

Article

Motivation and Preferences of Visitors in the Bohemian Paradise UNESCO Global Geopark

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Abstract: There are some localities in the Bohemian Paradise Geopark that suffer from temporal overtourism in the high season. On the other hand, more than half of the geopark is not so often visited by tourists, although very attractive geosites can be found there too. In the most visited localities, nature is damaged due to overloading of the tourist infrastructure, while elsewhere there is pressure driven by municipalities to increase the number of tourists. For this reason, we organized a large questionnaire survey in summer 2020, which aimed to reveal the motivation of visitors of the geopark and their preferences regarding the places visited. The questionnaire combined several research methods: graphic scales, qualitative open questions, mental map, etc. The analysis of visitors' answers shows that most of them cannot be described as geotourists, i.e., tourists who are primarily interested in geology and conceive their holiday as a sightseeing stay. Many tourists like to stay in nature without an educational element. We also found that there is a higher proportion of ecotourists and geotourists in less-visited geosites because they appreciate even lesser-known localities and crowds of tourists rather than repel them. The question for the future is, therefore, whether the geopark should strive for greater promotion of lesser-known localities, which would attract even mainstream tourists, or, conversely, to protect these geosites, it should promote only the most visited localities (which are already damaged).

Keywords: overtourism; geoheritage; geopark management; geotourism; sustainable tourism



Citation: Drápela, E.; Boháč, A.; Böhm, H.; Zágorský, K. Motivation and Preferences of Visitors in the Bohemian Paradise UNESCO Global Geopark. *Geosciences* **2021**, *11*, 116. <https://doi.org/10.3390/geosciences11030116>

Academic Editors:

Jesus Martinez-Frias and
Teresa Brzezińska-Wójcik

Received: 25 January 2021

Accepted: 26 February 2021

Published: 3 March 2021

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1. Introduction

Geotourism is a form of tourism that, in addition to connecting the abiotic, biotic and cultural components of the landscape, significantly emphasizes its sustainability [1–5]. The development of geotourism should take place in accordance with the wishes of local communities [6–9] and should contribute to the protection of geoheritage [10–12]. Geotourism is a phenomenon that is not limited to specific types of areas [13] but is present worldwide (e.g., in cities [14–16]), but it can be said that it is concentrated into areas with particularly attractive elements of inanimate nature, which in some cases are declared geoparks [17,18]. These should be areas where sustainable geotourism is widely promoted and the protection of the geoheritage is ensured at a high level [17,19,20]. Geoparks have their employees, financial resources and knowledge to ensure the care for geosites. However, the real situation is not always so simple.

The main dilemma that geoparks have to solve is the question of how much to promote tourism to geosites [21,22] because too intensive tourism brings along a threat to the geoheritage due to inappropriate behavior of visitors [23–25]. Efforts to promote the geoheritage may thus contradict the efforts to protect it. The situation is all the more complicated because local communities and regional administrations are usually interested in attracting as many tourists as possible, as this supports the local economy [26,27]. Especially in remote rural regions, tourism is an important

factor in regional development [28–31], and efforts to regulate it to protect nature can thus encounter deep misunderstandings [27]. As geoparks are often dependent on funding from regional administrations [12], they are in a difficult situation where their activities to promote tourism are welcome, while activities to increase the protection of vulnerable geosites are rather rejected. Of course, not all geoparks are exposed to this dilemma. Some geoparks do not have problems with mass tourism, as they are relatively little visited. However, the most famous and most visited geoparks, especially the UNESCO Global Geoparks [2], are among the exclusive tourist destinations with hundreds of thousands of visitors a year [32]. Such destinations include the Bohemian Paradise UNESCO Global Geopark [33], i.e., at least some parts of it.

In this article, the UNESCO Global Paradise Geopark is used as an example of a region where there are geosites, endangered or even significantly damaged by mass tourism [32,33], but there are also areas that tourists practically do not visit. To find out why some attractive geosites are significantly less visited than others, we conducted a questionnaire survey in the summer of 2020, during which we found out various aspects of visitors' motivation and preferences regarding their holiday in the geopark. The purpose of this research was to find out whether it is possible to influence visitors in some way to increase their attendance of the less known sites and, conversely, to visit the less congested ones. Based on the results of the questionnaire survey, we tried to make recommendations on how to proceed in this situation so that regional tourism develops and at the same time endangered geosites are sufficiently protected.

2. Materials and Methods

2.1. Region

“Bohemian Paradise” is a region that belongs to the most traditional tourist areas in the Czech Republic [34]. The beginnings of tourism here date back to the 19th century (e.g., the lookout tower on the ruins of Trosky Castle was built in 1841 [35]), when under the influence of Romanticism, the main local tourist attractions were popularized: large areas of sandstone rocks, castles and their ruins, chateaux and a harmonious cultural landscape. The name “paradise” itself was created thanks to the richness of cultural, historical, and natural beauty that is located in this region [34]. Bohemian Paradise, located about 60 km northeast of Prague, has a good transport connection by the D10 motorway from the populous agglomeration of the Czech capital.

In the 1930s, the first areas of sandstone rocks received their nature protection [36]. In addition, Bohemian Paradise was the first region in former Czechoslovakia to receive the status of a Protected Landscape Area in 1955 [36], which is a category of a large-scale protected area for the cultural landscape (for the unspoiled natural landscape it is the National Park). Finally, in 2005, the newly established Bohemian Paradise Geopark became the 25th member of the European Geoparks Network and in 2015 the first and so far the only Czech geopark in the UNESCO network [37]. An orientation map showing the location of the geopark is shown in Figure 1, examples of two types of the most visited types of sites—rock formations and cultural monuments—are in Figure 2.

