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## Customer experience through online reviews from TripAdvisor: The case of Orlando theme parks

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**Abstract:** In the last years, the development of social media and digital technology have empowered customers to strongly engage with firms, to freely behave choice wisely and to influence other customers either positively or negatively. This study sought to extract latent information on theme park visitor perception and experience through sentiment analysis from user generated content. In general, satisfaction and sentiment differed between the eight theme parks, wherein the three theme parks with higher positive sentiment were Disney's Animal Kingdom, followed by Universal's Islands of Adventures, Discovery Cove and finally SeaWorld. Furthermore, it was found on the one hand that drivers of customer's satisfaction were associated with sentiments such as "fun", "great", "lovely" and "amazing", and on the other hand experience and services like "rides", "water", "dolphins", "experience" and "show". Those results are valuable to support theme park management to improve guest experiences and consequently achieve sustainable competitive advantage.

**Keywords:** customer experience; customer satisfaction; sentiment analysis; online reviews; TripAdvisor; theme parks; Orlando.

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## **1 Introduction**

Customers have taken a role of sharing opinions, experiences, interests, and information throughout online social networks, having the opportunity to express, share, influence and compare experiences with other customers. The appearance of social media (SM) services such as Facebook, Twitter, and Instagram have changed the way in which information and news are known (Ye et al., 2011). Marketing is about dealing with the

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ever-changing market (Kotler and Armstrong, 2020), and theme parks are an important segment of the tourism industry. To highlight, Disney parks are truly pioneers of the emerging experience economy by using technology to enhance their customers' experiences (Pine and Gilmore, 1998).

The research focuses on eight theme parks in Orlando, Florida since this is one of the world's most visited tourist destinations due to its famous attractions (TEA/AECOM, 2017). The Amusement Parks industry in U.S. has experienced a strong growth over the years and consequently it is crucial to obtain continuous competitive advantage over other similar businesses to retain customers and attract new ones. In the 1990s, 225 large-scale theme parks operated worldwide generating US\$7 billion from 300 million visitors while in 2000 there were 50% more theme parks in operation which generated twice the revenue from 80% more visitors (Pan et al., 2018). From 2016 to 2017, the attendance at the world's top theme park groups increased 8.6%, from 438 to 476 million visitors (TEA/AECOM, 2017).

There is a large amount of user-generated content (UGC) available on SM, and in order to transform it into useful business information, sentiment analysis is a very popular research topic. Several studies conducted experiments on sentiment analysis with data from online reviews (Calheiros et al., 2017; Li and Wu, 2010; Serrano-Guerrero et al., 2015), but not many related with theme park experience (Niu et al., 2019). Indeed, there is a research gap in the literature not only in the new context of theme parks, which portray clearly different features from other sectors in tourism (such as accommodation, restaurants, or air travel), but also addressing online reviews as a proxy of customer experience, enabling an articulated approach involving customer satisfaction, sentiment analysis as well as related experience and services. Moreover, recent research (Pan et al., 2018) showed that online reviews were considered the most influential factor among six major attributes influencing U.S. theme park visitors, thus highlighting the importance of conducting further investigations in this area.

This study highlights the inherent value of analyzing and interpreting theme park visitor satisfaction from UGC. The research questions focus on understanding customer experience and identifying which variables influence customer evaluation and satisfaction while visiting major U.S. theme parks which offer visitors a wide array of attractions. Hence, monitoring customer's satisfaction and perceptions is critically important to this industry.

## **2 Related literature**

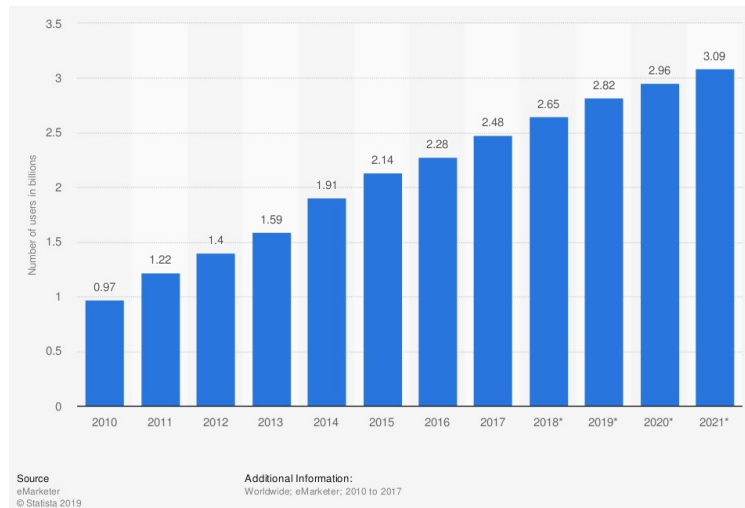
### *2.1 Customer Experience*

The interplay between technology and consumers is mostly non-linear and emergent. From Facebook, where the consumer is the product, to user generated information systems (UGIS) where the consumer creates the product (DesAutels et al., 2014). Technological advances in communication have caused significant changes in how companies communicate with customers, but also in how customers communicate with each other (Parreira et al., 2021). The appearance of SM services brings an opportunity to engage customers and their social bonds to help meeting their needs and deepen their relationships. Most importantly, SM provides a rich set of customer sentiment and

perceptions that can support even more powerful business decisions. Social network usage worldwide is ever-increasing (Figure 1), and this explains the growing online interactivity between organizations and their customer base. SM facilitates the creation and sharing of knowledge, information, ideas, opinions, insights, and allows companies to actively participate in the daily customers' life, influencing customer decisions by delivering an online experience.

The decision to visit a theme park is usually made by parents, but recent research has shown, in terms of decision-making related to adventure tourism, that family members are becoming more democratic by listening to children's ideas (Jamal et al., 2019). However, the decision will need to be more thoughtful in the case of a natural park, where associated environment, such as the appearance of wildlife, weather conditions and landscape features, are less controllable than environments created by humans, such as hotels, restaurants, and theme parks (Fossgard and Fredman, 2019).

**Figure 1** Number of Social Media Users Worldwide From 2010 To 2021 (In Billions)



The increase usage of SM changed customer experience and its dynamics, putting customers at the core of their business. Schmitt (1999) was one of the first scholars to emphasize the importance of customer experience, taking a multidimensional view and identifying five types of experiences: sensory (sense), affective (feel), cognitive (think), physical (act), and social-identity (relate) experiences. Recent business practice has also broadly defined customer experience as the internal and subjective response customers have to any direct or indirect contact with a company (Meyer and Schwager, 2007). Direct contact generally occurs in the act of purchase and is usually initiated by the customer. Moreover, indirect contact most often involves word-of-mouth (WOM) recommendations, advertising, news reports and reviews. Experience is created not only by those elements which companies can control such as service interface, retail atmosphere and price, but also by elements that are outside of firms' control, like influence of other customers.

WOM is the influence of someone's informal opinion about products/brands derived from consumption experiences in which there is an information provider and receiver

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(Sandes, and Torres, 2013). Overall, customer experience encompasses the total experience, including search, purchase, consumption, and after-sale phases of the experience, and may involve multiple retail channels. It consists of individual contacts between firms and customers at several phases of the experience (Homburg et al., 2015).

Internet users can alter an individual's motivations for visiting a tourist destination through their posts, references, and comments (Llodrá-Riera, et al., 2015). Monitoring customer satisfaction and perceptions is critically important in the theme park industry. One of the main reasons of technology development is the ability to understand how customers value a particular product/service. Customer satisfaction is a post-choice evaluative judgment, concerning a specific transaction, and it is central for understanding customers' consumption experiences (Ali et al., 2017). Pine and Gilmore (1998) argued that creating a distinctive customer experience can provide enormous economic value for firms, addressing the importance of experiences in today society, and the opportunities for firms to benefit from defining and executing successful customer interactions which can enhance a company's ability to keep their customers forever. The rapidly expanding variety of new technologies are empowering companies to learn and understand better what customers want and why.

#### *2.2 Customer Satisfaction in Theme Park context*

Theme parks are a relatively new form of entertainment attraction that attempts to create a fantasy atmosphere of another place and time (Milman, 2009). Similarly, the International Association of Amusement Parks (IAAPA, 2019) define theme parks as a specific type of amusement parks that offer themed attractions, food, stores, rides, entertainment, and costumes. With the development of theme parks, the leisure and tourism industry has faced intense competition from a wide range of rapidly emerging innovative leisure products (Milman, 2001). Consequently, due to the growing importance given to theme parks, several studies have addressed satisfaction drivers in this context.

