The culture of ecological centers as a significant element of urban life in eco-cities

Shaikhieva Alina[1], *Korovina* Anastasya[2], *Tkach* Sergey[2], and *Rusakova* Maya[2*]

[1]Sociological Clinic of Applied Research, Saint-Petersburg State University, Saint-Petersburg, 191124, Russia
[2]Centre for Applied Sociology, Saint-Petersburg State University, Saint-Petersburg, 191124, Russia

Abstract. The study included an examination of user activities at an ecological centre in a major city, as well as the ecological culture that resulted from those actions. Non-participant observation and an offline questionnaire survey with 342 respondents were the methods used to acquire the data. The data is analysed using Jens S. Dangschat's notion of place habitus. The theoretical paradigm of habitus enables to analyse the community's ecological culture. The space itself benefits greatly from visitor behaviours; for example, a normal visitor's path is automated and predictable. Most users regularly come to the center, visit other eco-friendly spaces, and follow this topic on social networks. A significant proportion (47%) of respondents actively pursue environmentally friendly lifestyles, with occasional engagement in environmental organizations and infrequent financial contributions. A smaller but notable group (22%) demonstrates consistent engagement with environmental organizations through frequent visits and financial contributions. The center, with its spatial solutions, quickly places visitors in an ecological culture, which allows us to talk about the integrating role of the center.

1 Introduction

The main objective of popularizing an environmentally responsible lifestyle among city dwellers is to take urgent measures in connection with the increasingly acute problem of finding an answer to global environmental changes [1, 2]. One of the elements of such an answer may be the transformation of the everyday habits of city dwellers. City authorities increasingly hope for urban environmental centers, which could become centers for assembling an eco-oriented community [3]. Such a community could disseminate the values of an environmentally friendly lifestyle among its members, advise newcomers on the basics of environmentally responsible habits, and become a space for popularization and education [4]. Among the possible tools by which such an effect could be achieved is the creation of an atmosphere of accessibility and the holding of educational lectures, seminars, and colloquiums accepted on the territory of the eco-center. Within the framework of such a space, visitors could freely share their discoveries about how they change their lives, making them more economical. Another important area in which eco-centers can prove themselves

*Corresponding author: sch14tlt@gmail.com

is the topic of waste sorting. The centers can have places for waste delivery and sorting [5]. Speaking about the educational function, lecture halls and educational communities can be located on the basis of such centers. The link for both waste sorting and dissemination of knowledge is the community of active citizens, which is formed on the territory of the eco-center [6]. However, at present, the question deserves attention: how does the space of the eco-center itself influence the formation of such a community, and what, in a more general sense, are the ways to produce such a community.

An eco-center is usually understood as a group of buildings, a separate building or several premises, usually located within the city. The eco-center premises house various open spaces, shops, lecture halls, waste sorting points, libraries and exhibition halls. All organizations located on the territory of the eco-center are united by a single theme - ecology and a responsible lifestyle. This significantly facilitates the maintenance of an ecological lifestyle by visitors and maximizes the efficiency of each of the organizations, since visitors can bring garbage for sorting, buy the necessary goods in the store, attend a lecture, take a book they like, and communicate with like-minded people during one visit to the eco-center [7]. We will use concepts that were developed in detail by J.S. Dangshat [8]. The basis of Dangschat's reasoning is the idea that a building within an architectural ensemble in most cases does not have any initially predicted scenario of use. Both a store and a library space turn out to be simply rectangular boxes during construction. It is the practices that people access inside these buildings that make these buildings a library or a store. The idea of habitus of place is based on the reconceptualization of P. Bourdieu's concept of habitus [9]. In his works, Bourdieu borrowed the idea of habitus from botany. In botany, habitus is understood as the form that a plant can take depending on external conditions. Bourdieu believes that a person can also take some kind of divided form depending on the conditions in which his socialization takes place. In the case of habitus of place, these arguments are also true for space. However, such a conceptual model has significant limitations. It is easy to imagine how a library could be converted into a shop6, but it is almost impossible to imagine how an outdoor swimming pool could be converted into a fire station. In the swimming pool example, it is the physical objects that impose the constraints, in short, the pool itself. We are talking about the resistance of the material, which is described in detail in the classic works of the philosopher G. Simmel: "The Bridge" [11], "The Door" and "The Ruin" [12]. The materials of a building and the form they take can direct the movements of people. Thus, research interest in the forms of a building and how these forms construct the behavior of visitors to the building, we can come to how these practices create a community.