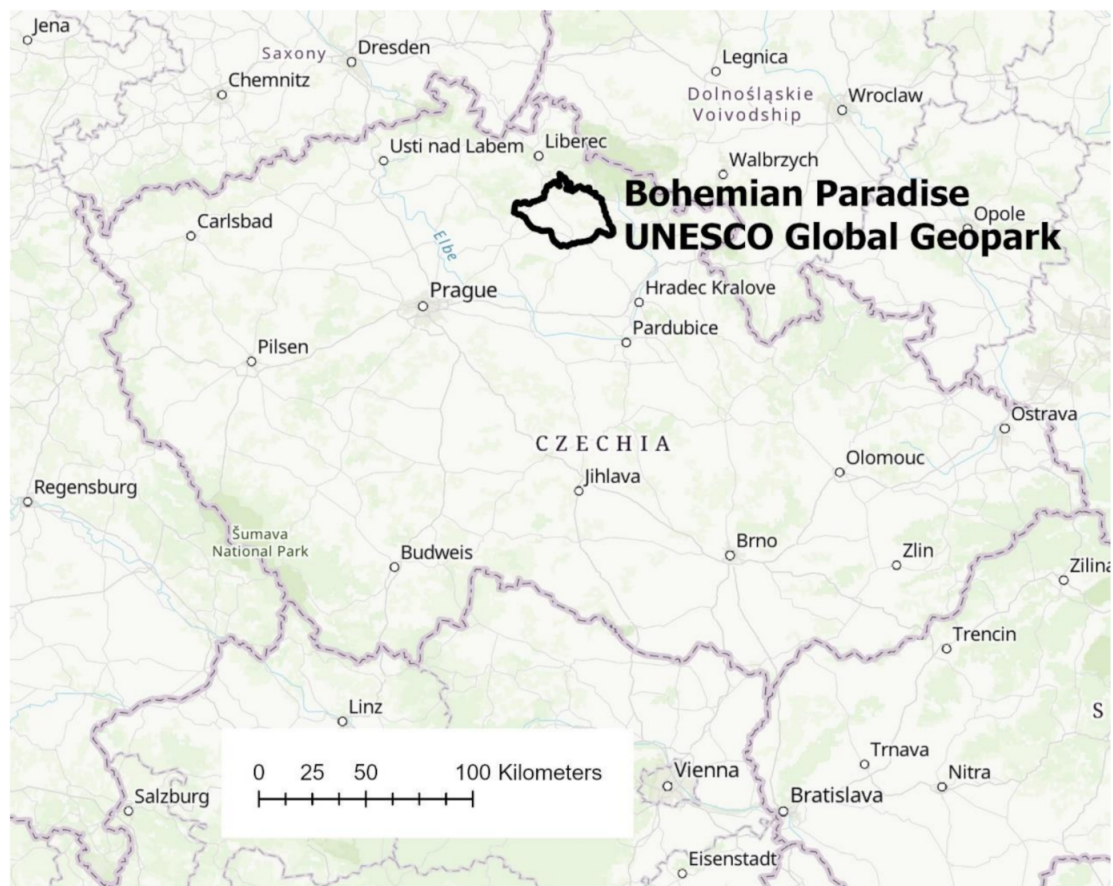


Figure 1. Location of the Bohemian Paradise UNESCO Global Geopark within Central Europe.



Figure 2. An example of two types of the most visited localities in the Bohemian Paradise UNESCO Global Geopark: sandstone rock formations in Prachov (left) and the ruins of Trosky Castle (right).

From a geological point of view, the territory of the geopark is very heterogeneous—you can find here a diverse range of different types of rocks, geomorphological formations, mineral and fossil deposits. The oldest rocks in the geopark are muscovite metagranites to metadiorites, Latest Precambrian in age (about 550 million years old) [37]. Chlorite-sericitic phyllites, which contain ichnofossils and mineralized body parts and molds of fossils as well [38], are Late Proterozoic in age. The lenses of older crystalline metamorphic dolomites are folded in the bodies of these phyllites, of which the largest is probably located

near the village of Bozkov. Thanks to water erosion and variously resistant parts in the rock, it contains also many speleothems [37].

The eastern and northeastern part of the geopark is covered by rocks of the Krkonoše Basin. The deposition here took place from the Upper Carboniferous to the Lower Triassic, and the filling consists mainly of freshwater sediments, fine-grained claystones, and siltstones, which became slates, or fluvial sandstones, and conglomerates [37]. In the vicinity of Nová Paka, slate contains a relatively large number of fossils, mainly petrified plant stems called *Araucaria*. The northeastern and southeastern parts of the geopark are separated by the Lusatian fault, along which there were frequent tectonic movements in the past [39]. The southwestern part of the geopark is formed by sandstones of Bohemian Cretaceous Basin, which originated in the Upper Cretaceous in a sedimentary cycle from Cenomanian to Santonian. [40]. Sedimentation created several hundred meters' thick layers of sandstone, siltstones and conglomerates contain many macrofossils, among others molds of many bivalves. The sandstone layers were then modeled by erosion into interesting landforms, which are today among the most visited tourist sites [32]. The current landscape was last formed by Tertiary volcanism, which was active around 17–4.5 million years ago [37]. Some dominants in the landscape come from this period, especially the double peak with the castle Trosky [41], which has become a symbol of the Bohemian Paradise. The geological map of the area is shown in Figure 3.

