Tourism Perception on the Coast of Paraná, Brazil: Analysis of Natural Attractions

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Abstract
Digital platforms are tools of great importance for the evaluation of tourist destinations, as they allow tourists to access photos, evaluations and tips from users who have enjoyed destinations and attractions visited, thus being a source of consultation for other people who plan their trips. In this research, the analysis of comments on the TripAdvisor website was developed, aiming at mapping important attributes, in the visitors’ point of view, from a qualitative approach, guided by principles of netnography in the city of Paranaguá/PR, Brazil. The period considered as the basis for the analysis extended between January 2018 and January 2020 in order to reflect the realistic perceptions of the normality experienced by visitors in relation to the attractions without the bias of the Covid 19 pandemic time. In order to determine the corpus analyzed in the present study, the attractions available in the “Essential in Paranaguá” option were considered, classified by TripAdvisor as “places to see; ways to explore and; typical experiences”. Data collection was performed manually, with a copy of each comment left on the platform being made to a text document. 112 comments were compiled into a single text document with 16 pages and 6258 words, which form the textual corpus. This corpus was analyzed using the free software Iramuteq, suitable for qualitative and quantitative analysis of texts, such as correspondence analysis, hierarchical classifications, similarity analysis and word clouds. This set of possibilities enabled a better understanding of the meanings, motivations and perceptions emanating from the texts that make up the interactions of users of the TripAdvisor website in relation to the attractions of the city. Preliminary analyzes reveal that ‘Ilha do Mel’ and ‘Ilha dos Valadares’ are the most prominent attractions. The Descending Hierarchical Classification of the text indicates the existence of 7 categories of
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perception with related and statistically significant terms in the Chi-Square test. It was noted that ‘Ilhai do Mel’ is perceived as a place that is "worth" to be visited and that it has positive reviews and full of tips on how visitors can enjoy the best options during their visit.

Keywords: Perception, Tourism, Coast of Paraná.

1. Introduction

Digital platforms are tools of great importance for the evaluation of tourist destinations, as they allow tourists to access photos, evaluations and tips from users who have enjoyed destinations and attractions visited, thus being a source of consultation for other people who plan their trips. In this research, the analysis of comments on the TripAdvisor website was developed, aiming at the mapping of important attributes, in the visitors' point of view, from a qualitative approach, guided by the principles of netnography in the city of Paranaguá/PR, Brazil, seeking to answer the objectives of the study that were, initially, to identify the main virtual environments where users of tourist services express their perceptions; survey of data related to tourism in coastal areas; report the perceptions of these visitors in relation to Paranaguá through the chosen methodology; analyze the data collected from the opinions of people who visit these virtual environments.

The period considered as the basis for the analysis extended between January 2018 and January 2020 in order to reflect the realistic perceptions of the normality experienced by visitors in relation to the city's attractions without the bias of the pandemic resulting from Covid 19.

In order to determine the corpus analyzed in the present study, the attractions available in the “Essential in Paranaguá” option were considered, classified by TripAdvisor as “places to see; ways to explore and; typical experiences”. Data collection was performed manually, with a copy of each comment left on the platform being made into a text document. 112 comments were compiled in a single text document with 16 pages and 6258 words, which form the textual corpus. This corpus was analyzed using the free software Iramuteq, suitable for qualitative and quantitative analysis of texts, such as correspondence analysis, hierarchical classifications, similarity analysis and word clouds.

This set of possibilities enabled a better understanding of the meanings, motivations and perceptions emanating from the texts that make up the interactions of users of the TripAdvisor website in relation to the attractions of the city, which will be presented in the topic results and discussions. A brief reference will be presented below that helped in the understanding and analysis of the results.

