Atmospherics Measurement:
The Ways to Make Public Goods Available

SHISHOVA Ekaterina[a], KUZMINA Ksenia[b]

Laboratory of Economics of Culture, Higher School of Economics, Saint Petersburg, Russian Federation
[a]eshishova@hse.ru, [b]kkuzmina@hse.ru

Abstract

The purpose of this article is to introduce the concept of atmospherics to the public sector research. Since museums as cultural institutions preserve the cultural heritage and take care of socially and culturally significant public goods, they should also guarantee the accessibility to cultural objects for different social groups and provide them sufficient information about preserved cultural objects. Although museums nowadays find themselves in the situation of governmental funding reduction, their main objectives along with preservation of cultural objects, security issues, and accessibility should be focused on development of such museum services as structured itineraries, saturated with information maps, improvement of public service areas in park and museum complexes. Framed in the theoretical concept of atmospherics the qualitative study on functional characteristics of the Peterhof State Museum-Reserve (Saint Petersburg) provides, firstly, new methodology for the analysis of visitor attraction and visitor experience, secondly, new managerial strategies in order to include different social groups in the process of receiving knowledge about cultural objects.

Keywords: atmospherics; visitor experience; cultural heritage; museum; public sector

JEL Classification: H14, H72

1 Introduction

The contemporary museums are forced to be oriented on visitor attraction due to government funding reduction and market economy transition. Since the competition between museums increases, museums are obligated to extend their services spectrum. Moreover according to this policy they should develop new services and make it accessible for different visitor social groups [6]. It becomes important for museum managers to augment visitor satisfaction and their involvement level.

There are a lot of ways to increase visitor involvement: from information availability [10] to measures which increase museum collection learning [2]. In such conditions it is important for museum management to use results of visitor studies which permit to learn the visitor satisfaction level and as consequence build visitor involvement strategy in a right way [2], thereby providing the museum services with competitive advantages and greater coverage of different visitor social groups.

The search for new marketing and management solutions in order to attract visitors to museums is related largely to changes that have occurred in visitor (tourist) behavior: nowadays tourist wish is not just to 'stay' in a museum, but to gain a new experience, new emotions and learn something new [12]. In this regard, tourist behavioral practices are under a special scope of research: studies on measurement of visitor satisfaction and willingness to revisit the museum, or recommend it to friends [12, 1, 5]; case studies of the best museum practices to create the informative environment for visitors that contributes to the stimulation of their emotional and cognitive processes [7]; studies on museum space and its influence on visitor behavioral practices [12]. Studies show that it is important to find out not only the degree of visitor satisfaction, but to analyze the museum environment and the factors that affect the experience that visitors get while visiting museums. Among such factors could be listed different

services, spatial organization of exhibitions and landscape, communication with other visitors or smells and noise in museums and parks. In addition, it is important to study factors that influence the visitor behavior in museums and parks in general and in specific areas of museums and parks in particular.

Framed in the theoretical concept of atmospherics the qualitative study on functional characteristics of the Peterhof State Museum-Reserve (Saint Petersburg) aims to test qualitative methods for the analysis of visitor attraction and visitor experience, and elaborate new strategies in order to include different social groups in the process of receiving knowledge about cultural objects.

1.1 Atmospherics as a Tool for Management Strategy of Visitor Attraction

It is a multifaceted task to conduct the visitor satisfaction research in the architectural and park complexes. Such complexes combine not only the objects of cultural and historical heritage, but also the diversity of the landscape. For this kind of cultural organizations the atmospherics [4; 9] and its impact on visitor behavior is of particular interest. It allows to shape marketing strategies according to the understanding how particular elements of the atmosphere (architecture, landscape, information support, the quality of related services) can influence visitor willingness to revisit this place. Thus, applying the atmospherics model to the museum environment has considerable potential to derive specific visitor behavioral practices and analyze the role of the atmosphere in visitor experience [8]. Museum then is understood as an "informal learning setting" [8].

