Kotler and Armstrong 2020). Brand elements such as brand names, logos, packaging, and symbols help to develop this positioning and maintain certain key associations in the marketplace (Keller and Lehmann 2006). Brand associations that evoke positive affect, as well as cognitive considerations of benefits, provide consumers with reasons for buying a brand or product (Henderson et al. 1998), and extant literature has linked favorable perceptions of brand images and attitudes to positive purchase intentions (Baksi and Panda 2018; Kudeshia and Kumar 2017).

A unique brand positioning is critical for brands, particularly in the hospitality sector, and can offer multiple benefits to the firm such as higher occupancy, repeat visits, increased service patronage, and even relative economic resiliency during a down industry cycle (Hu and Trivedi 2020).

Integrated Marketing Communications (IMC) refers to the combination of marketing activities designed to work in tandem with each other to create a specific brand image and identity (Kotler and Armstrong 2020). Today, traditional marketing activities and the marketing mix are both helped and hindered by the prevalence of social media (Kaur and Kumar 2021). Consumers often use social media platforms to weigh in on whether they believe a company is following through on its customer promise. At the same time, customers are also quick to showcase brands they believe fail to deliver on their promise to consumers.

eWOM and other forms of UGC have become vital pieces of IMC and marketing mix offerings of brands. The proliferation of online reviews has created an environment where the future survival of brands is dependent on how reliable a company is in delivering a compelling brand promise (Azate et al. 2022; Balducci and Marinova 2018; Kübler et al. 2019). Consumers seem vested in the notion that it is part of their responsibility as a brand user to educate other potential users about the sincerity and authenticity of the brand promise and are using their voice to essentially co-create brand messaging along corporate entities (Veloutsou and Delgado-Ballester 2018).

As consumers become more invested emotionally and financially with brands, their desire to co-create brand identities increases and brands are also seeing the value in this co-creation process (Azate et al. 2022). Plumeyer et al. (2017) argue that it is necessary to examine the hotel brand positioning from a consumer's perspective and in doing so, the performance of various competing hotels must also be considered. This paper examines the connections between corporate brand associations (via their websites) and consumer brand associations (via online reviews) to explore the congruency between these two elements, as well as how these variations can impact a brand's competitiveness in the marketplace.

The Link between Customer Priorities and Marketing Strategy

In an excerpt from a 2022 McKinsey podcast, a McKinsey Senior expert Chauncey Holder said it best "If you're a consumer and your choice is to either put more weight on a signal that the marketer is giving you or more weight on the signals that actual consumers who are using the products are giving you, well, which one do we think most consumers will eventually default to? And we are absolutely seeing that" (p. 2 Fedewa and Holder 2022). Online reviews have now completely changed the game. According to Fedewa in today's marketplace, it's purely a matter of "ratings and reviews". (p. 2 Fedewa and Holder 2022).

In a hyper-competitive, post-pandemic era, Holder and Fedewa make the case that the most successful corporations will be the ones that actively solicit reviews for their products and services and then are very responsive to said reviews (Fedewa and Holder 2022). We know from past research that businesses that are responsive to reviews earn at least 35% more revenue than those that are not (Womply Research 2018). These statistics and others have demonstrated that the market has evolved from a producer-driven market to a buyer-driven one, making it critical to use customer feedback when developing corporate marketing and operational activities (Kim and Kim 2022).

In this study, we examine the positioning offered by 15 hotels in three different types of differentiations: luxury city hotels, all-inclusive beach resorts, and eco-tourism hotels. We argue that a luxury city hotel should have a different positioning to that of an all-inclusive beach hotel, and both should in fact have a different and differentiated positioning from that of an eco-tourism hotel. Content analysis and word searches are used to establish distinct branding in each of these categories and to differentiate them from the other categories. Moreover, each category of hotels should be distinct from other categories. That is, a luxury city hotel is distinct in its style, character, and physical product from an eco-tourism hotel or an all-inclusive beach resort and vice versa.

We make the case that in addition to the hotels themselves having unique corporate branding from each other, given the unique nature of each of these groups,

visitors should also use different and distinctive language when describing each category of hotel and there should be limited overlap between the various categories. We are also investigating whether distinctive positioning is being co-created by hotel guests not only across categories but also within categories. That is, are online reviewers offering distinctive brand positionings for these hotels that are 1. Unique and distinct across categories? (i.e. a luxury city hotel is different from a luxury eco-resort). 2. Are these reviews also distinctive within groups? (i.e. online reviews use distinctive language when discussing one type of eco-resort versus another type of eco-resort) Lastly, will online reviews exhibit congruency with the corporate branding and positioning offered by individual hotels, and will these reviews reflect the positioning, style, and character proposed by the brand in their various marketing mix and marketing communications available to the consumer? (i.e. will UGC mirror the corporate brand positioning offered by individual hotels).

Sentiment Analysis

Extant literature has recognized the value of greater exploration of narratives, attitudes, and brand associations present in eWOM texts (Azate et al. 2022; Heng et al. 2018; Hu and Trivedi 2020). These researchers have also argued that there are several limitations of past research that has used survey data as their primary data source for brand positioning, citing issues like small sample sizes and information selectivity bias (Hu and Trivedi 2020; Azate et al. 2022). Instead, the literature has made a case for the use of sentiment text analysis and text mining of online reviews when studying brand image and brand positioning (Azate et al. 2022). This technique allows researchers to "extract useful and meaningful information from the unstructured text" (p. 1 Azate et al. 2022).