2. Literature Review

2.1 Tourism

Since the beginning of civilizations, human beings have moved for various reasons, whether for survival in search of food and shelter or for the search for better living conditions, in the search for the conquest of previously little explored territories and riches (Scheuer, 2010). According to Bonfim (2007) “the displacement of people known as the phenomenon of Tourism, which is a social practice with economic characteristics, began to develop only in the 19th century, more precisely after 1860.
Tourism activity has been expanding annually, so it is common for several authors to write about tourism, such as Barretto (1991) who states that tourism is essentially the movement of people and meeting their needs, as well as the needs of people who do not travel. Tourism is the phenomenon of interaction between the tourist and the receiving nucleus and the set of all activities resulting from this interaction. (Barretto, 1991, p. 47-48). Another more comprehensive definition is from Silveira (2002) as tourism being: [...] the activity that consists in the displacement of people, provisional and limited in time and space, in such a way that it does not imply the transference of the place residence, which has different motivations (which can range from simple leisure, passing through curiosity, education, health, culture, adventure, going to professional and religious aspects), and which has, on the one hand, as underlying the use of this time of displacement, a desire on the part of the human being to escape from their daily territory and, on the other hand, the search for new spaces and cultures in a more or less linked way, and which will not fail to produce economic, social, cultural and environmental effects. Therefore, tourism is understood as an activity that also produces and consume spaces, being responsible for new territorialities [...] (Silveira, 2002, p.21).

In a more succinct definition, WTO (1995) defines tourism as the activity of people who travel to places away from their usual environment, or who stay there for no more than on consecutive year, for leisure, business or other reasons. Thus, it is characterized as a socioeconomic and cultural phenomenon, as it involves contact with people and different cultures. Tourism resources by definition are “all goods and services that, through human activity and the means available to them, make tourism possible and satisfy the needs of the demand” (WTO, 2001, p. 172).

According to Beni (1998), tourism can also be defined as “the sum of operations, mainly of an economic nature, that are directly related to the entry, stay and displacement of foreigners in and out of a country, city or region”.

What can be seen, according to Scheuer and Bahl (2011) is that tourism was born and developed with the capitalism and as it is an activity of the tertiary sector (provision of services) and as it is not considered an article of first necessity, it has suffered, and still suffers, with all the crises of history.

### 2.2 Tourism in Coastal Areas

Since the 1990s, ecotourism has gained prominence worldwide, which is defined by The International Ecotourism Society (TIES) as “responsible travel to natural areas that conserve the environment, sustain the well-being of the population and involve interpretation and education” (TIES, 2015) and its principle is to unite conservation, communities and sustainable travel. In recent years, there has been an increase in visitors to federal Conservation Units (CUs). According to the Chico Mendes Institute for Biodiversity Conservation (ICMBio, 2020) there were 15 million visits in 2019 (15,335,272), an increase of 20.4% compared to 2018 (12,389,393), with 6.4% (922,794) due to the real increase in visits and 14% (2,023,085) due to improved monitoring of the flow of visitors.

Thus, it can also be defined as the practice of leisure, sports or educational tourism in natural areas, which uses the natural and cultural heritage in a sustainable way, encourages its conservation, promotes the formation of environmental awareness and guarantees the well-being of the populations involved (MTur – Ministry of
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According to data from Embratur (2020), tourism in coastal areas is the main tourist receiver place in Brazil, and of the ten most visited cities in Brazil in 2019, six are coastal cities. In the coastal region, the main attraction are the beaches, but the attractions go much further, as the region is rich in natural resources. As for natural attractions, they receive the following operational definition from the Ministry of Tourism (2006, p. 14): “they are elements of nature that, when used for tourist purposes, begin to attract tourist flows (mountains, rivers, caves, waterfalls, climate, flora, fauna)”.

The coastal region is a very favorable region for the development of ecotourism due to the characteristics of the landscapes. According to Pires (2013) ecotourism is inserted as a sustainable version of tourism focused on nature. Also, Pires (2013) argues that in ecotourism the main motivation is the contemplation and observation of natural characteristics and related cultural resources in the destinations.

Another favorable factor for ecotourism in the region is to have Conservation Units and/or National Parks. National Parks allow public visitation in a regulated way with conditions and restrictions of use defined in the Regulation of Brazilian National Parks, Decree 84.017/79 (BRASIL, 1979). The MMA (Ministry of Environment) understands as visitation “the use of the Conservation Unit for recreational, educational purposes, among other forms of indirect use of natural and cultural resources” and considers a visitor to be any person who attends a CU in accordance with the purposes and objectives of each area, including tourists, day excursionist and the local population (MTur, 2006, p. 9).