Approaches of atmospherics elaborated by P. Kotler [9], J. Baker [3] and M. J. Bitner [4] as well as theoretical findings made by Forrest [12] were combined in order to sort out three components of the service environment that may have the impact on visitor emotions and behavior:

- ambient factors understood as environmental features - various noises, smells, cleanliness, sounds and air quality (temperature, humidity, ventilation);
- design as a combination of functional and aesthetic elements (layout). Functional features include spatial planning, navigation (the availability of signs that can be means of communication between visitors and organization). A special attention should be paid to the spatial functionality which facilitates the visitor access to different facilities. This is particularly necessary when the service is consumed by visitors themselves (without support of the organization, such as guided tours). Aesthetic elements include architecture, colors, textures and materials.
- social interactions (social factors) that fix the impact of other visitors and staff on visitor experience (number of visitors at the site, their appearance and behavior).

2 Material and Methods

2.1 Atmospherics Measurement Methodology

The atmospherics concept in this article was studied on the case of the Peterhof State Museum-Reserve which is located about 30 kilometres away from Saint-Petersburg (Russia). It is an object of cultural heritage and was constructed in 1714 by Peter's the Great decree. It contains palaces, gardens and fountains on its territory and it is called 'Russian Versailles'. As the Peterhof State Museum-Reserve is very huge, the pilot stage of research was conducted in the Lower Garden which is 1,02 km longwise.

The Lower Garden is one of the biggest part of Museum-Reserve which has a look-out over the Gulf of Finland. It consists of three palaces, four cascades, twenty two fountains and a great deal of alleys for walking.

There are three entrances for visitors in the park, one of which is from the side of the gulf. The last is available for those who travel to the Peterhof from Saint Petersburg center by boat. To estimate the Peterhof atmospherics, the methodology was elaborated and applied within the pilot research stage. The methodology is aimed to measure not only the atmospherics components (ambient factors, design as a combination of functional and aesthetic elements, and social interactions), but the behavioral practices influenced by the atmospherics.

For this stage of research there was chosen two methods of data collection, namely semi-structured interview and observation methods.

The semi-structured interview method was applied in order to estimate the atmospherics and behavioral practices were measured by the observation method. This method had a range of restrictions but it was used because it allowed to operationalize the atmospherics concept and to prove its applicability to Peterhof conditions, to check the question formulation for the respondents. This method does not permit to attain the representativeness level as it possible using the survey. Moreover the collecting data encoding and its analysis are very time consuming, but it helps to prepare further questions to the questionnaire for the core research stage.

In the beginning of the pilot research the guide contained the questions directed to measure three atmospherics components, but in time it became clear that it is impossible to get the information from the respondents about all three stages. The respondents could not operationalize reserve quality ambience (noises, air quality, smells) and reserve aesthetic elements (architecture and color), as well estimate these characteristics. There were some questions partially concerned about reserve functional elements, namely the questions about visitor itineraries during their spent time in the museum-reserve (the map to indicate the visitor itineraries was used) and photos of cultural objects that they will upload into the social networks.

The semi-structured interview method is valid for reserve design estimation and social factors partially. That is why the research tool included the questions concerned with the navigation availability, opportunities for access to the reserve cultural objects and reserve staff interaction. There were no answers to questions about interaction with other visitors. That is why this part of social factors was not estimated by study tool.

The semi-structured interview could partially estimate some behavior practices, namely the questions aimed to ask about frequency of return at the museum reserve and to define the respondents' actions caused by the visit to the reserve.

This research tool contained also the questions about reserve atmospherics images and respondents social characteristics such as gender, age, education level, occupation.

The observation method was included after the analysis of first interviews which demonstrated that respondents cannot describe by words their behavioral practices used during their pastime in the museum reserve and describe the most\least favorable objects there. This method was applied at the end of the pilot research stage. As consequence the research team had no time for proper observation tool elaboration. It was possible to estimate only the respondents' actions variety spread during their pastime into the museum reserve.

The pilot research was conducted during the high season in May 2015. It supposed that different visitor itineraries and location could influence on their atmospherics perception. As consequence the different areas with different level concentration of visitors was chosen during the sample planning. Among them it was the the area near the water, near the main fountain cascades, area near the Grand palace, fountain-crackers, the benches in the thick wood. As for observation the interviewers was staying on the chosen areas and fixed the visitors actions during their stay there in the observation form.