Kim and Kim (2022) suggest that using UGC to inform operational priorities and marketing messaging is an example of a company's ability to extract business value from social media data. They conducted a study on hotel reviews and found that 55 words were typically used to describe customer satisfaction levels for hotels. These words were divided into four main factors- service, destination, the physical environment, and trip purpose (Kim and Kim 2022). This study mirrors the work of Kim and Kim (2022) and others (e.g. Azate et al. 2022; Heng et al. 2018; Hu and Trivedi 2020) who examine hotel reviews through text analysis to understand how the language used in these reviews have echoed in corporate messaging and advertising. Additionally, the study builds on previous work by using sentiment analysis to examine whether there is a commonality in how customer reviews describe hotels in different sectors and whether UGC is fairly common across hotel categories and brand differentiations.

Text mining of online reviews and other UGC is typically classified into two methods, namely, machine learning and lexicon-based methods (Azate et al. 2022; Kübler et al. 2019). Machine learning algorithms often require a high level of skilled expertise

and computational skills. Alternatively, lexicon-based (LBA) methods, which rely on established dictionaries of words, provide a simpler method for analyzing the text of online reviews. Recent developments and advances in machine learning and natural language processing have led to increased attention to sentiment analysis of hotels' online reviews.

The research using text analysis and machine learning methodologies is quite extensive. Krawczyk and Xiang (2016) used online reviews to create a perceptual map from the most frequent terms used, finding that online reviews can be used to represent the level of differentiation between hotel brands. Khorsand et al. (2020) used supervised learning methods to predict future reviewers' rates on a hotel based on their profile information and the hotel's amenities. Padma and Ahn (2020) used content analysis to find the key attributes of luxury hotels in Malaysia and Liang et al. (2019) examined the determinants of the helpfulness of reviews by a comprehensive framework.

Sentiment analysis has been used for different purposes such as review helpfulness prediction and review summarization generation. In other studies sentiment analysis is used to analyse the polarity of online reviews. For example, Shi and Li (2011) proposed a supervised machine-learning approach based on a uni-gram feature and TF-IDF for the polarity classification of reviews. Ray et al. (2021) developed an application of BERT (Bidirectional Encoder Representations from Transformers) to predict the sentiment polarities of each review, including positive, negative, and neutral. Zhang et al (2021) used an unsupervised learning method for aspect-level sentiment analysis to measure customer preference for hotel services.

Methodology

Pre-test

Our pre-test was conducted with 80 college students at a small northwestern university in the United States. It was used to establish the destinations we were going to examine for the main study, as well as the review site we were going to utilize for customer reviews. In the pre-test we asked students to identify the types of vacations they would go on, if they could go on any type of vacation. The findings led us to pick the top three vacation types for the main study, as 91% of respondents chose a beach vacation as one of their top 3 choices of vacations, 86.2% of respondents chose a big city sightseeing as one of their top 3 vacations choices, and 82.5% chose eco/nature vacations as one of their top 3 choices.

We also asked students to name the site they most often frequented to read and post reviews. Yelp and Trip Advisor were listed as the top two sites for reading and posting reviews. Finally, the last piece of information we explored in the pre-test was the type of accommodations students would use when they went on a vacation to ensure

hotels were still a popular option with customers given the multiple accommodation options available in the marketplace today. Respondents listed hotels as number 1, Airbnb as number 2, and a hostel/motel as the third option. Based on the pretest findings, we extracted consumer reviews from TripAdvisor, which is one of the largest online review communities for travel consumers. We evaluated the online peer reviews of hotels in three different location categories: luxury big-city hotels, high-end beach resorts, and eco-tourism resorts. To create a baseline for a particular segment, we chose five hotels in each of the categories.

In deciding what we wanted to use as each of our destinations for the three identified categories, we turned to practitioner press articles. The hotels were chosen based on data from Conde Nast Travel, US News, Forbes, TripAdvisor.com, and Tripping.com. According to Forbes.com in an article with data from Statista, the top three cities in the world for luxury hotels are London, Dubai, and New York (McCarthy 2018). However, New York has more visitors annually than the other two, so we ultimately chose New York as our location of choice for luxury hotels. For the eco-tourism destination, we chose Costa Rica as it is always listed as either number 1 or in the top 3 for the best eco-tourism destination across several popular travel publications. Regarding the all-inclusive beach resort destination, we looked to the Caribbean for a location as the concept of an all-inclusive beach resort originated there. Each list from popular travel sites for top all-inclusive beach resorts that we reviewed heavily featured Jamaican hotels. As a result, Jamaica was chosen based on the presence of many highly-ranked all-inclusive resorts on the island. The hotels selected from all three categories were similar in terms of popularity and cost. Table 1 lists the hotels along with the number of reviews that were used in this study.