Paraná state has a total of 71 Conservation Units, of which 29 are open for controlled visits, according to IAT 2021 (Water and Earth Institute of Paraná). In the coastal region, there are Full Protection Conservation Units created according to Law No. 9,985/2000, with the basic objective of preserving nature, being admitted only the indirect use of its natural resources. By definition, “integral protection” refers to the maintenance of ecosystems free from alterations caused by human interference, admitting only the indirect use of their natural attributes. ‘Ilha do Mel’ Ecological Park (Paranaguá), ‘Graciosa’ State Park (Morretes), ‘Palmito’ State Park (Paranaguá), ‘Pau Oco’ State Park (Morretes), ‘Río da Onça’ State Park (Matinhos), ‘Ilha das Cobras’ State Park (Paranaguá), ‘Pico do Marumbi’ State Park (Piraquara, Quatro Barras and Morretes), ‘Pico Paraná’ State Park (Campina Grande do Sul and Antonina) and ‘Roberto Ribas Lange’ State Park (Antonina and Morretes) (IAT, 2021). The Sustainable Use of Conservation Units aims to make nature conservation compatible with the sustainable use of part of its natural resources (IAT, 2021). It is understood as ‘sustainable use’ the exploitation of the environment in order to guarantee the perenniality of renewable environmental resources and ecological processes, maintaining biodiversity and other ecological attributes, in a socially fair and economically viable way. As part of this group in Paraná Coast, there are: APA of Guaraqueçaba’ (Guaraqueçaba) and the State APA of Guaratuba (Guaratuba, São José dos Pinhais, Tijucas do Sul, Morretes and Matinhos (IAT, 2021).

In Brazil, according to the MMA (Ministry of the Environment, 2002), the expansion process of sun and beach tourism was consolidated in the 1970s, with the constructions on the coast. The Ministry of Tourism (MTur - 2006) defines that “sun and beach tourism” consists of tourist activities related to recreation, entertainment or rest on beaches, due to the joint presence of water, sun and heat” (MTur, 2006, p. 14). The beauty of the beaches and the constant presence of the sun in some regions help the country to establish itself as a sun and
beach tourist destination for the local community, national and international tourists. According to PDITS (2010) there are 73 tourist attractions identified on Paraná Coast, 23% are linked to the sun and beach segment; 24% to ecotourism and 14.7% to adventure, with 25% still related to cultural tourism. With the data presented, it is possible to understand the importance of the different segments of tourism in the region.

3. Materials and Methods
Handel & Schwartzstein (2018) indicate that digital platforms constitute tools of great importance for the evaluation of tourist destinations. Among such platforms, TripAdvisor website allows tourists to access photos, reviews and tips from users who have enjoyed destinations and attractions visited, thus being a source of consultation for other people planning their trips (Leung et al., 2013).

The analysis of comments on the TripAdvisor website allows the mapping of important attributes, in the visitors’ point of view in relation to the attractions and services of a location. Given this characteristic, it was chosen in this research to collect data on the TripAdvisor website, since it was intended to: a) understand the general characteristics of tourist attractions; b) determine aspects related to the quality of service in the destinations visited by visitors; c) know details regarding the gastronomy offered in a tourist destination; d) knowing territorial specificities located in the attractions.

From a qualitative approach, guided by netnography principles (Kozinets, 2014), the present study used comments made by users of the TripAdvisor website in relation to Paranaguá, PR, Brazil. The period between January 2018 and January 2020 was considered as the basis for the analysis to reflect the perceptions without the bias of the pandemic resulting from Covid 19. It is believed that in this way more realistic assessments are obtained with the normality experienced by visitors in relation to the attractions of the city.

In order to determine the corpus analyzed in the present study, the natural attractions available in the “Essential in Paranaguá” option were considered, classified by TripAdvisor as “places to see; ways to explore and; typical experiences”.

Data collection was performed manually, that is, without the use of a software, with each comment left on the platform being copied to a text document. It is noteworthy that the TripAdvisor website allows the filtering of the type of visit indicated by the user, with the options classified as: business, couple, family, friends and alone. This procedure allows a broader assessment of perceptions, regardless of the type of public, and this procedure is important for generalizing the attributes of the attractions available in the city.