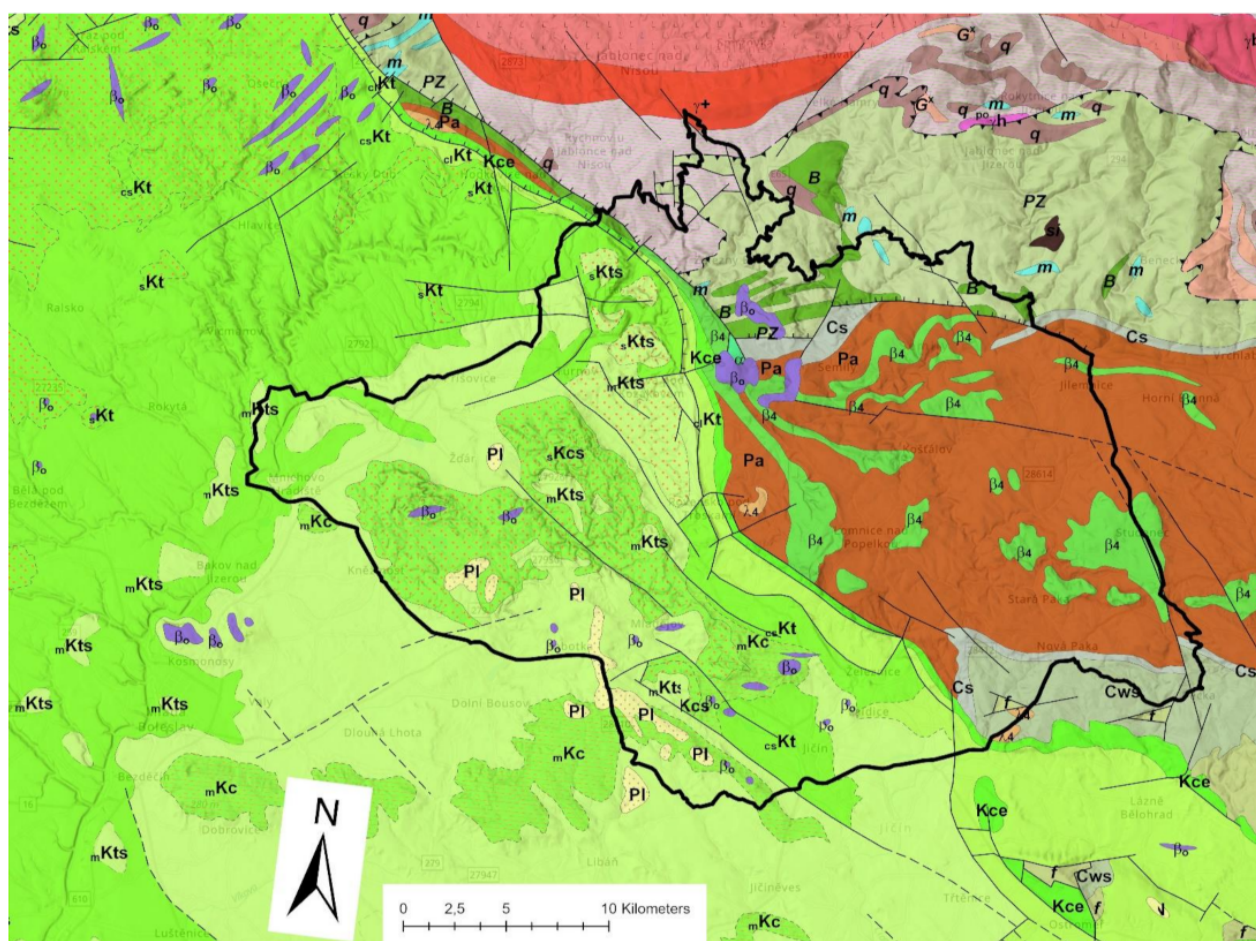


Figure 3. Cont.



Figure 3. The geological map of the Bohemian Paradise UNESCO Global Geopark. Source: Czech Geological Survey [42].

The main problem of the geopark is that tourism is very unevenly distributed in its territory [33]. The most attractive part is located in the southwest in the Cretaceous sandstones, where there are also the most visited cultural monuments. On the contrary, the northeastern part and the peripheral parts of the geopark are relatively little-visited [32]. The fact that there are several definitions of the Bohemian Paradise area does not help to improve the situation: on the one hand, it is its historical (or regional identity) delimitation (which is neither clearly defined nor perceived) [43,44], the delimitation of the Protected Landscape Area (with an area of only 181 km²) [45], the delimitation of the geopark (with an area of 833 km²) [37], and delimitation of the tourist area Bohemian Paradise (with an area of 1091 km²) [46]. On the other hand, its strong point is the diversity of the offer of various tourist attractions, where in addition to natural and cultural-historical beauty, there are many opportunities for sports, swimming, socializing, cultural events, etc. This diversity in the range of activities is then reflected in the diverse types of tourists who come to the region.

2.2. Data

Input data were obtained during a questionnaire survey conducted from June to September 2020—this period was limited by the restrictions associated with the incidence of coronavirus disease Covid-19 when it was not possible to collect data before or after. The data collection took place in 26 localities in the territory of the geopark. These localities are shown in Figure 4. The selection took into account the relatively even geographical distribution, but also traffic on tourist sites.