Table 1: List of hotels and number of reviews for each

Hotel Category	Hotel Name	Number of reviews
Eco-tourism resorts Location: Costa Rica	Finca Rosa Blanca Coffee Plantation Resort	696
	Lapa Rios Lodge: Osa Peninsula lodge	635
	Luna Lodge Eco Resort	336
	Hotel Punta Islita	1018
	Pacuare Lodge Costa Rica	575
All-inclusive beach resorts Location: Jamaica	Jamaica Inn	1370
	Sandals Royal Plantation Beach and Villa Golf Resort	2649
	Iberostar Grand Hotel Rose Hall	6564
	The Caves	694

	Grand Palladium Lady Hamilton Resort and Spa	5176
Luxury big city hotels Location: NYC	The Beekman	714
	The Chatwal	1121
	The Lowell	325
	The Quin	2890
	The St. Regis	816

Data Cleaning Process

Our research process, (as shown in Figure 1) can be divided into different principal steps: hotel review collection, review preprocessing, domain specific word selection and word aspect association calculation. First, reviews were collected from TripAdvisor.com for the specified hotels. The reviews were then preprocessed by removing unnecessary information. Next, a set of words were selected for each hotel category. For this step, vision, and mission statements (where available), along with the contents of the homepage were analyzed to identify how each hotel markets and brands itself. Table 2 lists the domain-specific words for each category:
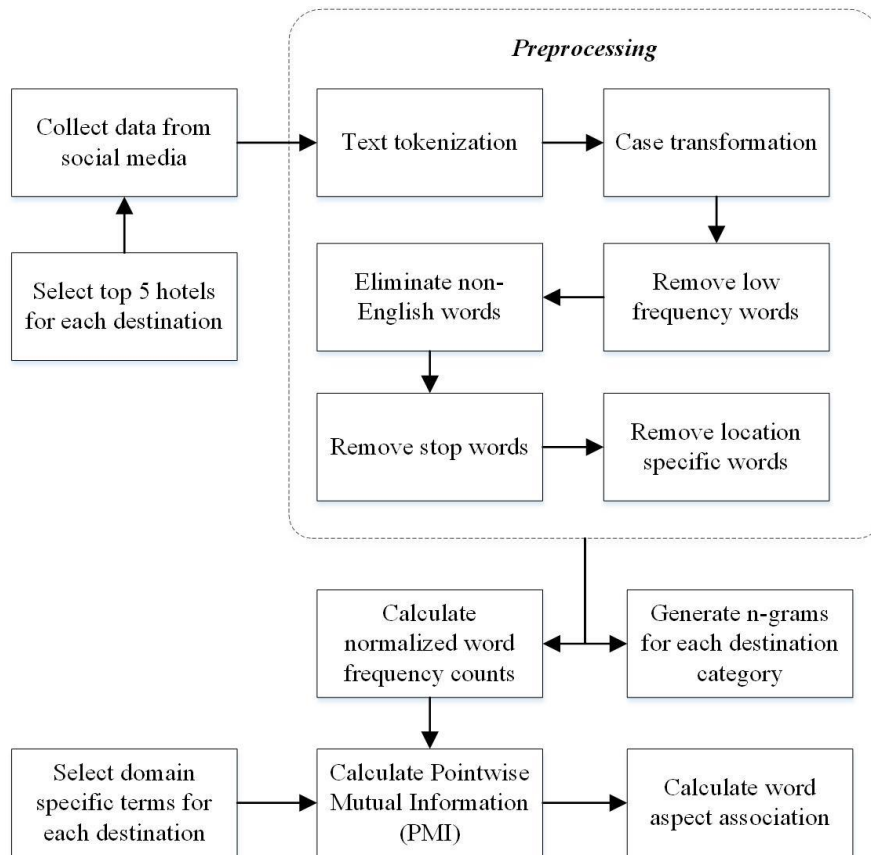

Figure 1: Research Process

Table 2: Selected words for each domain

Destination	Top 3 domain-specific terms
Eco-tourism resorts	Sustain, Solar, Recycle
High-end beach resorts	Escape, Relax, Getaway
Luxury big-city hotels	Classic, Luxury, Location

Finally, n-grams were generated, and pointwise mutual information was calculated for each term to calculate the word aspect ratio.

Review Preprocessing and N-gram Generation

A set of pre-processing steps were used on the reviews. For example, an original review as it appeared in TripAdvisor:

"We had a wonderful time relaxing and enjoying all the offerings of the hotel. Our deluxe suite was perfect and the view overlooking the forest to the sea breathtaking. The staff was kind, knowledgeable and eager to assist. We will certainly be back!"

And the review after the pre-processing steps:

"Wonderful time relaxing enjoying offerings hotel deluxe suite perfect view overlooking forest sea breathtaking staff kind knowledgeable eager assist certainly"

The N-gram frequency technique is an ideal approach for text coming from noisy sources (Cavnar and Trekel, 1994). Based on Zipf's laws, if we compare documents from the same category they should have similar n-gram frequency distribution (Cavnar and Trekel, 1994). For each destination category, we generated a set of n-gram frequency profiles to represent each destination. N-gram based similarity measures are used to highlight the voice of customer by detecting the highest frequency phrases and words in the reviews. Table 3 lists the top 2-gram words for each destination.