It was compiled 112 comments in a single text document with 16 pages and 6258 words, which form the textual corpus. This corpus was analyzed using the free software Iramuteq, suitable for qualitative and quantitative analysis of texts.

It should be noted that the Iramuteq software allows correspondence analysis, hierarchical classifications, similarity analysis and word clouds. This set of possibilities enables a better understanding of the meanings, motivations and perceptions emanating from the texts that make up the interactions of users of the TripAdvisor website in relation to the tourist attractions and services of the city of Paranaguá.
4. Results and Discussions

As visitors to tourist destinations rate a destination on the TripAdvisor platform, you can observe their reactions and ratings. In this sense, the present study sought to compile the evaluations in order to make them useful sources for public or private managers to better understand how tourists who frequent the city of Paranaguá perceive this destination, in particular, in relation to its natural attractions.

The visitors’ manifestations indicate that ‘Ilha do Mel’ and ‘Ilha dos Valadares’ are the most natural prominent attractions and these findings are reinforced in the following stages of analysis. After the data are processed by the Iramuteq software, the first result to be analyzed is the word cloud (Figure 1).

![Figure 1. Word cloud of natural attractions in Paranaguá, PR, Brazil.](image)

The visualization of the word cloud allows to understand that the Cave (Gruta) of Encantadas Beach (Ilha do Mel) concentrates most of the comments exposed on TripAdvisor by visitors to the city. The various adjective designations that also refer to this natural attraction, such as: beautiful, enchanted, interesting and beautiful. Some conjugations of terms can also be inferred, such as: worth it, low tide (suggesting the best situation for visiting) and easy access. These perceptions refer to the notion that tourists seek attractions that provide them with visiting experiences that are convenient for them (reinforced by the notion of easy access) and that allow them to enjoy the beauties of the attraction (reinforced by the notion of enchantment, beauty and nature).

Still in relation to the word cloud, it is also possible to perceive some peculiarities of the ‘Ilha do Mel’ and ‘Ilha dos Valadares’ as highlights in the reviews contained in TripAdvisor, such as: bridge, mangrove, island, boat, rock and walk and legend. These mentions indicate the tourist potential of the attractions and reveal the interests of the visitors in the attractions and their characteristics. In this sense, communications that reinforce...
these aspects to visitors, linked to the notion of natural beauties and convenience and nature conservation, may have the ways to position the differences of the locality in relation to other destinations.

The next step of the analysis aimed to understand how words are related in texts and comments left by visitors on the TripAdvisor website. In this way, the analysis of similarity was carried out, which allows the creation of clusters of words and their joint recurrences in the textual corpus. The cluster (Figure 2) are separated by color and, in this way, help to interpret the set of different reviews left by the visitors on TripAdvisor.

It is possible to verify the existence of 8 clusters (represented by the colored geometric figures in Figure 2). The yellow cluster, formed mainly by the words cave, sea and beautiful, represents a set with a tendency to centralize tourist assessments. In fact, the textual corpus indicates a greater number of evaluations of ‘Ilha do Mel’ in relation to ‘Ilha dos Valadares’. This cluster branches more strongly from the word “cave (gruta)”, this connection being represented by the greater thickness of gray veins under the word in question. It is interesting to note that the clusters close to this main cluster give clues about characteristics of visitation to ‘Ilha do Mel’, in fact. For example, in the pink cluster, the idea of visiting the cave is associated with the tide conditions (represented in the cluster by the words tide (maré), low (baixa) and enter (entrar). In this sense, the comments on TripAdvisor aim to highlight, in addition to the natural beauty of the Gruta da Praia de Encantadas on Ilha do Mel (Cave of the Encantada Beach from Ilha do Mel), the best visitation situation for effective contemplation of the attraction, since entering in the Cave at low tide is more conducive to the full contemplation of the attraction.
The cluster of green color allows to verify some observations of the tourists in relation to the ‘Ilha do Valadares’. Although represented by a narrower gray line, which in turn indicates a more tenuous relationship between the terms, the words “foot (pé)”, “bridge (ponte)” and “car (carro)” can be observed in a clear allusion to the characteristics of this island. In the opinion of visitors, based on their comments on TripAdvisor, it is clear that the use of the ‘Bridge of Valadares’ stands out for its characteristics, which must be crossed on foot and does not allow vehicles to go to the island.