As for semi-structured interview method the same areas for questioning was chosen. It supposed to question an equal ratio according to gender, age and visitor type (tourists or locals), but it turned out impossible because of visitor flows. As result the visitor type wasn't took into

account. Within this method there were collected 152 short semi-structured interviews (about 5-15 minutes long) with reserve visitors. According to the age it was questioned 41% of those whose age is less than 30 years, 25% of those whose age varies from 31 to 45 years, 19% of respondents who are from 46 to 60 years and 15% of those who are more than 60 years. The most part of respondents in the sample are women (81%), the men proportion is significantly less (19%).

3 Results and Discussion

This section presents the results of the evaluation of the functional elements and visitor behavioral practices observed in the museum-reserve. The section represents the results analysis overlapped with the discussion.

Analysis of the functional features of the Peterhof State Museum-Reserve (in particular, the convenience of the navigation system) has revealed that the lack of maps and signs in the park affects the behavioral practices of park's guests. Guests who visit the park without a guided tour choose itineraries intuitively. They might have followed proposed in advance by the park management options that would allow to visit various sites in different ways (chronological, historical, geographical, etc.), but such pedestrian itineraries were not elaborated. Visitors are guided by their own pre-knowledge about the park, they apply the information obtained about the park in advance via different methods such as guide-book, official webpage, word-of-mouth, memories from their previous visits, and not in accordance with a predetermined marketing strategy of the park.

"According to the respondent the system of navigation is well. He doesn't use the maps and other guide signs because he knows this park since childhood" (Man, 50 years)

Park management could elaborate different possible itineraries, for example, chronological, historical, geographical, etc.). A visitor in fact is left to himself to find objects to visit. The lack of information desks or maps constrains the visitor's access to certain cultural objects, sculptural compositions and services (cafes), and also leads to the lack of information about exhibitions in some small museums, located in the park:

"We need the map. We would like to find out where we are, where we can find the cafe to drink a cup of coffee" (Man and woman, 32 and 22 years)

"There is no map inside the park. It is only outside. Now we don't know where to go. We hope on the guide signs" (2 women, 28 years)

The lack of signs information and directions affects the level of knowledge that visitors get in the park. Many people want to learn more about the park and sculptural compositions, but they cannot get necessary information. Installed QR-codes are not always available for use, as not all visitors have the access to the Internet. Some visitors ask park's staff to help As a result tourists visiting the park without a guided tour have insufficient knowledge sometimes complemented by stories overheard from tour groups. The lack of signs and maps affects the overall satisfaction of the visit:

"Couldn't they make the cheapest map for those who need. There is no practically navigation. If there was wi-fi... In some places there is wi-fi, but if you don't have a gadget... " (Women, 62 and 48 years)

By conducting interviews it was revealed that respondents did not remember the acts committed during their stay in the museum complex. Therefore, the most effective way to fix the visitor behavior was to use the method of observation.

According to the results the most popular options in the museum-reserve are pauses or breaks when visitors could eat snack, take pictures, or rest. It was fixed that visitors choose the places for their breaks (to rest and for food consumption) with the smaller number of visitors and where cultural objects are less recognizable for tourists. The data indicates that the places next to the Gulf of Finland (regardless of location) are favorable points for food consumption.

Visitors taking photo were fixed at all places with a high number of visitors. Another result shows that a high number of resting visitors was fixed in different parts of the studied park with the high concentration of benches.

One of the characteristics of the public goods is non-rivalry, which means that the consumption of the public goods by some groups does not prevent from simultaneous consumption by other groups. On the one hand, the consumption of public cultural goods in the museum reserve is not restricted to an 'exclusive' consumption. The reserve is open to all categories of visitors, while some of them have financial preferences. On the other hand, since different groups have different pre-knowledge and are equipped with different devices and informational sources, the reserve is lacking informational and educational aspects that give visitors knowledge about the museum, park and fountains. Structured itineraries, saturated with information maps, improvement of public service areas could have created the opportunities for the various behavioral practices that are predefined by the museum reserve. In this case, the museum and park reserve has opportunities to concentrate visitor's attention not only on most visited and well-known tourist places, but also on exhibitions and small museums that need to be promote.