A study conducted by Cheng et al. (2016) consisted of understanding the relationship between satisfaction and attributes of recreation experience, park service and management, park environment, guidance information, amusement consumption, and park facilities. As a result, they found that recreation experience was the most significant factor in visitor satisfaction, whereas park facilities was the least significant. Additionally, Geissler and Rucks (2011) studied ten years of customer data through a survey distributed to existing theme park visitors during a 10-year period and concluded that visitors evaluated their theme park visits primarily on their overall park experience and value, i.e., the park offers fun and educational experiences, the park's food quality, value, and variety as well as the park's cleanliness and atmosphere. The ticket price and the money spent on merchandising and food, meaning the overall price was also a significant predictor of customer satisfaction. As visitors are exposed to more of the different experiences the park offers, they become even more satisfied with the overall experience. Regarding customer expectations, just meeting relatively higher expectations in many cases may be sufficient to help maintaining high levels of customer satisfaction (Geissler and Rucks, 2011). In a similar research, Fletcher and Fletcher (2003) studied 25 of Florida's State Parks to determine predictors of visitor satisfaction. Empirical findings showed visitor satisfaction to be strongly related to maintenance of the park, for example cleanliness of the park and with the behavior of park personnel, i.e., being prompt,

helpful, courteous, and friendly. In any enterprise, customers are positively affected by the presence and politeness of staff members, or negatively affected by their absence and indifference. Ali et al. (2017) proposed a structural model based on a survey measuring visitor satisfaction in Malaysian theme parks. They pointed out the ‘significant effect of physical environment, and indicated that physical setting, interaction with staff and interaction with other customers had a significant impact on both customer delight and satisfaction. Customer delight influenced customer satisfaction and loyalty. The results suggest that theme park managers need to pay attention to maintaining a good physical setting, managing both their human resources and the behavior of other customers to ensure they receive delightful experiences.

Furthermore, Pine and Gilmore (1998) identified the 13 most important attributes of theme parks for visitors, such as general shows and entertainment, animal shows, water rides, thrill rides, big-name entertainment, roller coasters, cartoon characters, movie-based rides and entertainment, souvenir gifts, exhibits/attractions promoting learning, variety/quality of restaurants, animals in natural habitats, and rides for young children. Milman (2009) also listed the main factors that customers value when evaluating a theme park: entertainment variety and quality; courtesy, cleanliness, safety, and security; food variety and value for money; quality of the theme and design; availability and variety of family-oriented activities; quality and variety of rides and attractions; price and value for money. In addition, Milman et al. (2012) indicated that the most important attributes impacting visitors’ satisfaction were staff’s knowledge of the theme park, roller coasters’ safety, park’s security, and ticket prices.

Previous studies on theme parks have been conducted in the context of experience and satisfaction with traditional survey data rather than online travel reviews in SM. On a different perspective, researchers like Yoo and Gretzel (2008) have reported that 75% of travellers referred to online reviews when planning their trip. According to Pan et al. (2018), of the six main attributes that influence U.S theme park visitors, online reviews were the most influential factor. Results ranked price as the second-most influential factor and type of theme park as the third. Distance from accommodation seemed to be less of a concern for U.S. theme park visitors. Moreover, Niu et al. (2019) investigated visitors’ perceptions of three theme parks in Orlando through TripAdvisor reviews, finding that the main park performance dimensions expressed in reviews can be described as “shared features” (e.g., waiting time, show/event/festival, food, guest service), “unique features” (e.g., unique attractions and experience, special service), “positive experiences” (e.g., core experiences, roller coaster, staff, food) and “negative experiences” (e.g., waiting time, cost, price).

### **3 Methodology**

#### *3.1 Research Context*

Due to the availability of a large amount of user-generated data on SM, there is a growing interest in using automated computational methods such as text mining and sentiment analysis to process large amounts of UGC and extract meaningful knowledge and insights. Traditional content analysis methods are no longer able to meet organizations’ needs to analyze the large amount of updated content on a daily basis.

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Therefore, a study was conducted to analyze and compare the written online customer reviews of the 8 most reviewed theme parks in U.S.

In the analysis of all the collected data, sentiment analysis was applied to comparatively examine the underlying patterns of online customer reviews, develop customer profiles, determine its importance and influence in a company's marketing strategy, how it may help providing a way to reach potential customers as well as understanding online behavior of customers and measure customer experience. Therefore, applying sentiment analysis technique to SM content from TripAdvisor was extremely useful to find previously unknown hidden patterns. In spite of the growing global popularity of the theme park industry, this segment lacks a universal evaluation and rating system or a comprehensive inventory of product attributes that may be associated with the guest's experience (Milman, 2009).

On SM it may happen that some comments are withdrawn/deleted, or even changed, and that is, indeed, a limitation, as fake comments tend to proliferate throughout the web. However, despite such limitation, large number of studies based in online reviews have been recently published in top-tier journals (e.g., Moro et al., 2020, Piccinelli et al., 2021), justifying the use of online reviews as proxy of guests' opinions. Furthermore, when conducting primary data collection (e.g., using survey-based questionnaires), it can also be questioned if the respondents are being honest about their opinions in that self-report exercise.

There are different SM websites where customers can share feedback concerning their experience in theme parks. Nevertheless, there is no uniformity of attributes evaluated or a reliable system to evaluate and compare guest experiences. For example, Theme Park Insider (2008) and Theme Park Critic (2008) provide an opportunity for readers to review, post comments and rate specific attractions, dining and events and other features of the world's top theme and amusement parks, usually on a Likert-type scale while comparing with TripAdvisor, is to measure it on a scale from 1 to 5.

Since TripAdvisor is one of the most famous and well-known travel and vacation websites and one of the most influential online WOM sources in the hospitality and tourism context, with a growing number and diversity of global internet users who post reviews online every day, it was chosen for this study. This platform has been considered "a leading provider of customer reviews in the hospitality and tourism industry in terms of the number of posts and number of views" (Molinillo et al., 2016).

### *3.2 Data Collection*

The experimental setup drawn for this research was based on the examination of TripAdvisor reviews by actual customers of the top eight Theme Parks in Orlando, Florida. The approach used to decide which theme parks would be under analysis was to select the ones with most reviews in 2017 which were Magic Kingdom, Universal's Islands of Adventure, Universal Studios, SeaWorld Orlando, Disney's Animal Kingdom, Disney's Hollywood Studios, Epcot and Discovery Cove (Table 1). SeaWorld Orlando is a theme park and marine zoological park, owned and operated by SeaWorld Parks & Entertainment. Discovery Cove and Aquatica forms SeaWorld Parks and Resorts Orlando, an entertainment complex consisting of three parks and many hotels. Universal Studios Florida is also a production studio inspiring its guests to "ride the movies" and has numerous attractions and live shows. Together with Universal's Islands of Adventure



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both parks are components of the larger Universal Orlando Resort. Finally, Magic Kingdom, Epcot, Disney's Hollywood Studios and Disney Animal Kingdom are part of the Walt Disney World Resort in Orlando.

**Table 1** Theme Parks with more Reviews on Tripadvisor 2017

<i>Theme Park/Month (N° Reviews 2017)</i>	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
<i>Magic Kingdom</i>	575	523	598	678	569	474	503	573	390	491	371	396	<b>6,141</b>
<i>Universal's Islands of Adventure</i>	356	278	364	417	371	332	433	445	251	289	228	215	<b>3,979</b>
<i>Universal Studios</i>	413	284	372	418	420	356	440	444	274	357	275	238	<b>4,291</b>
<i>SeaWorld Orlando</i>	203	153	204	275	209	166	219	229	173	180	128	157	<b>2,296</b>
<i>Disney's Animal Kingdom</i>	251	268	275	279	316	341	356	376	244	315	257	250	<b>3,528</b>
<i>Disney's Hollywood Studios</i>	230	190	226	262	233	168	188	252	150	169	139	155	<b>2,362</b>
<i>Epcot</i>	313	297	377	369	325	247	227	250	193	265	228	198	<b>3,289</b>
<i>Discovery Cove</i>	87	86	95	137	133	131	114	155	93	102	78	48	<b>1,259</b>

The data set spanned a period from January to December 2017 and included a total of 800 reviews, 100 reviews per theme park. In order to define a strategy on how to collect the 100 reviews per theme park between all the reviews from 2017, it was decided to extract approximately the same number of reviews per month to have also the perception of some seasonality pattern that might happen. The large quantity of available online reviews and the big variations in the review quality presented a challenge to effectively extract useful information from online reviews. For each review, both structured information and unstructured information were manually collected. Table 2 shows the review and user features extracted from TripAdvisor.