At the same time, our last thesis about the relationship between space and community is not entirely clear and requires more detailed explanation. Based on the idea of the habitus of place, we believe that the place itself is defined by the practices implemented in it, but at the same time, the practices themselves are limited by the resistance of the material - physical structures, solid walls, glazing area, etc. Where is the place for community here? The answer can be found in the works of R. Oldenburg [13]. Oldenburg begins his argument by asserting that people have some basic occupation on which they spend most of their lives. For many people, this occupation is work. Oldenburg suggests calling the space where people work the first place. Then there is the place where people live outside of work. As a rule, this is the house or apartment where people live. Oldenburg suggests calling this space the second place. There remains an activity that cannot be attributed to either work or being at home. Oldenburg believes that we are talking about leisure. And the place where leisure is spent is the third place. Oldenburg further notes that just as not every place is suitable for work and for living, not every place can be suitable for leisure. This place must be specially adapted. It is the way the place is adapted that plays a key role in the entire course of reasoning. According to Oldenburg, there is no need to make special efforts to create a community. People are initially adapted to unite in groups and form communities. The wrong arrangement

of any place where they spend their time can hinder them in this or, conversely, help them. In third places, if they are designed correctly, people freely enter into conversations within which they gradually begin to share their experiences and form trusting relationships with others. Another sign of a freely functioning third (in other words, correctly organized from the point of view of its planning) is the regularity of visits to this third and its accessibility to a wide range of people. Now we can summarize the entire theoretical model6 that can form the basis of this study. The existing practices that exist on the territory of the ecocenter are a pre-representation of the organization of its space and the organization of its interior decoration. In turn, if these practices correspond to those that Oldenburg expected to see in a correctly constructed third place, we can assume that a community is being formed in this place, since, according to Oldenburg, it will inevitably appear if no one and nothing interferes with it. Thus, the habitus of the place turns out to be connected with the community itself in this place.

2 Methodology and data collection

2.1 The study area

The main area of the study was limited to the online and offline audiences of the eco-center Sborka located in Saint Petersburg, Russia. Access to the offline audience was carried out through a personal face-to-face survey of the audience who visited the center on the days of collecting empirical data. Access to the online audience was carried out by sending an online questionnaire through the official eco-center community on social networks (The work was carried out with the support of St. Petersburg State University, project code 121062300141-5).

2.2 Data collection plan

At the first stage, a desk study was conducted – an analysis of the area of interest through searching and working with information. In parallel with the literature search, the research team conducted a number of non-participant observations to obtain information about the characteristics of the organization, its visitors, and the practices of visiting the eco-center.
342 questionnaires were gathered as part of the planned study; 285 of them belonged to eco-center visitors, 34 to social media group members, and 23 to first-time eco-center visitors. The questionnaire began on April 30, 2023 and lasted 22 days.

2.3 Data analysis

The study generated two sets of data: one from non-participant observation and one from a survey. The non-participant observation diaries were coded by the research team. The codes were visitor behaviour patterns, the number of visitors, and whether they came alone or not. The hypotheses posed in the study were proven inductively by presenting the distribution of data on the questions of interest as arguments for or against the hypothesis.

3 Results

As part of the observation, data were obtained, which later formed the basis for the creation of the questionnaire and were considered by the researchers when interpreting the findings and presenting analytical conclusions. The first observation concerns the prevalence of the proportion of female visitors among the number of visitors. Moreover, it was noticed that

men who visit the ecocenter, as a rule, do so as part of a group. In addition, they do it much less often. The behavior of the men was also different — they were less likely to engage in any dialogues with visitors and more often turned to the staff of the center for advice.