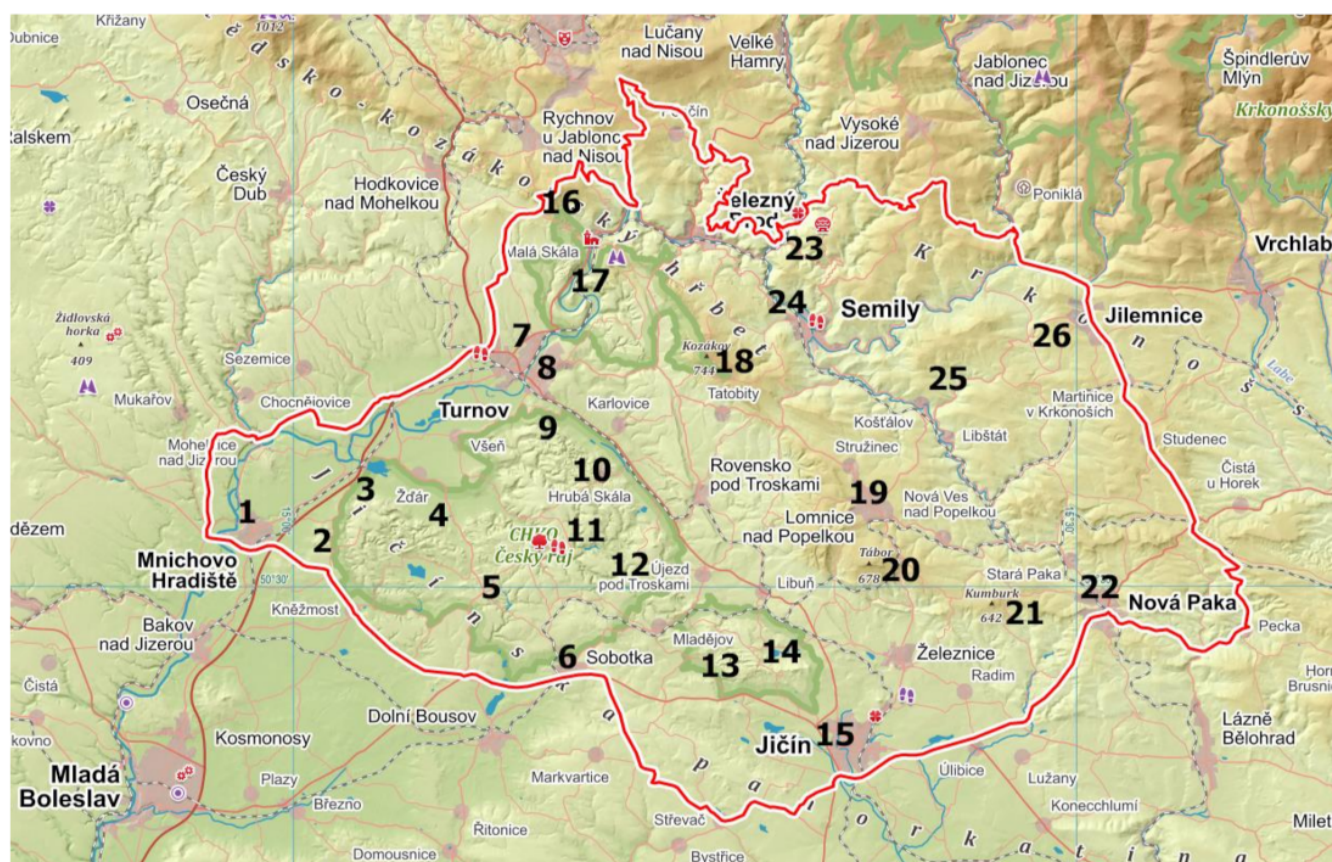


Figure 4. Location of data collection points within the Bohemian Paradise UNESCO Global Geopark. Description: 1—Mnichovo Hradiště, 2—Valečov, 3—Krásná vyhlídka, 4—Příhrazy, 5—Kost, 6—Sobotka, 7—Hrubý Rohozec, 8—Turnov, 9—Valdštejn, 10—Hrubá Skála, 11—Nebákov, 12—Trosky, 13—Prachovské skály, 14—Jinonice, 15—Jičín, 16—Frýdštejn, 17—Malá Skála, 18—Kozákov, 19—Lomnice, 20—Tábor, 21—Kumburk, 22—Nová Paka, 23—Bozkov, 24—Semily, 25—Košťálov, 26—Jilemnice.

The questionnaire was quite long; it took about 30 min to complete. The method of data collection was a face-to-face interview combined with tasks that the respondent filled in the questionnaire her/himself (marking preferences in graphic scales—see below, mental map—not used in this article). All respondents participated in data collection voluntarily, always had the opportunity not to answer the question (or not fill it in), and all work with their data was strictly anonymous—the respondent only filled in gender, age group, district or state from which s/he came and the size of the group with which s/he spends her/his vacation. A total of 556 responses were obtained.

The questionnaire was divided into eight parts:

1. Socio-demographic identification of the respondent;
2. Details of her/his vacation;
3. Visitor motivation and preferences;
4. Evaluation of satisfaction with services in the region;
5. Perception of the tourist region Bohemian Paradise;
6. Specific holiday experiences (qualitative information complementing quantitative scales);
7. Evaluation of the holiday from the point of view of satisfaction;
8. Interest in the “Bohemian Paradise Card” (if there was a card after which there would be free entry to various attractions, would the respondent be interested in it?).

To understand the motivation of visitors (why they came to spend their holidays in the Bohemian Paradise Geopark) and their preferences (what they want to see, do, experience here), parts 3, 6, and 7 were the crucial ones in the questionnaire. The answers to these parts formed the background data for the analysis presented in this article. Therefore, we commented on them in more detail below.

In the “Visitor motivation and preferences” section, two questions were important: Why did you decide to come here on vacation?

An open question, the answers to which were subsequently qualitatively processed/recoded into parent keywords.

Please indicate on the graphic scales what you want to visit, see, or experience during your holiday:

A battery of 11 sub-questions, asking respondents to mark their answers on a graphic scale, was used. The graphic scale consisted of a line 10 cm long, at the ends of which extreme answers were indicated: “I am not interested at all” and “I am most interested”. The respondent’s answer (comma crossing the line) was subsequently recoded to the value 0–100 (this is the measured distance in millimeters, where 0 means the extreme answer “I am not interested at all” and 100 the extreme answer “I am most interested”). The respondent commented on the following items:

- (a) Rocks, rock formations
- (b) Castles, chateaux
- (c) Museums, galleries, folk buildings
- (d) Forests, meadows, landscape views
- (e) Swimming, sunbathing
- (f) Cycling
- (g) Walking, hiking
- (h) Good food and drink
- (i) Festivals, social events
- (j) Events and attractions for children
- (k) Well-being and relaxation
- (l) Something else: (any other answer—open question; the answers were not evaluated, they only served as a check of the completeness of the list above)

In the “Specific holiday experiences” section, four questions were important:

What have you liked the most so far?