Table 3: Top ten 2-grams for each destination category

Destination	Top 2-gram words
Eco-tourism resorts	Highly recommend Coffee plantation Coffee tour Howler monkeys Plunge pool Infinity pool Rain forest Horseback riding Beach club White water

High-end beach resorts	Food great
	Front desk
	Pool area
	Surf turf
	Ocean view
	Room service
	Highly recommend
	Top notch
	Butler service
	Star friends
Luxury big city hotels	Central Park
	Great location
	Highly recommend
	Staff friendly
	Front desk
	Times square
	Front desk
	Room service
	Hotel staff
	Friendly helpful

The results show that the focus of the reviews is mainly on the amenities rather than how the websites position themselves. However, to compare frequency distributions across different corpora, we need to normalize the frequency counts. This is due to the fact that our documents have different sizes and normalizing them will give a better representation of each frequency count.

$$normalized\ frequency\ count = \frac{frequency\ of\ word\ in\ corpus}{corpus\ size}$$

Analysis and Results

In this study we have analyzed the data from different aspects to understand the differences between customer reviews and hotel brand positioning. We conducted the following analyses to better understand language differences within and across categories.

- Calculate and compare the word frequency of domain-specific words (listed in Table 2) in the three hotel categories.
- Calculate and compare the word frequency of general terms in hospitality such as words related to food, room, service, etc.
- Calculate and compare the PMI to specify the association of each word with the hotel category.

- Calculate a final score for the word-aspect association that compares the PMI of a word in one domain with the PMI of that word in other domains.
- Generate a supervised machine learning model to predict the hotel category based on a set of features generated from each review. Using this model, we wanted to know how similar or distinct the reviews of hotels are from each other and how likely it is to specify the hotel category given the review.

Word Frequency Analysis

Domain-specific words (table 2) were used in the first stage of analysis to see if there is a strong positive relationship between brand positioning as defined by an individual service provider and brand positioning as defined by a customer in an online review. In other words, we wanted to see how often the words that hotels used on their website to position themselves have been used in the reviews. For this purpose, we compared the normalized frequency of these words in all the categories.
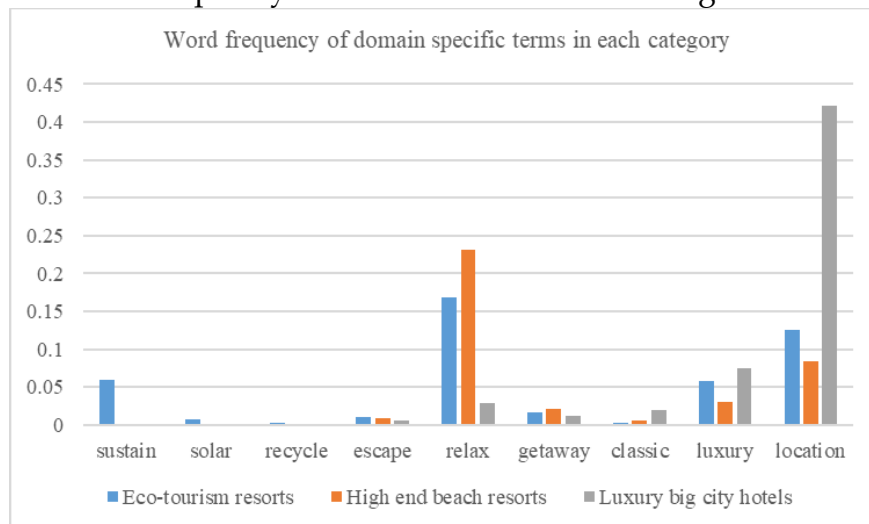

Figure 2: Word frequency comparison of domain specific terms

The results shown in Figure 2 suggests that although the domain specific terms are being referred most in their reviews, overall, their frequency is very low. The only exception was the luxury big city hotels in which both the branding and customer reviews focused on their location. The concept of 'location' and this word have been mentioned in comments as well as the website extensively. Therefore, in the next stage, we compared the frequency of these words with a set of general terms in the hospitality industry to see how much reviewers focus on attributes related to a brand positioning vs the overall characteristics of a stay at a hotel. Figure 3 compares the frequency of words in each category. These figures show that on average the words related to a hotel's brand positioning have been mentioned the least compared to common words used in the hospitality industry. Customers tend to talk more about their experience in terms of service, food, room, and staff.
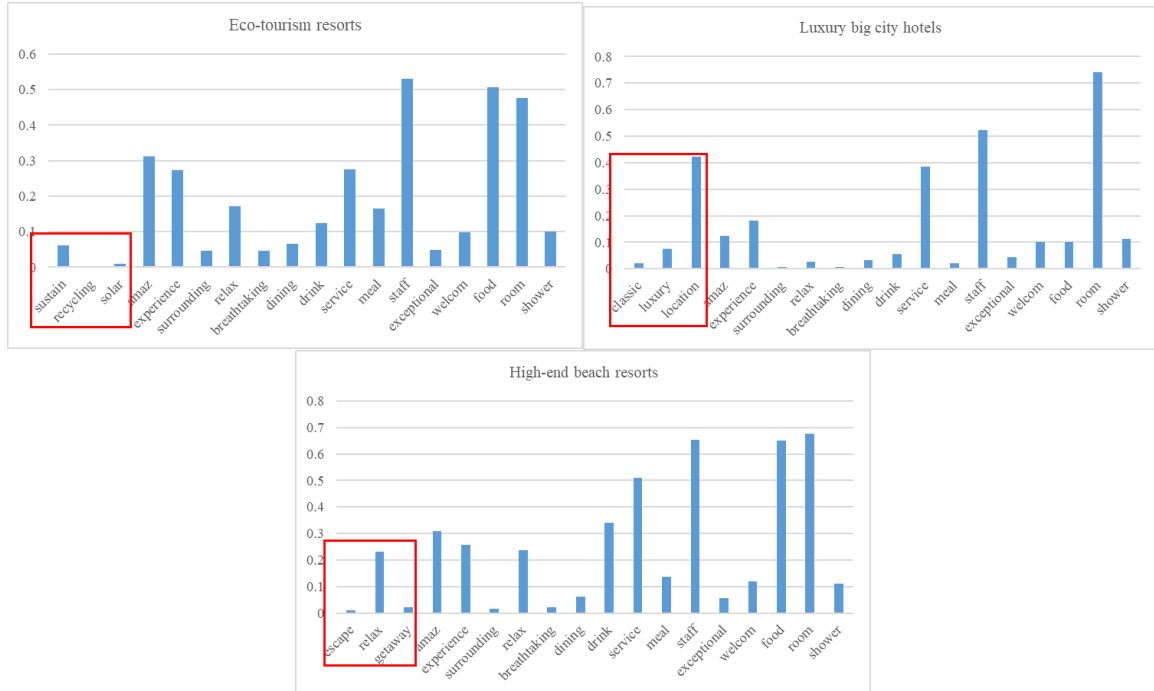
Figure 3: Word count distribution for each domain