**Table 2** Review and User Features Extracted from Tripadvisor

Feature name	Source type	Data type	Description
Username	User	Categorical	Username as registered in TripAdvisor
User country	User	Categorical	User's nationality
Nr. Reviews	User	Numerical	Number of reviews
Nr. Contributions	User	Numerical	Total hotel reviews
Helpful votes	User	Numerical	Helpful votes regarding reviews' info
Score	Review	Numerical	Review score [1,2,3,4,5]

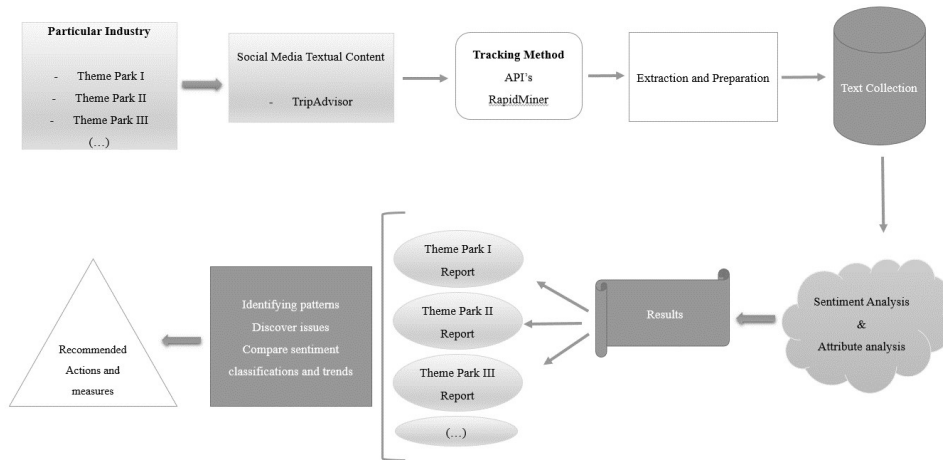
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Review date	Review	Date	Date when the review was written
Review text	Review	Text	Textual content of the review
Review language	Review	Categorical	Language of the review
Period of stay	Review	Categorical	Period of stay
Traveller type	Review	Categorical	{Business, Couples, Families, Friends, Solo}

**3.3 Proposed Approach**

Figure 2 presents the proposed SM competitive analytics framework with sentiment analysis for industry-specific marketing intelligence. It consists of 4 stages, which comprise collecting data, conduct a sentiment analysis, highlight the main attributes for costumers, analyze and get into the main conclusions. Results from sentiment analysis can be used to show variations among companies’ key performance metrics. Each variation can either show in which areas a company is really good or identify a potential problem area to be fixed highlighting the opportunity to improve the company’s overall performance.

**Figure 2** A Social Media Competitive Analytics Framework with Sentiment Analysis



After all data was gathered, a sentiment analysis was conducted. There are three APIs for sentiment analysis used for comparison coming from Alchemy API, Aylien, and Indico. The one used was the Aylien API, through RapidMiner software, that returns two pairs of output values. The first pair consists of “polarity” indicator and “confidence” in this indicator. The polarity indicator takes on positive, neutral or negative as values and the polarity confidence is a number ranging from 0 (highly negative) to 1 (highly positive). A value close to 1 indicates higher confidence. The other output pair is subjectivity indicator and its confidence value. There is a distinctive lack of open-source solutions for data mining and analytics, but one of the most efficient and free software is RapidMiner Studio. This data science software platform provides solutions such as data preparation, machine learning, deep learning, text mining, and predictive analytics.

RapidMiner is one of the most widely used tools within the sentiment analysis portfolio available, to conduct textual analysis (e.g., Papathanassis and Knolle, 2011). Therefore, we adopted RapidMiner, given it has provided useful for knowledge extraction in other tourism and hospitality settings.

Sentiment analysis enables to automatically draw insights from textual contents, making it a valuable tool to analyze large volumes of text, such as a large set of textual online reviews. Notwithstanding, current state-of-the-art sentiment analysis still struggles to identify figures of speech such as irony or metaphors. Nevertheless, the use of punctuation has been considered by such tools to improve its accuracy when computing sentiment polarities and scores. Hence, we argue that using automated sentiment analysis renders feasible to analyze a large corpus of online reviews, which would be a time-consuming task for humans, who could, however, be likely to perform better.

### *3.4 Sentiment Analysis*

Technological advancements in the last years have led to the emergence of large databases with information from customer interactions (Sundararajan et al., 2013). Data extracted from online platforms and networks are used to understand online customer behavior, measure online customers' responses to digital marketing stimuli, and optimize digital marketing actions fostering customer behavior which benefits businesses. Moro et al. (2019) found that previous user's experience with hotel online platforms was relevant to satisfaction. By analyzing this type of data it also provides insights such as the latest market trends, monitor customer loyalty and help to have an effective decision making, strategic thinking, acting and consequently achieving competitive advantage.

In addition, extracting sentiment from a piece of text such as a tweet, a review or an article can provide companies valuable insights about reviewer's emotions and perspective, whether the tone is positive, neutral or negative, and if the text is subjective (i.e., reflecting the reviewer's opinion) or objective (i.e., expressing a fact). Sentiment analysis, the computational detection and study of sentiments in text (Li and Wu, 2010), classifies sentiments within the analyzed text into three categories: positive, negative and neutral, and measures the sentiment degree in a range (0; 1) – Sentiment Polarity.

For polarity and subjectivity classification is necessary to the following process:

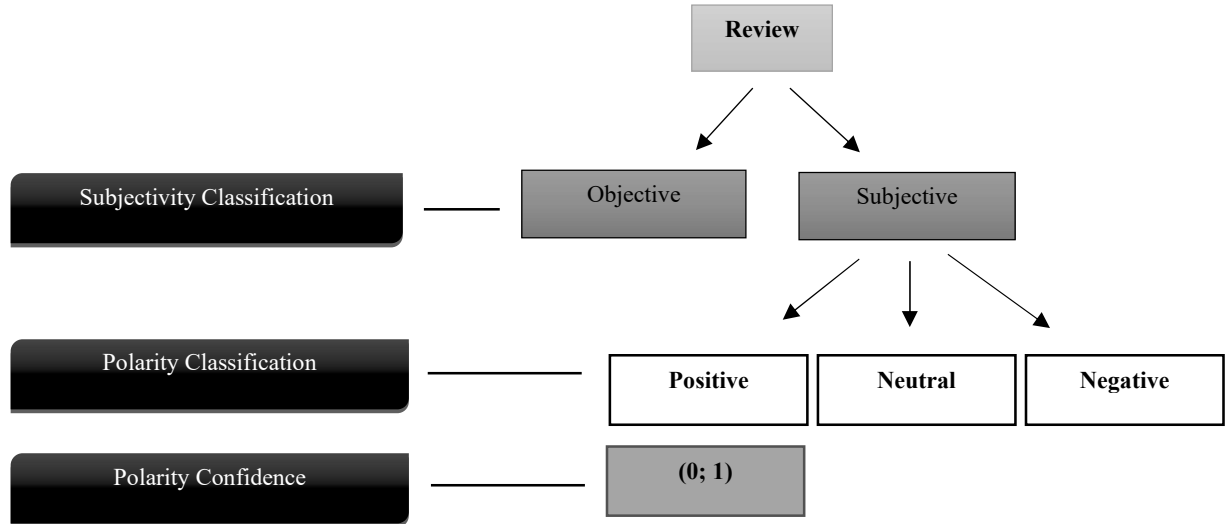
1. Classifying a sentence as subjective or objective, and for a subjective classifying it as expressing a positive, negative or neutral opinion;
2. Classifying a document categorized as an opinion, expressing a positive or negative opinion and measuring the sentiment degree in a range (0; 1).

Often called subjectivity classification, it consists in detecting whether a given sentence is subjective or not (Table 3). An objective sentence expresses a fact while a subjective sentence can express opinions, evaluations, beliefs and emotions. If expressing an opinion, it also allows to know whether the opinion expressed positive or negative sentiment. Moreover, a subjective sentence may not express any positive or negative sentiment and thus should be classified as “neutral”. As Serrano-Guerrero et al. (2015) stated, a good subjectivity classification can ensure a better sentiment classification. Commonly known as sentiment classification or sentiment polarity, it aims to classify sentences into three main categories: positive, negative or neutral and measuring the sentiment degree in a range (0; 1). This task is closely related to sentiment rating prediction, consisting in measuring the intensity of each sentiment (Serrano-Guerrero et al., 2015).