What have you missed the most so far?

What has disappointed you the most so far?

What has surprised you?

Of course, all questions concern the respondent's holiday in the region. These are open questions, and their answers were subsequently qualitatively re-coded into parent keywords.

In the "Evaluation of the holiday from the point of view of satisfaction" section, another two questions were important:

What sites would you recommend to your friends?

An open question, all answers were recorded.

Would you come back here again? Why?

An open question, the result is a binary variable yes/no and a free answer qualitatively re-coded into parent keywords.

2.3. Method

In the first part of the analysis, the results from the battery of graphical scales were processed using K-means cluster analysis. The K-means method was chosen based on its suitability for a given dataset, which contains data that do not have a normal distribution, is not very affected by extreme values, and is mutually comparable. Therefore, K-means was chosen from various methods of cluster analysis. Only the answers of the respondents who filled in all the items on the graphic scales were included in the analysis. In total, responses from 555 respondents were processed (only 1 did not fill in all). The resulting number of clusters was chosen based on the rule on minimizing the loss function [47] when the number of clusters was selected at which the last time there was a significant decrease in the loss function. Based on this rule, the division into 7 clusters was chosen.

After the K-means analysis divided the file into individual clusters, additional qualitative information was sought for these clusters, the source of which was all other questions mentioned in the previous subchapter. These are therefore mainly open-ended questions, in which the frequency of answers recoded into keywords was assessed. The method used for recoding was axial coding [48], in the case of some questions only the selection of keywords or names from the respondent's record. Hence, qualitative information serves to better understand the motivations and preferences of respondents, divided into quantitatively defined categories. The answers from some questions were grouped into one variable because they described similar things, only the wording was different.

3. Results

The results of the K-means cluster analysis are shown in Table 1 (highest values are marked in bold). The first column lists the variables entering the analysis, the other columns show means for each cluster. In general, the variables "well-being and relaxation" and "good food and drink" reached high values in all clusters, as these are the universal qualities that people expect from their vacation. For all other variables, there was at least one cluster where this variable was rated below average (less than 50—as half of maximum 100).

Cluster 1 reached the highest values in the variables "castles, chateaux" and "museums, galleries, folk buildings". It also reached high values for a number of other variables, with the exception of cycling, festivals, and social events and attractions for children. It was also below average in hiking. It is therefore a cluster containing a culturally oriented tourist, who likes nature, but does not pay much attention to hiking and prefers a relaxing holiday.

Cluster 2 reached high values for all variables, while for the last five variables it reached the highest values of all clusters. It differed from other clusters mainly by its strong focus on children—it is, therefore, an active family tourist who welcomes an activity or attraction of any kind, mainly to entertain children.

Cluster 3 reached the highest values for the variable "cycling" and high values for the variables "forests, meadows, landscape views" and "rocks, rock formations". This described a typical sports tourist who enjoys movement in nature through his or her own

sports performances. A specific subgroup of sport tourists are climbers who often visit the sandstone rock formations in this region. A total of 7 respondents were climbers.

Cluster 4 reached the highest values in the variables “rocks, rock formations”, “forests, meadows, landscape views” and “swimming, sunbathing”. The rather low value of the variable “walking, hiking” was somewhat surprising, as it is assumed when people like to visit natural sites and, conversely, the high value of swimming and sunbathing, which is typical for resting tourists. The cluster, therefore, describes a typical nature lover, who is not so active a tourist, but also enjoys staying by the water.

Table 1. Results of cluster analysis by K-means method.

| Item | Cluster 1 | Cluster 2 | Cluster 3 | Cluster 4 | Cluster 5 | Cluster 6 | Cluster 7 |
|------------------------------------|--------------|--------------|--------------|--------------|-----------|-----------|-----------|
| Rocks, rock formations | 64.73 | 78.63 | 79.20 | 80.47 | 75.28 | 21.31 | 61.14 |
| Castles, chateaux | 91.60 | 77.96 | 62.52 | 52.00 | 77.34 | 34.84 | 70.25 |
| Museums, galleries, folk buildings | 84.80 | 57.92 | 38.13 | 19.36 | 30.32 | 22.56 | 39.51 |
| Forests, meadows, landscape views | 75.26 | 80.92 | 82.59 | 84.14 | 75.54 | 33.13 | 55.00 |
| Swimming, sunbathing | 62.01 | 73.92 | 68.15 | 79.06 | 16.39 | 66.27 | 51.55 |
| Cycling | 18.48 | 59.20 | 85.33 | 15.78 | 7.77 | 15.87 | 23.62 |
| Walking, hiking | 53.60 | 81.45 | 72.52 | 68.26 | 77.30 | 17.33 | 60.03 |
| Good food and drink | 78.60 | 88.32 | 77.18 | 82.44 | 50.85 | 83.31 | 67.09 |
| Festivals, social events | 26.94 | 73.36 | 47.67 | 46.18 | 10.68 | 61.49 | 33.18 |
| Events and attr. for children | 22.12 | 83.17 | 21.67 | 12.45 | 9.59 | 28.33 | 76.35 |
| Well-being and relaxation | 85.11 | 87.01 | 72.89 | 81.26 | 64.19 | 83.91 | 75.77 |
| Number of cases | 85 | 84 | 88 | 87 | 74 | 45 | 92 |

The remaining three clusters did not reach the highest values for any variable. Cluster 5 was somewhat similar to cluster 4 but reached lower values for most variables. On the contrary, cluster 5 reached higher values for variables describing cultural sites and hiking. Cluster 5 reached very low values for four variables: “swimming, sunbathing”, “cycling”, “festivals, social events”, and “events and attractions for children”. Thus, this cluster describes a hiker who seeks both natural and cultural heritage, does not love sports or passive rest much, and avoids social events.