Figure 4 compares the word occurrence of the general terms in hotel industry for all the locations. The findings suggest that in online reviews, consumers use very similar terminology to discuss all hotels within a particular category. It also supports that there is a distinct difference in the terminology consumers use to discuss the hotels in each of the three hotel categories. However, on the contrary, despite the destination and type of hotel, customers care more about concepts such as 'service', 'room' and 'staff'.
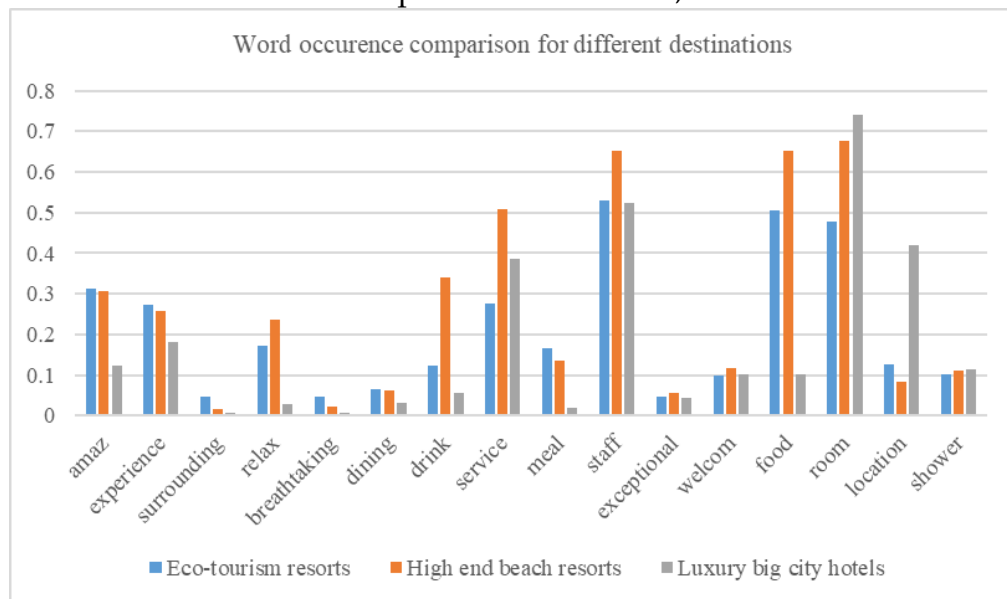

Figure 4: Word count distribution for all the reviews

Word-Aspect Association

To compare the association of each term with destination we generated scores based on Pointwise Mutual Information (PMI). This is done to further analyze the association of each word with the hotel category, we calculated the PMI for our top words in each category.

$$PMI(w, dom) = \log 2 \frac{freq(w, dom) \times N}{freq\ (w) \times freq(dom)}$$

Where freq(w,dom) is the number of times a term w occurs in our domain-specific reviews, freq (w) is the total frequency of the term in all the reviews, and freq(dom)is the total number of terms in our domain and N is the total of terms in all the reviews. A higher PMI indicates a greater association of that word with the domain compared to the others. Since PMI is known to be a poor estimator of association for low-frequency terms, we only selected high-frequency words. The PMI of general aspects of the hotel industry is shown in Table 4 for each category. The top 3 PMI for each group is highlighted to show the focus of the reviewers in each category.