*Customer experience through online reviews from TripAdvisor*

The principal goal when dealing with sentiment analysis consists in distinguishing between subjective and objective sentences (Figure 3). If a given sentence is classified as objective, no other fundamental tasks are required, while if it is classified as subjective, its polarity needs to be estimated.

**Figure 3** Sentiment Analysis Workflow



An on-line customer review has a double role, functioning both as informant and recommender. As informant by providing information about the product, such as functionalities and characteristics, while as recommender providing recommendations by previous customers in the form of online WOM. The number of online reviews of a product may be seen as representing the product’s popularity, since the number of reviews is related to the number of customers who have bought the product (Chatterjee, 2001; Chen and Xie, 2004). As there is no standard format, the content of online reviews, (review quality) varies from subjective to objective. A high-quality review is one that is more logical and persuasive supporting its evaluation with reasons based on facts about a product, which means customers are more likely to believe the message. On the contrary, low-quality reviews are emotional and subjective, with no information except expressions of subjective feelings or simple interjections (Park et al., 2007).

**Table 3** Subjectivity on Reviews by Theme Park

<i>Park</i>	<b>Subjectivity</b>	<b>Total</b>
<i>Discovery Cove</i>	Objective	3
	Subjective	97
<b><i>Discovery Cove Total</i></b>		<b>100</b>
<i>Disney’s Animal Kingdom</i>	Objective	1
	Subjective	99
<b><i>Disney’s Animal Kingdom Total</i></b>		<b>100</b>

<i>Disney's Hollywood Studios</i>	Objective	2
	Subjective	98
<b><i>Disney's Hollywood Studios Total</i></b>		<b>100</b>
<i>Epcot</i>	Objective	2
	Subjective	98
<b><i>Epcot Total</i></b>		<b>100</b>
<i>Magic Kingdom Park</i>	Objective	2
	Subjective	98
<b><i>Magic Kingdom Park Total</i></b>		<b>100</b>
<i>SeaWorld Orland</i>	Subjective	100
<b><i>SeaWorld Orland Total</i></b>		<b>100</b>
<i>Universal Studios</i>	Subjective	100
<b><i>Universal Studios Total</i></b>		<b>100</b>
<i>Universal's Islands of Adventure</i>	Objective	4
	Subjective	96
<b><i>Universal's Islands of Adventure Total</i></b>		<b>100</b>

## 4 Results

### 4.1 Sample characteristics

Spinks et al. (2005) stated that the level of visitor satisfaction at attractions might vary according to demographic characteristics such as visitors' origins, gender, and age groups. So, looking through our reviewer's sample in general, some characteristics were brought up such as the male slightly overrepresentation of 52% against female with 48% (Table 4).

**Table 4** Profile of Respondents by Gender

<i>Gender</i>	<i>Percentage (%)</i>
<i>Male</i>	52
<i>Female</i>	48

Another important characteristic is the number of contributions (Table 5). TripAdvisor has this type of indicator for the users interested in reading a specific review, to understand if the reviewer is a person used to write a review, positive or negative, and influence somehow the one that is reading. For example, the contributions of a certain user can list currently 53 contributions, which are comprised in 10 forum posts, 37 ratings and 6 reviews. Epcot and Disney's Hollywood Studios were the theme parks which had more reviewers with apparently more previous experience while using TripAdvisor. Once an attraction is visited, a review should be written in order to describe all the points of experience. A rating is completely different to a review. It is difficult to score a theme

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park only based on a scale rate. That is why the number of contributions can also be an important characteristic to look for.

**Table 5** Average number of Contributions by Theme Park

<i>Theme Park</i>	<i>Average N° Contributions</i>
<i>Magic Kingdom</i>	222,170
<i>Sea World</i>	99,150
<i>Universal's Islands of Adventure</i>	192,950
<i>Universal Studios</i>	176,930
<i>EPCOT</i>	233,080
<i>Disney's Hollywood Studios</i>	248,760
<i>Disney Animal Kingdom</i>	223,040
<i>Discovery Cove</i>	123,220

Information about the local residence of reviewers is presented in Table 6. In all theme parks, America residents comprised the majority of respondents, except for Discovery Cove which had more reviews from Europeans (with a difference of 5%). On average, 59% of the reviewers were residents in America, 33% resided in Europe, 4% in either Asia or Oceania and 1% in Africa. The filter used for the extraction of reviews pointed to English preference, and the proximity that tourists from North America have to all the theme parks played also a role. A close proximity of accommodations to a theme park location decreases visitors' transportation costs, increases their interest (Milman, 2001) and consequently, contributes to the overall satisfaction.

**Table 6** Distribution of Reviews per Continent

<i>Theme Park/Continent</i>	<i>% of Reviews</i>
<b><i>Discovery Cove</i></b>	
<i>Africa</i>	1
<i>Asia</i>	1
<i>Europe</i>	55
<i>Oceania</i>	3
<i>America</i>	40
<b><i>Disney's Animal Kingdom</i></b>	
<i>Asia</i>	3
<i>Europe</i>	27
<i>Oceania</i>	3
<i>America</i>	67
<b><i>Disney's Hollywood Studios</i></b>	
<i>Asia</i>	4

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<i>Europe</i>	28
<i>Oceania</i>	4
<i>America</i>	64
<b><i>Epcot</i></b>	
<i>Asia</i>	5
<i>Europe</i>	24
<i>Oceania</i>	10
<i>America</i>	61
<b><i>Magic Kingdom Park</i></b>	
<i>Africa</i>	2
<i>Asia</i>	5
<i>Europe</i>	25
<i>Oceania</i>	6
<i>America</i>	62
<b><i>SeaWorld Orlando</i></b>	
<i>Africa</i>	1
<i>Asia</i>	4
<i>Europe</i>	43
<i>America</i>	52
<b><i>Universal Studios</i></b>	
<i>Asia</i>	3
<i>Europe</i>	30
<i>Oceania</i>	4
<i>America</i>	63
<b><i>Universal's Islands of Adventure</i></b>	
<i>Asia</i>	4
<i>Europe</i>	33
<i>Oceania</i>	4
<i>America</i>	59

Concerning the traveler type, in most of the reviewers it was difficult to obtain this information. On TripAdvisor, reviewers can specify what type of traveler they are. Since a lot of reviewers had in the profile more than one option mentioned above, it was decided to choose the first option in the list. Twenty-two percent of reviewers did not have the information available of what type of traveler they were, however, 17% followed by 12% of the reviewers were defined as “Family Holiday Maker” and “Like a local”, respectively (Table 7). For many families, a trip to Walt Disney World in Orlando, is a once-in-a-lifetime experience. The name Walt Disney has been prominent in the field of family entertainment, where families can leave stress and worry of everyday life behind once they enter its carefree, imaginary world. All along, Disney focused on

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making the experience one that people would remember for the rest of their lives, meaning not also for younger kids but for adults too. It happened the same also for theme parks from Universal Group and Blackstone Group.

**Table 7** Traveler Type

<i>Traveler Type</i>	<i>N° of reviews</i>	<i>%</i>
<i>Unknown</i>	176	22%
<i>Family Holiday Maker</i>	139	17%
<i>Like a Local</i>	92	12%
<i>Urban Explorer</i>	63	8%
<i>Foodie</i>	60	8%
<i>Thrill Seeker</i>	52	7%
<i>Luxury Traveler</i>	49	6%
<i>Nature Lover</i>	41	5%
<i>60 + Traveler</i>	25	3%
<i>Art and Architecture Lover</i>	22	3%
<i>Thrifty Traveler</i>	20	3%
<i>Shopping Fanatic</i>	17	2%
<i>Peace and Quiet Seeker</i>	17	2%
<i>Beach Goer</i>	12	2%
<i>History Buff</i>	9	1%
<i>Foodie</i>	2	0%
<i>Night Life Seeker</i>	2	0%
<i>Backpack Traveler</i>	1	0%
<i>Trends Developer</i>	1	0%
<b>Total</b>	<b>800</b>	<b>100%</b>

Table 8 shows that there is any kind of seasonality pattern in theme park experience. Seasonality refers to periodic fluctuations in certain business areas on a particular season which may refer to a calendar season such as summer or winter or to a commercial season like the holiday season. Kemperman et al. (2000) proposed a framework of theme park choice behavior including three basic aspects of theme park choices and a time dimension - variety seeking, seasonality and diversification. They argued that timing was also an important dimension in the framework and served to understand the temporal aspects influencing theme park visitor choice behavior. More specifically, in destination choices over time seasonality and variety seeking had a significant influence. Kemperman et al. (2000, p.14) added that “most amusement parks have open-air attractions, and visiting this type of park in summer, when the chances for good weather are better, may be more attractive.”. In climates where differences between the seasons are large (e.g., Northern U.S.), seasonal shifts in preferences are usual. A certain



seasonality was found (Table 9), especially at school breaks during March and April as well as in summer months (June until August).