Aiming at validating the aspects perceived in the analysis of similarity, a Descending Hierarchical Classification was elaborated, represented by the dendrogram (Figure 3), which allows dividing the words into categories of more strongly correlated terms, with the respective indication of the percentage of occurrence of words of the same class, in the textual corpus analyzed in the study. Then, this analysis indicates the existence of 7 perception classes with related terms and statistically significant in the Chi-Square test ($X^2 > 3.84$), divided into two large groups. The classes belonging to the group 1, located in the left branch of Figure 3 (class 5, class 1 and class 4) represent, for the most part, the nouns and adjectives used when visitors indicate their perceptions on the TripAdvisor website. Thus, it is perceived through terms such as: wonder, landscape, tour, worth, knowing, charming and place as the impressions most related to the satisfaction of visitors and attributes that indicate some dissatisfaction are not noticed. The classes belonging to group 2, in the right branch of Figure 3 (class 6, class 1, class 2 and class 7), represent the aspects of the visited locations, where the terms are highlighted: view, beach, photo, rock, water, sea, low, tide, arrival, attraction and recommends as specific points or tips on how to better explore the natural attractions of the islands (Ilha do Mel and Ilha do Valadares).

Figure 3. Descending Hierarchical Classification of terms and their respective classes
The Class 5 has the highest percentage of significant relationships to the Chi-Square test (15.7%) and reinforces the perception of tourists regarding the beauties of the surroundings of the beach and the cave of Encantadas Beach, as being a place worth visiting and photographing.

5. Conclusion

Digital platforms are tools of great importance for the evaluation of tourist destinations because they allow tourists to access photos, evaluations and tips from users who have enjoyed destinations and attractions, thus being a source of consultation for other people who plan their trips. In this research, the analysis of comments on the Trip Advisor website was developed aiming at the mapping of important attributes in the visitor’s point of view, with a qualitative approach, guided by principles of netnography in the city of Paranaguá, PR, Brazil. TripAdvisor presents itself as a tool for expressing the perceptions of visitors when exploring the destinations and tourist attractions. Given the behavior of people in different everyday situations, travelers also seek to express their perceptions on social networks. These manifestations can be very useful for organizations and managers of tourism activities. In this way, TripAdvisor website is a showcase where reviews, photos, tips and suggestions are exposed and these can interfere in the decisions of other travelers and give clues to tourism professionals on how to adapt their attractions according to what is perceived in this network.

The analyses of the present study reveal the perception of tourists in relation to the beauties of the surroundings of the Encantadas Beach and Cave, as being a place worth visiting and photographing. Other categories also reinforce the importance of this place of visitation and indicate that the perceptions expressed in the comments praise: “wonderful”, “great”, “charming”, “beautiful”, as well as offering tips on how to go to the place, observing serving the low tide as the best opportunity for photographic records of the attraction. It is noted that this attraction is perceived as a place that is “worth” to be visited and that it has positive reviews and full of tips on how visitors can enjoy the best options during their visit.

This study contributes to a better understanding of the natural attractions of the municipality of Paranaguá, insofar as the systematic analysis of a textual corpus, created from TripAdvisor website and run in the Iramuteq software, revealed that ‘Ilha do Mel’ and ‘Ilha dos Valadares’ are the natural attractions that stand out in the evaluations of visitors to the city. Therefore, aspects related to natural beauty can be explored by managers in an assertive way to attract visitors, because it is precisely this factor that was highlighted by visitors.

Finally, this paper points out other horizons to be explored in future studies. An example would be an investigation into the impact of visitation on natural attractions on issues related to sustainability and environmental conservation. As is known, the islands located in the city of Paranaguá are in an area of preservation and conservation and the tourist activity in these locations can compromise the necessary harmony between human beings and nature.

6. References

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