Cluster 6 reached very low values in all but four variables: “swimming, sunbathing”, “good food and drink”, “festivals, social events”, and “well-being and relaxation”. It, therefore, describes a social and resting tourist. There are significantly fewer respondents in this cluster than in the other clusters (only 45).

On the contrary, most respondents (92) were in cluster 7, which did not reach very high values in any variable and reached very low values in one variable only (cycling). These are therefore somewhat non-specialized tourists, whose characteristics could be better revealed by a qualitative analysis. However, the strong focus on children should be mentioned here.

In the second step, we supplemented the results of the cluster analysis with qualitative data that will help us to better understand not only the diversity of different types of tourists but also their feelings from a vacation in the Bohemian Paradise. The results are processed for each cluster separately because of differences in motivation and preferences of individual types of tourists. The results are shown in Table 2.

Table 2. Qualitative information on individual clusters.

| Cluster | Vacation Reason | Best Experience | Bad Experience | Recommends | % Who Want to Come Here Again | Average Length of Stay in Days |
|-----------|--|--|--|--|-------------------------------|--------------------------------|
| Cluster 1 | trip (12) friends (10) region (9) | cultural monuments (41) nature (21) entertainment (15) | parking (11) mess in nature (8) places to rest (8) | Valdštejn (23) Hrubý Rohozec (12) Trosky (12) Hrubá Skála (12) Turnov (10) | 87.06 | 3.86 |
| Cluster 2 | nature (10) region (9) we like it here (6) | nature (30) cultural monuments (21) entertainment (17) | high prices (10) too many tourists (9) parking (9) | Dětenice (20) Hrubá Skála (12) Trosky (11) Prachov (6) Jičín (5) | 91.67 | 4.11 |
| Cluster 3 | region (10) nature (8) cycling (7) | nature (46) cultural monuments (22) hiking and sports (11) | too many tourists (19) parking (13) high prices (10) | Trosky (18) Hrubá Skála (17) Prachov (16) Malá Skála (14) Kost (13) | 96.59 | 6.12 |
| Cluster 4 | trip (10) friends (9) nature (8) | nature (42) cultural monuments (16) gastronomy (10) | too many tourists (14) parking (11) places to rest (7) | Trosky (21) Hrubá Skála (20) Prachov (18) Kost (14) Valdštejn (11) | 88.51 | 3.92 |
| Cluster 5 | nature (15) trip (13) region (12) | nature (44) cultural monuments (30) hiking (8) | too many tourists (10) mess in nature (8) parking (7) | Hrubá Skála (20) Trosky (17) Prachov (16) Valdštejn (10) Hrubý Rohozec (8) | 93.24 | 3.22 |
| Cluster 6 | friends (9) entertainment (7) trip (5) | entertainment (14) gastronomy (13) swimming (9) | alcohol (5) refreshment (4) parking (4) | Dětenice (8) Valdštejn (7) Trosky (6) Malá Skála (5) Svijany (4) | 66.67 | 3.75 |
| Cluster 7 | region (11) Covid-19 (7) nature (7) | nature (25) entertainment (25) cultural monuments (23) | parking (7) weather (4) high prices (4) | Dětenice (28) Prachov (14) Hrubá Skála (13) Malá Skála (9) Trosky (8) | 90.22 | 4.02 |

Before we interpret the results in Table 2, we need to explain what each column means. The “vacation reason” column shows the three most common keywords after recoding the answers to the question “Why did you decide to come here on vacation?”. The “best experience” column shows the three most common keywords after recoding the answers to the questions “What have you liked the most so far?” and “What has surprised you?” (if the surprise was meant positively). It is important to mention that respondents could provide more than one answer. The “bad experience” column shows the three most common keywords after recoding the answers to the questions “What have you missed the most so far?”, “What has disappointed you the most so far?”, and “What has surprised you?” (if the surprise was meant negatively). It is important to mention again that respondents could provide more than one answer, not just one. In this case, those responses were counted in all relevant keyword categories. On the other hand, some respondents had no negative experience. The “recommends” column shows the five most common sites that the respondent listed in response to the question “What sites would you recommend to your friends?”. The column “% who want to come here again” shows the percentage of

respondents who answered positively to the question “Would you come back here again?”. Finally, the last column “average length of stay in days” indicates the average number of days of stay as stated by the respondents in the introductory part of the questionnaire.

The most common reasons why visitors to the geopark decided to spend their holidays here were the natural beauty of the area, the fact that they wanted to spend their holidays with friends, that they wanted to go somewhere on a trip, and that they wanted to get to know this region. These four keywords were constantly repeated in all clusters, supplemented by some other less common ones. Respondents usually mentioned their best experiences like a visit to natural or cultural heritage, or experiences from entertainment attractions (knight tournaments, adventure programs, family attractions, etc.). Others in order included gastronomic experiences, hiking, sports and staying by the water. On the contrary, the most common bad experiences included too many tourists in the localities, problems with insufficient parking capacity and order in nature. Other negative experiences mentioned include high prices, few places to rest (especially benches), a small offer of alcohol or refreshment and bad weather. The most recommended places included cultural monuments: Trosky Castle, the ruins of Valdštejn Castle, Hrubý Rohozec Castle, Kost Castle, the town of Turnov and the town of Jičín. The second most common category was natural monuments: the Hrubá Skála rock formation, the Prachov rock formation and the Malá Skála rock formation. Apart from these two categories, only two places are mentioned in the top five: the castle resort Dětenice, which is an entertainment complex in the medieval style, and the brewery Svijany.