Table 4: Score for different terms at the domains

	Eco-Tourism	High-end Beach	Luxury Big City
PMI(staff)	0.34	0.26	0.53
PMI(service)	0.23	0.28	0.53
PMI(food)	0.38	0.32 *	0.12
PMI(room)	0.27	0.25	0.69
PMI(location)	0.29	0.12	1.56 *
PMI(experience)	0.43	0.26	0.46
PMI(amaz)	0.45	0.28	0.29
PMI(drink)	0.19	0.34 *	0.14
PMI(sustain)	2.86 *	0.01	0.03
PMI(solar)	2.58 *	0.05	-
PMI(recycle)	1.69 *	0.17	-
PMI(escape)	0.51	0.26	0.38
PMI(relax)	0.37	0.32 *	0.10
PMI(getaway)	0.36	0.28 *	0.39
PMI(classic)	0.10	0.18	1.36 *
PMI(luxury)	0.50	0.17	1.05 *
PMI(timeless)	-	0.27	0.76

To calculate the word-aspect association, we calculated a score that compares the PMI of a word in one domain with the PMI of that word in other domains.

$$Score(w, dom) = PMI(w, dom) - PMI(w, -dom)$$

Table 5 shows the score of words in domains. The higher the score, the greater the word-aspect association between that word and domain.

Table 5: Score for different terms at the domains

	Eco-Tourism	High-end Beach	Luxury Big City
Score(staff)	0.04	-0.18	0.26
Score (service)	-0.07	-0.11	0.26
Score (food)	0.09	0.07	-0.20
Score (room)	-0.03	-0.24	0.44
Score (location)	-0.01	-0.83	1.41
Score (experience)	0.15	-0.19	0.18
Score (drink)	-0.12	0.17	-0.18
Score(sustain)	2.84	-1.35	-0.31
Score (solar)	2.53	-1.16	-0.34
Score (recycle)	1.55	-0.63	-0.34
Score (escape)	0.23	-0.18	0.09
Score (relax)	0.07	0.10	-0.23
Score (getaway)	0.07	-0.10	0.10
Score (classic)	-0.22	-0.59	1.19
Score (luxury)	0.22	-0.62	0.84
Score (timeless)	-0.33	-0.13	0.52

The results show that the word association of our domain-specific words is the highest in each category. It can be concluded that customers tend to focus on general aspect characteristics of hotels no matter the location. However, the domain-specific words are mentioned the highest in the relative hotel category compared to others. In the next section, we build a machine learning model that would use a set of features to classify the review into one of the three hotel categories. The purpose of this model is to see if the reviews for each hotel category are distinct from others or not.

Machine Learning Model

In this section, a supervised machine learning model was developed to predict the likelihood of detecting the hotel category based on the review. The focus of this section is training supervised learning text classification models to see whether it's possible to predict the hotel category in the review that was written. This will help identify how different or similar the reviews are. As mentioned, the hotels are in the same category as

price and quality. If the model can predict the correct hotel category that would suggest that the customers' reviews are tailored for each specific hotel category and not just on the basics of room, service, staff, food, etc.

For this purpose, a set of 39 features were created for each review. The features consist of the following groups:

- 25 features were generated that would indicate the existence of general hospitality domain words. These keywords focus on the main aspects of the hotel such as room, service, food, and staff, ….
- 9 features that count the word frequency of domain-specific words. We used the domain-specific words listed in Table 1.
- 1 feature that would capture the count of exclamation marks.
- 2 features that would capture the count of adjectives and adverbs
- 1 feature that would count the length of the review
- 1 feature to identify the polarity of the review as positive, negative, or neutral

We used different classification methods such as a Decision Tree, Random Forest, LibSVM, K-Nearest Neighbor, and Naïve Bayes. The confusion matrix for our best model (Random Forest) is shown in Table 6.

Table 6: Classification confusion matrix

	Costa Rica	Jamaica	NYC	Precision
Costa Rica	1037	48	31	92.92%
Jamaica	1233	14609	495	89.42%
NYC	611	1796	5340	68.93%
Recall	35.99%	88.79%	91.03%	

The results show that NYC reviews had the highest accuracy of getting classified in the correct class, with Jamaica coming next, whereas the Costa Rica reviews had the lowest. This indicates that NYC reviews are very distinct compared to others. However, the majority of the Costa Rica reviews got classified as Jamaica, and this shows that customers' perspective of their stay in an Eco-tourism hotel is very similar to their perspective of high-end beach resorts.

Discussion

There has been little research on the impact of online reviews on brand positioning and consumer buying behavior (Farzin and Fattahi 2018; Tran et al. 2022). This study contributes to that gap in the literature by examining the relationship between the brand messaging of both consumers and corporate entities. Our goal for this study was three-fold. First, we explored whether online reviews were centered on marketing dimensions put forward by the hotel in its positioning and marketing efforts or whether these reviews

were distinct from brand messaging in terms of what was discussed. Second, we sought to examine if the online reviews of hotels within any one vacation category were distinctive from other hotels in that category. Finally, we investigated how these online reviews in any one category of hotels were distinctive from online reviews of hotels in another category. To accomplish these goals, we examined unique branding in the categories of character, style, and physical product of the hotel offerings in three vacation categories, namely, all-inclusive beach resorts, eco-tourism hotels, and big city luxury hotels.