4 Conclusion

This article is aimed to demonstrate the pilot study results of the applicability of the atmospherics to the Peterhof State Museum-Reserve. The atmospherics can help to define the visitor behavioral practices and as consequence to elaborate an effective marketing strategy for services development and wide coverage of visitor attraction. This research shows the advantages and disadvantages of elaborated qualitative methodology and its application to such huge museum reserve as Peterhof.

The tool used for the pilot stage of research has the range of restrictions which hinder to measure all atmospherics components and its influence on visitor behavioral practices. The semi-structured interview method is able to get the relevant data about atmospherics functional characteristics and social factors, namely navigation and interaction with staff. Behavioral practices are better to learn with the help of the observation method which can fix the unconscious visitor's actions during the pastime in museum reserve.

This research tool has a range of gaps which needs to be developed. In particular, ways to measure the ambient factors, design and social interactions with other visitors must be found. Moreover the research tool, namely observation method, should be further elaborated. To get a representative sample the semi-structured interview guide should be elaborated into the questionnaire.

As the results show, the main objectives for museum management along with preservation of cultural objects, security issues, and accessibility should be focused on development of such museum services as structured itineraries, saturated with information maps, improvement of public service areas in park and museum complexes. It means that since museums as cultural institutions preserve the cultural heritage and take care of socially and culturally significant public goods, they should also guarantee the accessibility to cultural objects for different social groups and provide them sufficient information about preserved cultural objects. One of the main tasks of cultural institutions is to give the knowledge about the cultural objects they are responsible to preserve to all visitor's groups. In this case the atmospherics concept gives new perspectives on public goods consumption.

As such elements of the atmospherics concept as social interactions, ambient factors and aesthetic features were not operationalized with the chosen methods, the future research concentrates on the search and probation of the new methods.

References

[1] Audience research 2008. Young Adult Study. Museum Visitor Studies, Evaluation & Audience Research. Randi Korn & Associates, Inc.

[2] BABAK, T., ALIAKBAR, J., O'GORMAN K.D. 2010. Keeping your audience : presenting a visitor engagement scale.*Tourism Management*; 42: 321–329.

[3] BAKER, J. 1987. The role of the environment in marketing services: The consumer perspective. In J. Czepiel, C. Congram, J. Shanahan (Eds.): *The services challenge: Integrating for competitive advantage*. Boston, MA: American Marketing Association, pp. 79-84.

[4] BITNER, M. J. 1992. Servicescapes: The impact of physical surroundings on customers and employees. *Journal of Marketing*; 56(2), 57.

[5] BONN, M. A., S. M. JOSEPH-MATHEWS, M. DAI, S. HAYES, J. CAVE. 2007..Heritage/Cultural Attraction Atmospherics: Creating the Right Environment for the Heritage/Cultural Visitor. *Journal of Travel Research*, 45 (3): 345-54.

[6] CAMARERO C., GARRIDO M. J., VICENTE E. 2014. Achieving effective visitor orientation in European museums. Innovation versus custodial. *Journal of Cultural Heritage*, 16: 228-235.

[7] DISTELMAN, B., HUTTUNEN,, K. KATTELUS, S., KINANEN, P. 2013. Report 6. Audience research as an essential part of building a new permanent exhibition. The Learning Museum Network Project.

[8] FORREST, R. 2013. Museum Atmospherics: The Role of the Exhibition Environment in the Visitor Experience.*Visitor Studies;* 16 (2): 201–216.

[9] KOTLER, P. 1973. Atmospherics as a marketing tool. *Journal of Retailing*; 49(4), 48–64.

[10] LEASK, A. 2010. Progress in visitor attraction research:towards more effective management. *Tourism Management*; 31 (2): 155-166.

[11] TRINTH, T.T., RYAN, C. 2013. Museums, Exhibits and Visitors Satisfaction: A Study of the Cham Museum, Danang, Vietnam. *Journal of Tourism and Cultural Change*; 11 (4): 239-263.

[12] TRÖNDLE, M. 2014. Space, Movement and Attention: Affordances of the Museum Environment. *International Journal of Arts Management*; 17 (1): 4-17.[1] Audience research 2008. Young Adult Study. Museum Visitor Studies, Evaluation & Audience Research. Randi Korn & Associates, Inc.