**Table 8** Seasonality on Theme Park Experience

Theme Park/Month (Reviews 2017)	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Magic Kingdom	↔ 575	↔ 523	↑ 598	↑ 678	↔ 569	↔ 474	↔ 503	↔ 573	↓ 390	↔ 491	↓ 371	↓ 396	6141
Universal's Islands of Adventure	↔ 356	↓ 278	↔ 364	↑ 417	↑ 371	↔ 332	↑ 433	↑ 445	↓ 251	↓ 289	↓ 228	↓ 215	3979
Universal Studios	↑ 413	↓ 284	↔ 372	↑ 418	↑ 420	↔ 356	↑ 440	↑ 444	↓ 274	↔ 357	↓ 275	↓ 238	4291
SeaWorld Orlando	↔ 203	↓ 153	↔ 204	↑ 275	↔ 209	↓ 166	↔ 219	↑ 229	↓ 173	↔ 180	↓ 128	↓ 157	2296
Disney's Animal Kingdom	↓ 251	↔ 268	↓ 275	↓ 279	↔ 316	↑ 341	↑ 356	↑ 376	↓ 244	↔ 315	↓ 257	↓ 250	3528
Disney's Hollywood Studios	↑ 230	↔ 190	↑ 226	↑ 262	↑ 233	↓ 168	↑ 188	↑ 252	↓ 150	↓ 169	↓ 139	↓ 155	2362
Epcot	↔ 313	↔ 297	↑ 377	↑ 369	↑ 325	↓ 247	↓ 227	↓ 250	↓ 193	↔ 265	↓ 228	↓ 198	3289
Discovery Cove	↔ 87	↔ 86	↔ 95	↑ 137	↑ 133	↑ 131	↔ 114	↑ 155	↔ 93	↔ 102	↓ 78	↓ 48	1259
<b>Total</b>	↔ 2428	↔ 2079	↑ 2511	↑ 2835	↑ 2576	↔ 2215	↑ 2480	↑ 2724	↓ 1768	↔ 2168	↓ 1704	↓ 1657	27145

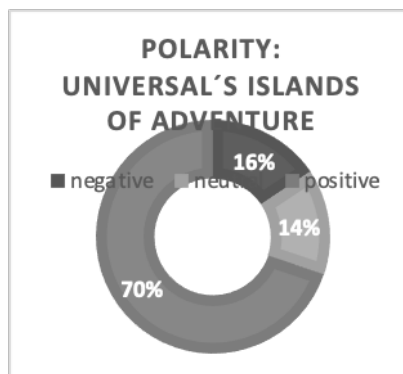
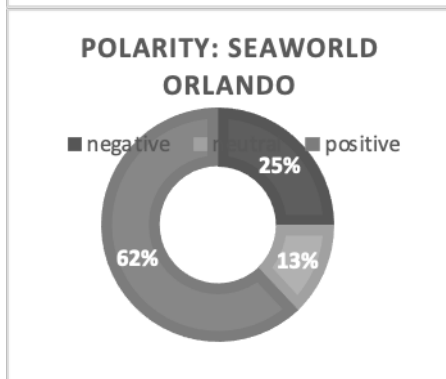
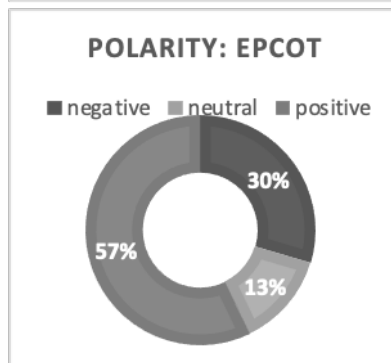
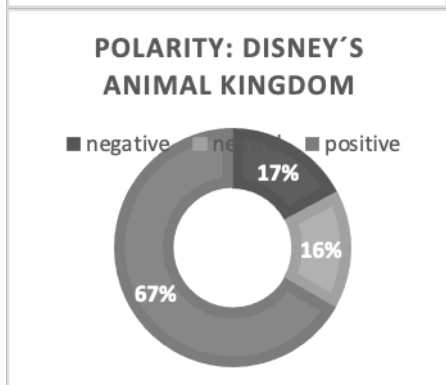
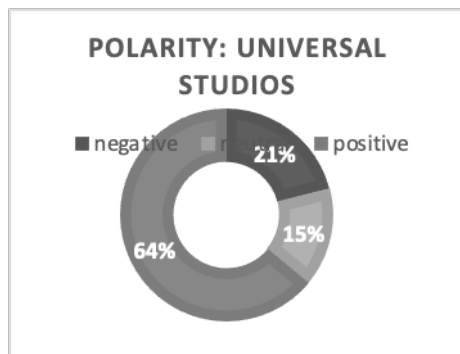
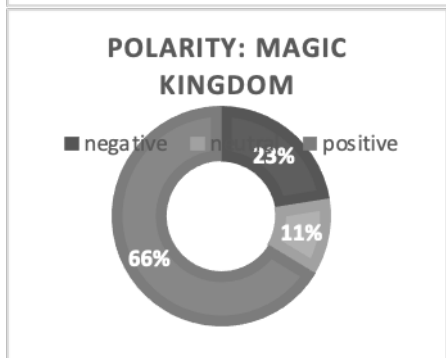
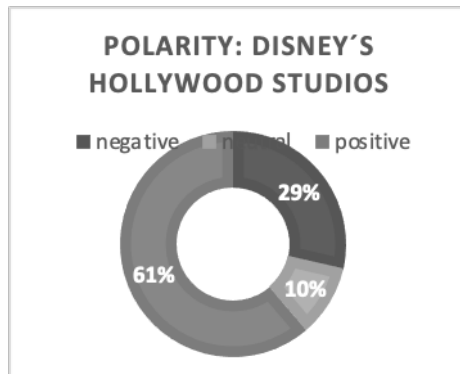
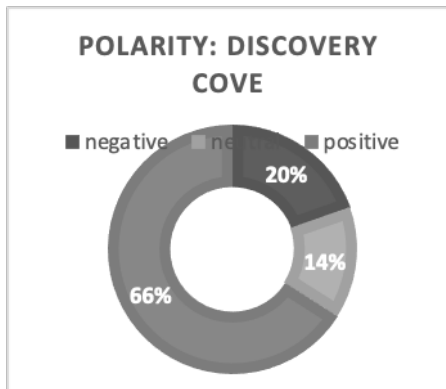
Regarding period of stay, most reviewers did not mention how many days they spent when visiting a theme park. In the past, theme parks were classified as 1-day amusement parks for families but nowadays theme parks tend to produce “the experience of another place and time” by portraying a main theme through architecture, landscape, rides, shows, food services, costumed staff members, and retail. Geissler and Rucks (2011) agreed that the longer the theme park guests stay during each visit, the more the park exceeds their expectations and consequently, positively influences visitors ‘experience. It appears that as visitors are exposed to more of the different experiences the park offers, they become even more satisfied with the overall experience. Another example is the study of Pan et al. (2018) revealing that visitors who spent more time at theme parks were more satisfied with the total cost and the value of their experience.

#### 4.2 Sentiment Classification Polarity

A sentiment analysis was performed over review contents by showing the sentiment polarity and the polarity confidence as well as the sentiment by ratings. Figure 4 shows the sentiment polarity distribution for each of the 8 theme parks, providing a basic idea of the customers’ sentiment or attitude on the theme park experience. By comparing the different graphics, we found there were substantially more negative comments from the customers of Epcot (30%), Disney Hollywood Studios (29%) and SeaWorld Orland (25%). Moreover, theme parks with more positive comments were Universal’s Islands of Adventure (70%), Disney’s Animal Kingdom (67%), Discovery Cove and Magic Kingdom (66% each).

**Figure 4** Sentiment Polarity by Theme Park

*Customer experience through online reviews from TripAdvisor*



Based upon the sentiment analysis, a polarity confidence value was assigned to each review. After each review was scored on a scale between 0 (highly negative) to 1 (highly positive), the scores of all the emotive phrases were combined to come to the overall polarity confidence of the review. Sentiment analysis showed that the average sentiment for all three theme parks was 0.747, extremely positive, with a standard deviation of 0.204. Figure 5 shows the average sentiment polarity of each of the theme parks (the Y-axis represents the average sentiment score, while the X-axis indicates the corresponding theme park). Although on average the overall polarity confidence for the eight theme parks were 0.747, Disney Hollywood Studios had considerably lower (0.734), followed by Epcot (0.736), Universal's Island o Adventures (0.742), Magic Kingdom (0.745) and Universal Studios (0.746). The three theme parks with highest polarity confidence, on average, were Disney's Animal Kingdom (0.754) after Discovery Cove (0.758) and SeaWorld (0.761).