Theoretical Implications

Extant Literature tells us that online customer reviews matter and they seem to have a major effect on the purchasing decision of customers (Ye et al. 2011; Farzin and Fattahi 2018; Filieri and McLeay 2014; Chen and Xie, 2008; Nguyen et al. 2020; Tran and Vu 2019; Tran el al. 2022). New and potential customers care about the past experiences of previous customers because they believe these perspectives can inform their future experiences with said brands (Austen 2018; Lee et al. 2008; Moriuchi 2016; Moriuchi 2018). Potential customers read online reviews as an avenue to check whether the marketing communication offered by the company on their website can be trusted (Alton 2017; Mackenzie 2012; Farzin and Fattahi 2018; Tran et al. 2022).

We argued that based on examined website messaging, each hotel in the identified categories had a different character, brand, style, and positioning for their hotels. Given the distinctive nature of each of these groups, the expectation was that visitors would use different and distinct language when describing each category of hotel and there should be limited overlap between the various categories. Additionally, given the pervasive nature of marketing messaging, we posited that both positive and negative online reviews would be reflective of the positioning, style, and character proposed by the brand in their various marketing mix and marketing communications available to the consumer. Simply put, online reviews would mirror the brand dimensions identified by the brand itself and the brand dimensions discussed in reviews of an all-inclusive beach resort should be distinctively different from those discussed in online reviews of an eco-tourism resort. Similarly, the reviews for beach and eco-tourism resorts should be uniquely different from the online reviews of a luxury big-city hotel.

Our findings suggest that there is a distinct difference between how hotels position themselves on their websites and what customers talk about in their online reviews. Despite visiting varying destinations and types of hotels, customers focused on concepts such as 'service', 'room', and 'staff' across destinations and individual hotels. Big city luxury hotels were the only contradiction to this trend, as these hotels tended to brand based on their city locations and customers echoed that in their reviews.

This finding was also supported by our machine-learning algorithm. For example, eco-tourism resorts focus on demonstrating how their hotels embrace sustainable operations. However, the online reviews for eco-hotels focused primarily on staff, services, food, and room type. Where high-end beach resorts branded themselves as places t offered opportunities for escape and relaxation, online reviewers instead mainly discussed the staff, service, food, and room options. Moreover, consumers did not experience hotels solely based on the proposed brand style and character put forward by the hotel. Instead, they focused on whatever they and other past guests deemed important, regardless of if that was a part of the established corporate positioning and branding.

Essentially, users are creating new brand knowledge. Despite the efforts of service providers to dictate how service encounters should be experienced and conceptualized, instead, experiences were occurring through a lens created by reviewers and not corporate branding. Based on the study findings we proposed a theoretical model presented in Figure 5. The model suggests that service providers market and position themselves in particular ways and operationalize these positioning through traditional and non-traditional marketing tactics. Potential guests then process these marketing tactics and either buy into or reject these positions. This will then lead to a service encounter or not. Once a service encounter occurs, through their experiences at that location, consumers will either confirm or reject these positions. At the end of a service encounter, consumers will offer an online summation of their experiences via UGC in the form of a review.

These reviews encapsulate perceptions on which parts of the brand's marketing efforts can be believed, the parts of the positioning that should be rejected, and the nuances of the experience that were either never mentioned or considered in the brand's marketing efforts. In essence, through their actual experiences, patrons will offer an online review that can complement, add to, reject, or accept existing corporate positionings. Potential guests, then in turn mix these reviews with their own ideas on which of the marketing efforts are believable or credible and thereby create a new expectation that will be contradicted or confirmed by their actual experience. They will also offer a review based on these new dimensions so the cycle continues. We refer to this model as the Theory of User Generated Content (UGC) Influence. The theory highlights the mediating nature of online reviews to nullify, modify, or support a firm's marketing efforts. It also highlights the fact that in today's marketplace, consumption experiences are heavily influenced not only by the user's immediate experiences but experiences that were anticipated due to the influence of past UGC, which in turn will also serve to influence new UGC.
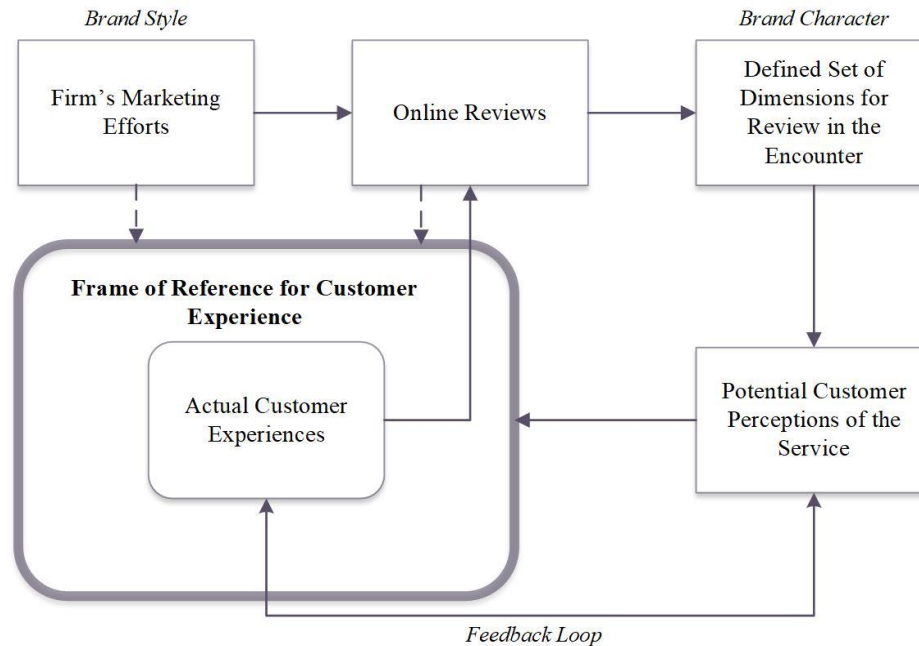
Figure 5: Theory of user generated content influence