What about the differences in responses across clusters? Cluster 1 confirmed its focus on cultural monuments—out of the five recommended sites, four are cultural. In addition, the most positive experiences were from visits to cultural monuments. They also concentrated on various entertainment activities, which were in third place. On the contrary, the problem was the insufficient capacity of car parks and places to rest. Tourists in cluster 1 also visited nature, although this is not their main priority. Nevertheless, they noticed a mess in nature. Interestingly, they stated “trip” and not “cultural monuments” as the most common reason for their arrival. For culture lovers, a trip means a visit to a castle, chateau, historic city, or museum.

Cluster 2 confirmed its focus on a wide range of activities and family holidays. The most recommended location was the castle resort Dětenice, where many fun activities for children and adults could be experienced. In addition, there were two cultural and two natural sites in the top five. Positive experiences come as expected from visits to natural and cultural monuments and entertainment attractions. The biggest problems of family holidays were high prices, a large number of tourists and problems with parking. As with a single cluster, the most common answers to the reason for the stay included the answer that tourists returned here based on their prior positive experiences. Maybe that is why their rating on the graphic scales was so high.

We have defined Cluster 3 as active tourists, especially those who love cycling. This was also confirmed by the answers, which ranked cycling in third place in reasons of visit and positive experiences. However, by far the most positive experiences concerned nature, even the most of all clusters. In this case, sport is an instrument of spending time in nature. However, the most popular natural sites in the geopark are significantly burdened by overtourism in the summer months, which is why crowds of tourists are the most frequently mentioned negative experience. The number of tourists in the most visited rock formations then means that although these geosites are sought-after climbing localities, there are relatively fewer climbers in the high season. However, the number of climbers never reaches the number of cyclists because cycling is widespread. Among the most frequently recommended localities, there are three natural and two cultural monuments. However, the last two columns are also worth mentioning for cluster 3: these tourists wanted to return here most often (96.59%) and spend significantly more time here than all other clusters (6.12 days). In terms of the local development, this was the most interesting group of visitors.

The typical respondent in cluster 4 was described as a nature lover who likes to rest more than to sport. S/he has the most positive experiences from nature, but gastronomy came as a third. However, the most common reason for a holiday in the region was not a visit to natural monuments, but a trip with friends (see Table 2). As with cluster 1, there was a situation where the visitor was used to spending their free time in a certain way, so they did not mention this reason as the main one. Negative experiences were associated with a large number of tourists in nature and poor parking. There were also not enough places to rest. There were surprisingly more cultural than natural monuments among the recommended localities.

Cluster 5 is made up of respondents who could be described as “calm loving hikers”. The most common reason for the arrival was a trip to nature and exploring the region. Positive experiences included visits to natural and cultural monuments and hiking. Negative experiences concerned crowds of tourists, clutter in nature and poor parking options. Natural and cultural monuments were evenly represented among the recommended localities.

Cluster 6 was the most different one from the others. The cluster analysis showed that the respondents included in it preferred rest and social events during their vacation; on the contrary, they were not very interested in visiting natural and cultural monuments. This can also be seen in their answers to open questions, where the most common reasons to spend a holiday in the region were to stay with friends and to have fun. Likewise, the best experiences were fun, gastronomy and staying by the water. Among the negatives, in addition to the obligatory parking, we also found a poor offer of alcohol and refreshments. Among the recommended locations there were two entertainment attractions, two cultural and one natural monument. However, a very interesting fact is that the share of respondents who would like to return to the region was significantly lower than that in other clusters—only 66.67%. This could mean that there were no good conditions for this type of tourism in the geopark.

For cluster 7, very important information is given in the first column: the most common reason for the visit was to get to know the region and Covid-19. Of course, this is not the usual reason for a visit—in 2020, when data collection took place, many people in the Czech Republic decided, based on recommendations from the government, to spend their holidays in the country and not abroad to minimize the risk of Covid-19. For the same reason, on the other hand, only a minimal number of foreign tourists came to the geopark (who usually make up about 10% of all visitors). There were also a lot of respondents in this group who said in one of the questions that they usually go differently every year. Respondents look for natural, cultural, and entertainment attractions, but most recommend natural monuments. They differed from other clusters, as they complained the least (they report relatively least negative experiences). They did not find the number of tourists to be such a problem, as well as a mess in nature; instead, they complained about the weather and high prices. So, it could be concluded that these are tourists who are used to visiting various crowded locations. Given the above facts, they could be characterized as family travelers.

4. Discussion

The results presented in the previous chapter show a relatively large variety of reasons for arrival and ways to spend a holiday in the geopark. This is not surprising, as scholarly works from Korea [28], Scotland [49], the Czech Republic [50], Australia [51], or Gambia [52] have reached similar conclusions. The cluster analysis method divided visitors of the geopark into seven groups, which differ from each other by focusing on vacation for exploration or relaxation, degree of interest in cultural and historical monuments or beauty of nature, search for social events and festivals, or spending holidays in peace and quiet, degree of willingness to run sports activities, etc. However, how can we interpret these results in the context of the aims of our research?

The first question we were looking for an answer to was why some attractive geosites are significantly less visited than others. Two criteria are important for this answer—the

average length of the visitor's stay in days and a list of the most recommended locations. Unfortunately, the average length of stay of a visitor is low, for the whole data set it reached the value of 4.1 days, even though the data were collected in the main summer tourist season. However, this also means that in these 4 days, tourists will only be able to visit the most famous sites and will not have time for the lesser-known ones.