**Figure 5** Average Polarity Confidence



When taken into consideration the standard deviation (Table 9), some more relations could be found. Discovery Cove and SeaWorld, independently of being the theme parks with the highest polarity confidence, were both also the ones with the largest standard deviation (0.211 and 0.220, respectively). This suggest that while, on average, customers of both theme parks had highly positive sentiment polarity confidence of their experiences, their opinions varied quite a lot. On the contrary, Magic Kingdom had an average polarity confidence of 0.745, which in comparison with the remaining theme parks, was in the middle of the average polarity confidence scale, but represented the lower standard deviation, which means that the data points tended to be close to the mean, i.e., the opinions were all around the sentiment polarity value.

**Table 9** Standard Deviation Polarity Confidence

<i>Theme Park</i>	<i>Polarity Confidence</i>
	<b>Standard Deviation</b>

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<i>Magic Kingdom</i>	0.191
<i>Universal Studios</i>	0.193
<i>EPCOT</i>	0.203
<i>Disney's Hollywood Studios</i>	0.203
<i>Universal's Islands of Adventure</i>	0.205
<i>Disney Animal Kingdom</i>	0.207
<i>Discovery Cove</i>	0.211
<i>Sea World</i>	0.220

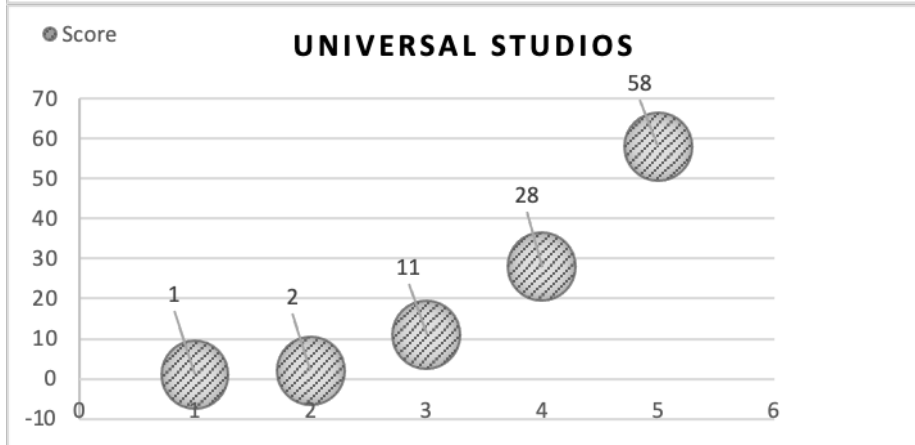
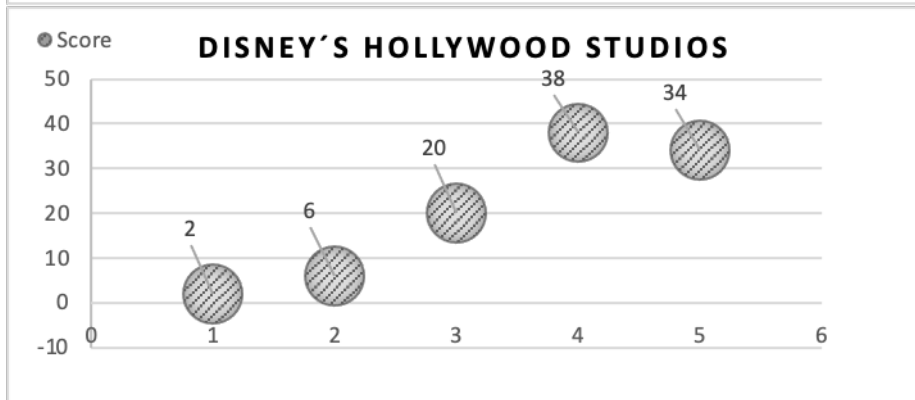
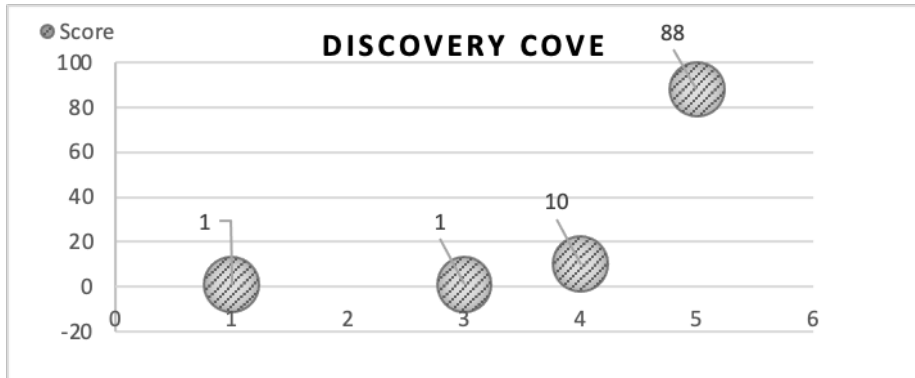
### 4.3 Sentiment Classification by Rating

Once the ability to classify the opinions in terms of sentiment polarity and polarity confidence was assessed, the ability to score sentiments by rating was tested once each review from TripAdvisor also came with an overall rating score. Average satisfaction rating of the eight theme parks was 4.41/5, with a standard deviation of 0.942. Figure 6 shows the sentiment by ratings for each of the theme parks (the Y-axis represents the frequency number of reviews, while the X-axis indicates the corresponding score). As such, the number in each circle corresponds to the number of reviews with a certain score. Comparing figures, the theme parks with a bigger gap between “5 score” and the remaining scale (i.e., from 1 to 4), were Discovery Cove, Disney’s Animal Kingdom and Epcot. Customers were highly satisfied with the experience on these theme parks. On the remaining ones the distribution among the 5 stars scale was in general between 3, 4 and 5 scores without many discrepancies.