The observation allowed for the creation of a rough portrait of the guest and the description of his usual traits. It is said that a base of frequent visitors exists at the ecocenter. The analysis showed that the ecocenter's target audience is made up of individuals between the ages of 16 and 82. The typical visitor is thirty-three years old. The age group of 23 to 37 is the most frequent visitor. Women made up 84% of the responders, while males made up 16%. The level of education is presented in Table 1.

Table 1. Level of education.

Level of education	People, %
College degree	59
Secondary vocational	15
Unfinished higher education	12
Average total	6
Initial professional	3
Academic degree	3

It is important to note that the average income of visitors to the ecocenter is only about 300-500 US dollars, while the average income of city residents during the data collection period was 900-1300 US dollars. More than half of the respondents (53%), when answering the question about their financial well-being, said that they can afford to buy clothes and food without problems, but they have difficulty buying durable goods. Every fifth respondent learned about the ecocenter from friends and acquaintances, and half from social networks. Most often, the study participants visit points for sorting waste into different fractions. More than half of the respondents indicated this point. About a third chose eco-friendly stores. Less than one-tenth of the respondents claim that they come to the center to visit auditoriums or free space. Table 2 shows how often respondents generally visit the center.

Half of the survey participants say that their lifestyle can be called ecological. Among all respondents, every eighth (13%) donates at the center, and two-fifths of all respondents will do so in the future, when such an opportunity arises. The audience that regularly visits the ecocenter is more inclined to consider the possibility of financial support for the center than the center's subscribers on social networks. Most likely, this is because offline viewers are more involved in the work of the ecocenter and have more active environmental practices. It was also noted that those audience members who have been subscribed to the ecocenter's social networks for a long time are also inclined to support the ecocenter financially.

The portrait of donors and potential donors coincides in socio-demographic characteristics, the difference between them lies in environmental behavior practices and their involvement in the environmental agenda.

The most common reasons for refusing to donate to the ecocenter and other organizations are insufficient or unstable income. Respondents noted that they prefer to help those they know personally.

Table 2. Frequency of visiting the ecocenter.

Frequency	People, %
Almost every day	15
2-3 times a week	24
Once a week	21
2-3 times a month	16
Once a month	8
Once every 2-3 months	6
Less than once every 2-3 months	8
I don't usually visit	5

Speaking about the audience profile, the survey also noted that a large proportion of respondents were women. This is consistent with the results of other studies that show that women are more likely to develop environmentally-conscious practices [14]. This may be due to gender role pressure: women are expected to be caring, including with respect to the environment, within the framework of their gender role. Men, on the contrary, are expected to be less sensitive to risks, including risks associated with climate and environmental change. Therefore, they adopt a less environmentally friendly lifestyle.

4 Discussion

The majority of visitors claim that they visit the eco-center because they try to adhere to an eco-friendly lifestyle, and for them visiting the center is one of many environmentally oriented practices in their lives. Survey participants also rated their personal credence in the center quite highly. Out of five points, the center scored 4.7. The need for a counter or table where waste was sorted echoes the works of R. Oldenburg [13]. The researcher gives an example of a bar counter as a successful small interior form that contributes to the independent emergence of a sustainable community. The results obtained in our work are similar to the results obtained by researchers turning to the theory of grassroots practices in matters of forming ecological communities. In particular, the studies of A. D. Eisler et al. [14] The eco-center turns out to be woven into a network of environmental initiatives. This is evidenced by the fact that a significant part of visitors indicate that they also visit other eco-centers. Similar results are presented, for example, in the work of J. Hiller et al. [15] One of the main limitations of the study is the lack of clear measurements of urban cultural change. Conclusions about the significance of practices in these changes are based only on theoretical assumptions, and therefore deserve additional validation in future studies.