Perhaps an even more important finding is the list of sites that visitors would recommend to their friends. Although the preferences of the respondents differed significantly, the list of recommended sites was largely the same: most often there are three rock formations (Hrubá Skála, Prachov, Malá Skála), four cultural monuments (Trosky, Valdštejn, Kost and Hrubý Rohozec), and one amusement park (Dětenice). Even for cluster 6, whose respondents declared a lack of interest in natural and cultural monuments, three of the five recommended sites on the list are natural and cultural monuments. In addition, seven of these eight localities (except for the Dětenice resort, which has a huge capacity) suffer from signs of overtourism: long traffic jams occur on access roads, there are so many tourists that they have nowhere to park, they move in crowds and complain about the high number of tourists in the locality, at cultural monuments they complain about long waiting times for sightseeing, on the geosites, long queues are formed at the viewpoints, in narrow passages between the rocks, etc. Thus, the core of the problem is that although different types of tourists spend their holidays differently, everyone wants to visit the most famous sites in the region, even at the cost of making their tour unpleasant because of the crowds of other tourists. Although they complain about a number of things then (see the results of the questionnaire survey), these sites impress them so much with their beauty that, despite all the negative experiences, they recommend them to their friends.

However, can this negative phenomenon be reversed? How can we answer the second research question, whether it is possible to influence visitors in some way to visit more less-known sites and, conversely, to visit less congested ones? The answer is a bit more complicated here—if tourists do not spend longer than the current 4 days, they will not have time to visit other locations in addition to regional highlights. The main task of the destination management agency is to motivate tourists to come to the geopark for a longer period of time. This can be achieved in many ways, but it is important to communicate the offer of attractions to the visitor in a timely manner.

On the other hand, the question is whether it makes sense to promote more interesting but less-visited geosites. With a larger number of tourists (and especially those tourists who are not exactly natural enthusiasts) [50] comes a greater degree of damage to geosites. Thus, perhaps it would be better not to promote less-known geosites so much and focus on their protection instead. Tourists who are interested in geotourism will visit them anyway, while the mass tourist will miss them and will not damage them. On the contrary, places where different types of tourists can satisfy their main motivation should be promoted more: sections of safe cycle paths for cyclists, lesser-known cultural monuments for cultural tourists, swimming pools, spas and wellness for resting tourists, social events and festivals for social tourists, restaurants and local gastronomic specialties, etc. The strong point of the Bohemian Paradise UNESCO Global Geopark is that all these types of activities can be found here in the main tourist season, which could ideally (if visitors extend their stay) contribute to the sustainability of tourism in the region. However, the path of tourism diversification is a long way off and certainly not easy, as evidenced by examples from other scientific studies [53–55].

The southwestern part of the geopark is a traditional climbing area, as there are attractive sandstone formations. There were a total of 7 climbers in our sample of respondents, which is not so much in comparison with the number of other tourists. However, due to the overcrowding of geosites in the high season, climbers prefer peace to climb in the off-season. Although the popularity of sandstone climbing may seem to be a potential threat to rock damage, it is a minimal threat compared to the damage done by ordinary tourists [50]. In addition, climbing includes an educational aspect [56–58], when climbers try to behave respectfully on geosites and with regard to the sustainability of their sport

there. Evidence of this is, for example, the representation of hobby climbers in nature conservation authorities.

The year 2020 was significantly affected by events related to the spread of coronavirus disease Covid-19 in the world. For this reason, there was a reduction in international tourism, which also affected the results of our survey, as there were almost no foreign visitors and, conversely, more domestic tourists. However, due to the trends in tourism development that can be observed in recent years, there has been no significant deviation—there is a more or less linear year-on-year increase in the number of visitors [32], which is limited only by the supply of accommodation in the region. However, data collection will continue in the coming years, and it will therefore be possible to follow the trends that will come in the post-Covid period.

5. Conclusions

The results of the research brought several interesting findings. The results of the cluster analysis using the K-means method showed that visitors to the Bohemian Paradise UNESCO Global Geopark can be divided into seven categories according to their preferences (what they want to see, do and experience on their holiday). These categories were named according to their characteristics: cultural tourist, active family tourist, sports tourist, nature lover, calm loving hiker, relaxing social tourist, and family traveler. Although the preferences varied significantly between groups, all tourists eventually visited the main highlights in the region—especially the sandstone rock formations and cultural monuments. Combined with the relatively short average length of stay (4.1 days), this means that tourists only went to the most visited sites (which have the status of a must-see) and did not have time for visiting less-known sites.

During the research, we looked for answers to two research questions. The first was why some attractive geosites were significantly less visited than others. This is based on a cumulative mechanism, where tourists who know only some places in the region visit only these places and further recommend them to their friends. The number of visitors to these most famous places is constantly rising [32]. As the qualitative part of our research proves, visiting these overtourism-affected localities causes negative experiences to the tourists, so they probably do not want to explore other parts of the region and leave relatively soon.

The second research question was whether tourists could be more evenly distributed throughout the region. According to our findings, this is possible, but the key factor is to increase the average length of stay, as visitors will always want to see those must-see sites and can use the remaining time to visit the lesser-known ones. However, in the article we also mentioned certain risks that this strategy entails in terms of protection of geosites. Therefore, we recommend targeting promotional activities in the direction of diversifying the tourist offer, rather than promoting as many geosites as possible.

Author Contributions: Conceptualization, E.D., A.B., H.B. and K.Z.; methodology, E.D., A.B., H.B. and K.Z.; writing—original draft preparation, E.D.; writing—review and editing, E.D., A.B., H.B. and K.Z.; visualization, E.D. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by the Technology Agency of the Czech Republic, grant number TL03000020, project name “Proactive solutions to the negative effects of overtourism”. The authors also express their gratitude to the Technical University of Liberec, which is co-financing this project.

Institutional Review Board Statement: The authors declare that the study was conducted in accordance with the ethical rules that are generally accepted for questionnaire surveys in the humanities research.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Data are available on request from the authors.

Conflicts of Interest: The authors declare no conflict of interest.

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