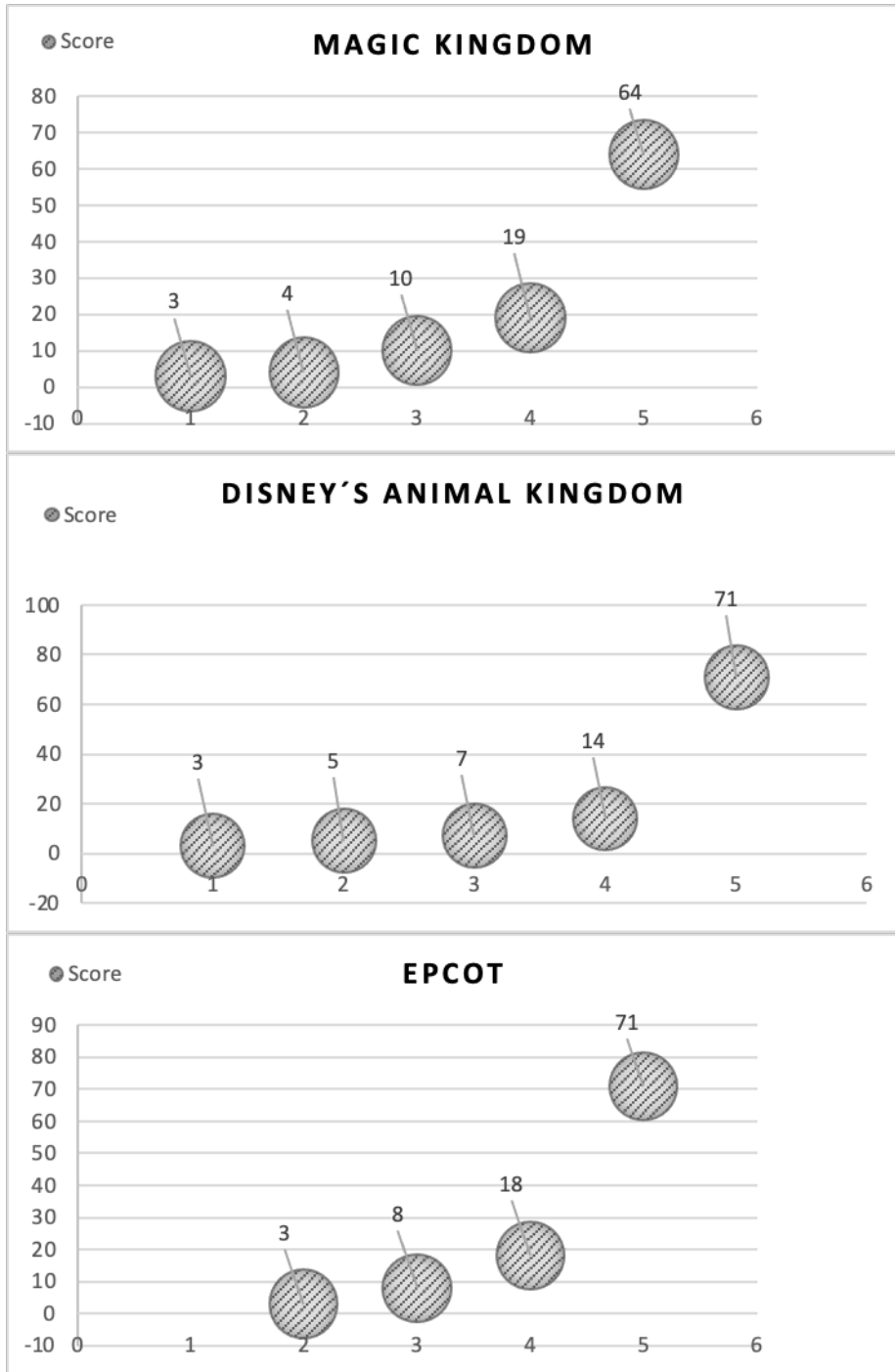
Furthermore, the 3 to 4 star ratings were also analyzed separately and compared with the result of sentiment polarity, leading to find that there was a higher number of reviews with a negative or even neutral sentiment than with a positive sentiment behind them. This indicates that although a three-star rating is defined as a neutral rating, many people considered three-star rating as negative in their text of a review. It seems that review content was a better indicator of the customer sentiment than the coarse star rating. Previous studies showed that most businesses strive for a perfect rating, however perfect ratings are overrated. Maslowska et al. (2016) analyzed e-commerce data and found that people were more likely to buy products with a moderately high rating (4 to 4.5 stars) than a very high rating (4.5 to 5 stars). This is because imperfect ratings seem authentic. When customers see a perfect rating, they become suspicious of fake reviews.

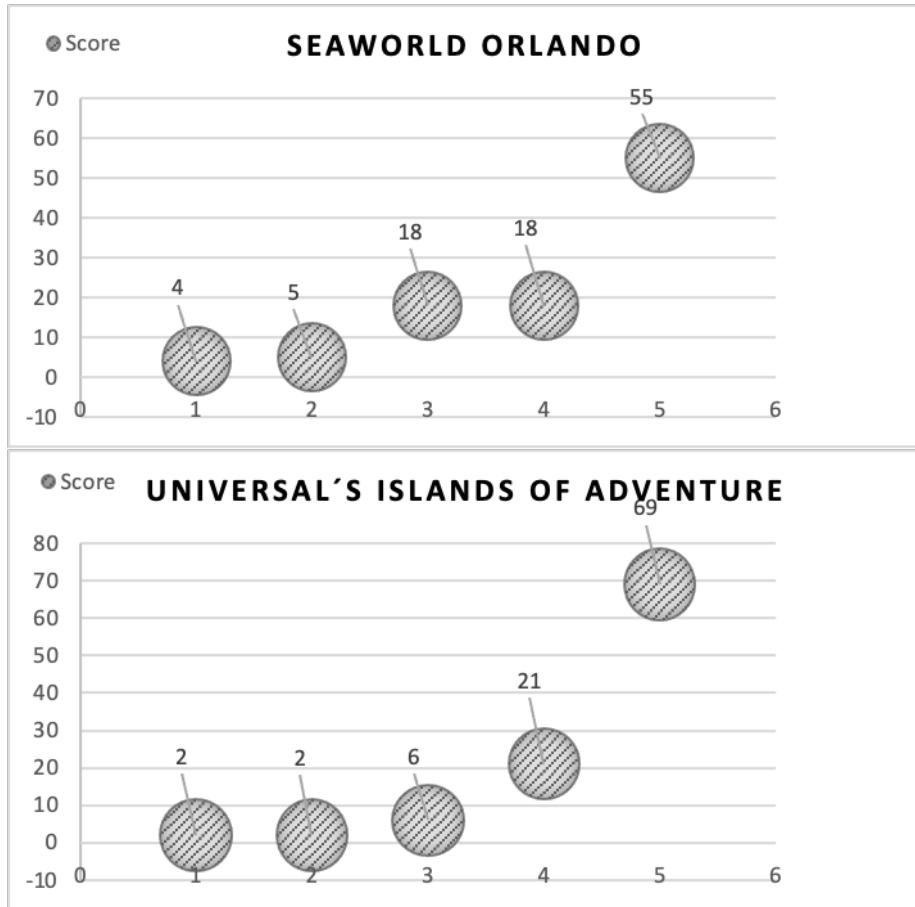
**Figure 6** Score Rating by Theme Park

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#### 4.4 Attributes Analysis

Word associations can help designing a customer profile and is one more feature facilitating the analysis of customer reviews. In this study, the first 40 reviews were selected from the group of positive reviews, with polarity confidence of 1, in order to analyze their content with the purpose of tracking the words that customers used more frequently when explaining what they liked the most in their theme park experience. Both Table 10 and Figure 7 show the list of the 20 visitor experience-related words that explained satisfaction ratings. Words like “experience”, “education” “great”, “cool” and “lovely” were the main attributes mentioned by customers, particularly in measuring the main reasons for customer satisfaction in what concerns the theme park activities. There was also a relevant interest in services related with “water”, “dolphins”, “swim” and “rides”. As Niu et al. (2019) found also on their study, words representing aspects related to the theme park visitor experience included sentiments such as “great”, “amazing”, “love”, “good”, “awesome”, experience and service such as “time”, “family”, “visit”, and “experience”.

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**Table 10** Positive Attributes Discovered and respective Frequency

<i>Number</i>	<i>Term</i>	<i>Frequency</i>
1	great	40
2	experience	36
3	cool	27
4	education	24
5	lovely	19
6	love	18
7	amazing	17
8	water	14
9	dolphin	14
10	rides	14
11	swim	13
12	show	12
13	first	12
14	time	12
15	park	8
16	awesome	8
17	good	6
18	best	6
19	fun	6
20	recommend	5

**Figure 7** Word Cloud for Positive Theme Park Experience Domain





Theme parks provide a typical experience of product attributes to meet the needs of visitors. Both the eight, nine, ten, eleven and twelve words, represented interesting discoveries. Among several characteristics, the main attributes of theme parks, according to Pine and Gilmore (1998) are shows and entertainment, animal shows, water rides, thrill rides, big-name entertainment and roller coasters. Geissler and Rucks (2011) found that fun experience, the variety of attractions available, satisfaction with the total cost, admission price value, park atmosphere, and educational experience were the most important variables contributing to a positive theme park experience. The first, second and forth attributes also emphasized the positive sentiment regarding theme park experience. Cheng et al. (2016) studied the relationship between satisfaction and a number of attributes (recreation experience, park service and management, park environment, guidance information, amusement consumption, and park facilities) and found that recreation experience was the most significant factor in visitor satisfaction. Specific attributes were discovered, in common with the theories discussed in our literature review, included in the word cloud shown below. All of the characteristics were related with positive feelings like experience, great, education, lovely, fun, rides and shows. A more recent study from Torres et. al. (2019) explored the key drivers of customer delight and outrage in North American theme parks and by analyzing the content of reviews from TripAdvisor, these authors revealed that the most frequently used attributes for delight included rides, travel advice, fun, animals, physical environment, positive food and beverage experience, and well-managed lines. Another important relation could be observed in word on the position 20 – recommend, which emphasizes a strong positive sentiment regarding theme park experience. This result shows that as a consequence important factors as sign of positive sentiment and perceived as theme park satisfaction are the customer intention to repurchase and recommend.

Despite results focusing on several different attributes that can be characterized by a specific sentiment, the same results concealed certain limitations. One of them was that the given results did not show an emphasis on attributes in specific but just about feelings, for example words number one, three, five, six and seven, which were respectively, great, cool, lovely, love and amazing. According to Hudson (2006), experiences are a key innovation in today's businesses across a variety of industries from health care to automobiles. Moreover, a recent study found that the number one ranked 'most memorable experience' for customers was in connection with vacation (Hudson, 2006). The demand for leisure and tourism products which are able to engage customers' senses, to stimulate minds, to deliver unique moments or to interact with customers in an emotional, physical, spiritual or intellectual setting seems increasing.