Practical Implications

Extant literature purports that brands tend to position themselves in very specific ways, with their marketing communications typically reflecting and supporting these chosen associations (Schmitt 1999). Based on an analysis of the messaging used by these brands on their respective websites, the hotel brands chosen in our study continue to promote and position themselves based on specific talking points and characteristics. Each brand showcased itself in a distinctive and unique way from its counterparts. However, whilst each of these individual hotels/service providers maintains their respective distinctive branding on their websites, a slightly different focus is presented in online reviews from guests who visited these properties.

In our model, we tried to predict the hotel category based on the review itself. The results show that reviews for big city luxury hotels would be classified correctly with high accuracy (91%), whereas the model demonstrated little to no distinction between eco-tourism hotels and high-end beach resorts. Most of the Costa Rica reviews got classified as reviews for Jamaican hotels, with Costa Rican reviews only correctly predicted in 36% of the cases. This illustrates that the language used by customers to describe their stay at an eco-tourism hotel is very similar to the language used by customers to describe their stay at high-end beach resorts.

In the 25000+ reviews that were evaluated, it seems that there is a low level of synergy between how hotels position themselves and what in turn customer online reviews highlight about these properties. Instead, most of the reviews tend to be

consistent across almost all hotel categories. Dimensions such as experiences, service, drinking, food, staff, and a place to relax seem to capture the full attention of past consumers, thereby influencing the expectations of new and potential guests. This was an interesting finding. What it is saying to us is that there is a significant missed opportunity for Hoteliers. Hotel management is not taking advantage of the opportunity to create synergy between what they are saying about their properties versus what previous guests are saying about their properties.

The practitioner press and academic literature alike are filled with articles outlining how little consumers trust traditional marketing messaging and how much they believe online reviews (e.g.Hawkins 2021; Gavilan et al. 2018). If there is such clarity around a lack of trust for corporate messaging, then why not utilize the messages that are coming out of reviews to craft more believable corporate branding? The findings from this study suggest that marketers who utilize themes discussed in reviews and echo the positive assessments communicated online in UGC stand to benefit from a higher likelihood that these messages are more believable because they echo 'independent' online content. Extant literature says that online reviews either confirm or disconfirm corporate messaging (Chatterjee 2001; Hu et al. 2017; Lee et al. 2008; Moriuchi 2016; 2018; Tran et al. 2022). So why not design corporate messaging that mirrors existing reviews and as such would offer confirmation of UGC? It tends to reason that this approach could yield some positive outcomes for hoteliers.

Additionally, there is an opportunity for marketers to even go beyond mere mirroring and have consumers dictate what they should highlight in their campaigns. Maybe, the fact that this eco-lodge has a sustainable A+ rating is hidden in the fine print. Instead, the website focuses on excellent service, pristine surroundings, extraordinary food/drinks, and the luxury of the rooms because that's what past guests are raving about on Hotels.com and Trip Advisor. Maybe instead of picking a differentiation strategy based on what management thinks a hotel property is good at and what they believe customers value. Instead, management could create differentiation strategies based on what actual guests think the hotel is good at and what actual guests value enough to communicate about the hotel in a review. This potentially will have more payoff in revenue generation and hotel occupancy rates in the long run as the hotel that focuses their messaging on what consumers say they are good at are constantly winning on the confirmation spectrum and ultimately are coming across as more authentic.

Conclusion

It can be argued that customers might choose a brand based on its current positioning, style, and vision/mission, but that is often just the beginning of the process. Once potential consumers select a service provider, the next step is almost inevitably a visit to a review depository for that brand, either on the brand's own site or via a third party. Recent studies indicate that 93% of consumers visit an online review site before

making a purchase (Kaemingk 2020). Our findings suggest a disconnect between how the hotels position themselves on their websites and what customers talk about in the online reviews. Regardless of the destination and type of hotel, customers care more about concepts such as 'service', 'room', and 'staff'. Big city luxury hotels were the only contradiction as they focused on their location and customers echoed that in their reviews.

Brands need to be aware of both the major dimensions that are typically reviewed and how much UGC support, complements, or contradicts their ongoing marketing efforts. If these nuances are ignored continuously, at a minimal level marketing professionals run the risk of losing out on opportunities to brand themselves in meaningful ways. However, there is also the significant risk for management of being out of touch with the components of a visit consumers really care about. In the end, there seems to be a remarkable feedback loop between what consumers read in terms of an online review and subsequently what they choose to discuss in their post-visit reviews, often downplaying the importance and influence of corporate branding. Managers have an opportunity to use these reviews as the basis for how they position their hotels. Ultimately, hotels that focus their branding on what consumers are raving about may have more success than the properties that choose to go in a different direction than existing UGC.

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