5 Conclusion

As was revealed during the observation stage, among the visitors of the eco-center there is a fairly large proportion of those who have already visited it many times. Here it is necessary

to press an explanation of the logic of such a conclusion. Sorting the brought waste is quite a difficult task for those visitors who have come to the center for the first time. There are different containers in which waste of different fractions must be placed. It is almost impossible to predict in what order the containers will be. Therefore, a new visitor must stop at the container, read what fraction must be put in it, select the appropriate waste, and only then throw it away. Visitors who were not in the center for the first time remembered the location of the containers, so they put waste of the required fractions in them almost automatically, without stopping. Most visitors behave similarly. However, many visitors noted that they perceive the waste sorting space as a transit one. They cannot stop there and wait, for example, for their friends if they come in a group. In addition, sometimes the waste must be pre-sorted. This could be done behind some kind of stand or counter. But, unfortunately, there is no such thing in the room.

References

1. L. Yangfan, J. Qiu, B. Zhao, M. Pavao-Zuckerman, A. Bruns, S. Qureshi, C. Zhang, Y. Li, Quantifying urban ecological governance: A suite of indices characterizes the ecological planning implications of rapid coastal urbanization. Ecol. Ind. **72,** 225-233 (2017). https://doi.org/10.1016/j.ecolind.2016.08.021
2. W. Zhang, G. Liu, F. Gonella, L. Xu, Z. Yang, Research on collaborative management and optimization of ecological risks in urban agglomeration. J. of Clean. Prod. **372**, 133735 (2022). https://doi.org/10.1016/j.jclepro.2022.133735
3. J. I. Nassauer, Z. Wang, E. Dayrell, What will the neighbors think? Cultural norms and ecological design. Landsc. and Urb. Plan. **92(3-4)**, 282-292 (2009). https://doi.org/10.1016/j.landurbplan.2009.05.010
4. M. Hodson, S. Marvin, 'Urban ecological security': a new urban paradigm? Int. J. of Urb. and Reg. Res. **33(1)**, 193-215 (2009). https://doi.org/10.1111/j.1468-2427.2009.00832.x
5. K. F. Abagale, A. Mensah, A. R. Osei, Urban solid waste sorting in a growing city of Ghana. Int. J. of Env. and Sustain., **1(4)**, 18-25 (2012). https://doi.org/10.24102/ijes.v1i4.83
6. A. Light, The urban blind spot in environmental ethics. Env. pol. **10(1)**, 7-35 (2001). https://doi.org/10.1080/714000511
7. A. Davis, J. R. Wagner, Who knows? On the importance of identifying "experts" when researching local ecological knowledge. Human ecology, **31**, 463-489 (2003). https://doi.org/10.1023/A:1025075923297
8. J. S. Dangschat, Space matters—marginalization and its places. Int. J. of Urb. and Reg. Res. **33(3)**, 835-840. (2009). https://doi.org/10.1111/j.1468-2427.2009.00924.x
9. C. Costa and M. Murphy, Bourdieu and the application of habitus across the social sciences. In Bourdieu, habitus and social research: The art of application (Palgrave Macmillan UK, London, 2015)
10. A. Warde, Practice and field: revising Bourdieusian concepts (Centre for Research on Innovation Competition, The University of Manchester, Manchester, 2004)
11. G. Simmel, Bridge and door. Theor., Cult. Soc. **11(1)**, 5-10 (1994). https://doi.org/10.1177/026327694011001002
12. G. Simmel, Two essays. The Hudson Rev. **11(3)**, 371-385. (1958). https://doi.org/10.2307/3848614
13. R. Oldenburg, Our vanishing third places. Plan. commis. j. 25(4), 6-10. (1997)

14. A. D. Eisler, H. Eisler, M. Yoshida, Perception of human ecology: cross-cultural and gender comparisons. J. of Env. Psych. **23(1)**, 89-101. (2003). https://doi.org/10.1016/S0272-4944(02)00083-X
15. J. Hillier and E. Rooksby, Habitus: A sense of place. (Ashgate, Michigan, 2002)
16. D. D. Perkins, B. B. Brown, R. B. Taylor, The ecology of empowerment: Predicting participation in community organizations. J. of Soc. Iss. **52(1),** 85-110 (1996). https://doi.org/10.1111/j.1540-4560.1996.tb01363.x