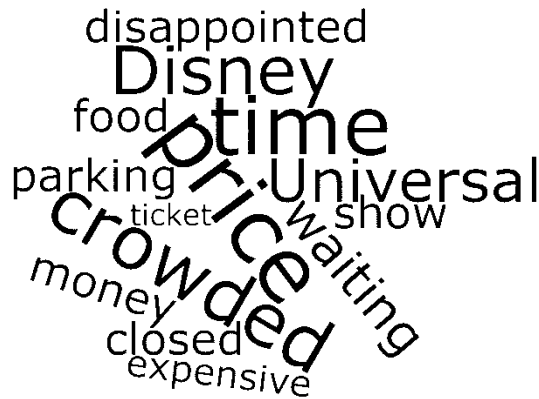
On the contrary, in order to see also the pattern regarding the negative word cloud, the first 40 reviews content were selected from the group of negative reviews with polarity confidence approximate from 1, in order to select the main words used with more frequency. The global results, presented in both Table 11 and Figure 8, with a total of 15 terms, showed that the words "price", "time" and "crowded" were clearly the main attributes mentioned by customers, particularly in measuring the main reasons for customer dissatisfaction in what concerns theme park activities. In fact, according to what Niu et al. (2019) revealed also in their study, words such as "waiting time" and "high price" have significant influence on guest experience.

**Table 11** Negative Attributes Discovered and respective Frequency

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<i>Number</i>	<i>Term</i>	<i>Frequency</i>
1	price	22
2	time	20
3	crowded	16
4	Disney	16
5	Universal	14
6	waiting	10
7	parking	8
8	closed	8
9	money	6
10	show	6
11	food	6
12	disappointed	6
13	expensive	5
14	ticket	4
15	hours	4

**Figure 8** Word Cloud for Negative Theme Park Experience Domain



Regarding service experience, it was seen that words “Disney” and “Universal” represented the theme parks associated with lower levels of satisfaction. In 2017, Disney attractions were the first most attended theme parks, hosting more than 150 million visitors and Universal hosted an estimated nearly 50 million visitors, ranking as the third most attended theme park in the United States, expected also to be almost full of people every day (TEA/AECOM, 2018). One of the words with a higher frequency was

“crowded”. A consequence of the high levels of density was the waiting time and the long queues to go to any roller coast that could be also a factor compromising the overall experience. To this concern, Disney has recognized the importance of implementing customer relationship management technologies to assist in allowing guests to customize their experience based on their needs and interests, being involved in the planning of their own experience. In order to face this, Disney created MyMagic+. It works as a vacation planning program that lets guests customize their vacation. Guests use this program during and after booking their Disney World vacation. Recent media reports highlighted on how some theme parks have consistently raised prices above the rate of inflation, thus making it less accessible to the average family (Torres et. al., 2019). These authors added that during a ten-year 2007–2017 period, the average price of an adult ticket for Disneyland and Universal Studios Hollywood increased by 67% and 88%, respectively. Tickets to theme parks in Orlando, Florida have increased by an average of 50–64%.

## **5 Conclusion**

### *5.1 Contributions*

In this study, a sentiment analysis from 800 customers’ reviews was conducted, as well as the identification of the main attributes that customers value within U.S theme park experience. The proposed method was applied to the most reviewed theme parks where the attributes found exposed how guests’ satisfaction was being perceived. It provides a comparable sentiment analysis process applied to different theme parks, which induces the creation of intelligent customer databases providing fundamental contributions to marketing strategy. This, aligned with the acknowledgment of their strengths and weaknesses leads to an increase of competitive advantages. In fact, the methodology used in this study and its research findings point to the relevance of an approach that should be consistently applied as a framework to address customer satisfaction and sentiment analysis based on a proxy of customer experience, namely online reviews.

The value of this study is underlined in the use of both structured and unstructured data from TripAdvisor user generated content, to understand customer perceptions and feelings of different theme parks, in a way that was not available through traditional survey studies. Hence, a more comprehensive use of data together with a possible continuous monitoring of the reality while avoiding some of the drawbacks of traditional survey-based self-reported questionnaires provides an impactful contribution to literature in several ways.

From a more specific perspective, this study stresses that core sentiments expressed through online reviews are mainly positive in what concerns the theme park experience. It has also shown that satisfaction and sentiment differ between Universal Studios, Disney World, and Sea World. The three theme parks with highest positive sentiment, on average, were Disney’s Animal Kingdom, followed by Universal’s Islands of Adventures, Discovery Cove and finally SeaWorld. It was also found an agreement in sentiment by score rating for both last mentioned parks with the greater number of reviews and with the highest score (5). Furthermore, drivers of customer satisfaction were associated with sentiments such as “fun”, “great”, “lovely” and “amazing”, and

### *Customer experience through online reviews from TripAdvisor*

experience and services like “rides”, “water”, “dolphins”, “experience” and “show”. On the contrary, the main attributes mentioned by customers, particularly in measuring the main reasons for customer dissatisfaction, were the waiting time, the price and the density of people, besides both Disney and Universal being mentioned on reviews with a negative sentiment. As such, the contribution of this study provides a solid background support beyond a simple traditional method, thus strengthening managerial decisions to further improve the guest experiences, not only to general management but also to marketing managers due to the nature of the generated information and their associated decision-making challenges. Moreover, other stakeholders are likely to benefit from this deepening knowledge about consumers, namely those which establish business partnerships with theme parks.

The theoretical contribution also suggests that drivers of customer satisfaction in the context of theme parks are associated with attributes such as “experience”, “great”, “education”, “fun”, “rides” and “water”. On the contrary, the attributes such as “price”, “crowded”, “time” and “waiting” were clearly the main attributes mentioned by customers, for customer dissatisfaction in what concerns to theme park activities. Like it was already mentioned before, it is difficult not to find a crowded theme park since this kind of parks provide multi-focus resources like attractions and rides, shows, restaurants, retail stores, and more. Guests make decisions regarding their visit journey and the time they allocate for each resource according to their personal preferences, which sometimes can be difficult to control. Early studies regarding the factors influencing the selection of a particular U.S. theme park identified crowds as an influencing variable, but not the most significant (Torres et. al., 2019).

Prior research on WOM communications revealed that customers typically express positive content as a result of their product involvement, self enhancement, or a desire to help the company. Stephen and Galak’s (2012) analysis of data showed that online WOM generated by customers in an online forum had a stronger long-run positive impact on sales than traditional earned media did, even though the traditional earned media were likely reached more people. Another important study by Shriver et al. (2013) examined the dynamics of UGC production and came to the conclusion that people who posted information for others in an online community benefited by attracting more social ties and that this not only pushed them to generate more content but also raised overall browsing activity on the internet. In this regard, offering advice about a delightful theme park experience helps readers know what to expect and how to best plan their visit. In fact, customer expectations can have a positive or negative impact on customer satisfaction. While meeting and exceeding expectations is very important, managing expectations has proven to be a more comprehensive approach to deliver a satisfying experience.

### *5.2 Limitations and Future Research*

The present study comprises several limitations and the findings should be interpreted with that in mind.

First, the attribute analysis only considered a sample of 40 reviews out of 800 in total, which represents only a small group of customers’ perceptions of theme parks.

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Furthermore, there are many words that can have different meanings, depending on their context and usage, so that the same word can be used as a positive or a negative sentiment.

Additionally, sentiment classification and guest satisfaction could be considerably different in another cultural context while in this study the patterns analyzed considered theme parks in U.S and most of the reviews were from customers residing in United States of America.

Future research may consider applying a fully automated system approach, as this proposal contains both computer programs and manual effort. The ideal option should combine both in a single system as a technological development. Companies use marketing and service tactics to draw customers in and make them want more. Businesses must continually adapt and get to know the needs of the customers in order to provide them with both a quality product and service worth coming back for. One important aspect companies must not forget stands for the fact that improving the customer experience takes commitment across all levels of the organization. Finally, innovation corresponds to the ability of one's creativity as well as strive constantly to adapt, fulfil and exceed not only customers' but also industry's needs. Overall, taking into consideration the new technological systems applied to management, this research can be used as an example for the development of a methodology that can lead companies through a distinctive marketing strategy, characterized by customer focus and competitive advantage. It is understood that visitor experiences may vary from one guest to another, from park's geographical location, demographic patterns, technological advancement and government regulations, yet the findings are useful for theme park decision makers to support marketing strategies.

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