Vernacular Urban Areas as a Qualitative Factor in the Epidemic Situation (on the Example of Khabarovsk)

A F Garnaga¹, Iu A Nishchimnykh²

¹Senior Lecturer, Department of Architecture and Urban Studies, Institute of Architecture and Design, Pacific National University, 136 Tikhookeanskaya Street, Khabarovsk, 680035, Russia
²Senior Lecturer, Department of Architecture and Urban Studies, Institute of Architecture and Design, Pacific National University, 136 Tikhookeanskaya Street, Khabarovsk, 680035, Russia

E-mail: neklyudova.anastasiya.90@mail.ru, luchiamo@mail.ru

Abstract. The article examines the impact of the epidemic situation in the region on the interaction of society with the environment. Changes in the image of vernacular urban areas on the example of the city of Khabarovsk, as well as in the nature of preferences of citizens regarding places of residence, employment and recreation based on the results of sociological surveys in 2017-2019 and 2020 were revealed. Among the criteria for choosing places for recreation, Khabarovsk residents note the presence of large spaces and the degree of control by law enforcement agencies in different areas.

The assumptions and fears of respondents identified during the content analysis of the results of the 2020 survey that the most densely populated urban areas are most vulnerable to the spread of COVID-19 due to the number and density of the population are not confirmed at the meso-level: the largest percentage of infected people living in small settlements in the Khabarovsk territory.

1. Introduction

In the past few decades, all spheres of society have gravitated towards cities, and the urban population in Russia and the Far East in particular has been growing. This trend is confirmed by the results of the all-Russian population censuses of 2002, 2010 and the trial population census of 2018.

At the same time, cities differ from other types of spatial organization not only by their large population [1, p. 13; 2, p. 15-18; 3, p. 313-315], but also by their special habitat, which includes a number of social, natural, spatial, cultural and ethnic characteristics [4].

To describe a city as a multidimensional system and study its features, knowledge from a number of scientific fields covering one of these factors is often used. This leads to the fact that the city is studied "narrowly-disciplinary, in the context of a particular scientific direction" [5, p.242]. The authors believe that an important scientific and practical task is to study a specific urban space using a comprehensive interdisciplinary approach. This takes into account various natural, urban planning, spatial, sociological and cultural factors that ultimately form the spatial organization of urban space.

In 2020, in connection with the detection of cases of mass infection with the new COVID-19 coronavirus infection in the world, Russia, and the region, the epidemic factor and its interaction with
human residence spaces are particularly acute. The hypothesis of the study is a change in public opinion about different urban vernacular areas due to the threat of infection in the most densely populated locations. It was decided to check it based on the research conducted by the authors in 2017-2019 using the example of the city of Khabarovsk [6] and conducting a comparative analysis of its results and respondents' responses in June 2020.

The purpose of the study is to identify the features of life of various population groups in certain vernacular areas of the city of Khabarovsk during the "self-isolation" regime due to the threat of COVID-19 infection, as well as to record changes in public opinion regarding these areas.

2. Vernacular districts of the city of Khabarovsk and changes in preferences among citizens due to manifestations of the threat of infection COVID-19

To obtain primary empirical information about the subject under study, the most common method of sociological research was selected—a sample survey conducted by interviewers in person in the period from December 22, 2018 to January 20, 2019. Geographical borders are set within the administrative borders of the city of Khabarovsk. Accordingly, the total population of the sociological survey is equal to the urban population and is 589,596 people. With a confidence interval of 5 (five), the confidence (confidence probability) of 99.00% is provided by a sample of 665 people.

The survey was conducted in all five administrative districts of the city, the number of respondents in each of which is directly proportional to the number of residents (Fig. 1).

![Figure 1. Distribution of the population of Khabarovsk by intracity areas.](image)

According to statistics, the maximum number of residents is in the Industrial and Railway districts. The third place in terms of population is occupied by the Central district, the fourth – Krasnoflotsky. The population of the latter differs slightly, the population density exceeds the average population density of the Krasnoflotsky district by more than 4 times – due to the significant difference in the area of these inner-city areas, as well as the features of the historical concentration of urban life in its Central part.

Among the respondents, there is a predominance of the young population (the first 3 positions: under 19, 30-39, 20-29 years), a slight predominance of men under 39 years and women over 40 years (Fig. 2). This is due to natural demographic processes and features of contact with interviewers: women older than 40-50 years are more likely to engage in conversation with them than men of the same age category.
Figure 2. Distribution of respondents by sex and age.

The diagram (Fig. 2) clearly shows the natural tendency of the population to decrease with increasing age. There is a "failure" of values for the group of 20-29 years due to the peculiarities of demographic processes and a sharp drop in the birth rate in Russia as a whole and, in particular, in the region and city of the early 1990s.

The majority (37.8%) have lived in Khabarovsk for more than 25 years (Fig. 3), accordingly, they are witnesses and participants in the formation of urban spaces, know the city's features, and have their own opinion about the processes taking place in the city. 27% – less than 5 years (including internal and external migrants, students from small settlements of the region and neighboring regions).

Figure 3. Distribution of respondents’ answers to the question “How long have you lived in Khabarovsk?”

Interestingly, the statistical data differ from the data on the congestion of districts obtained in the course of a sociological survey in 2017-2019 (Fig. 4). Respondents were asked: «In which area of the city do you live / work / relax?». The answers to which allow you to vary the population of inner-city areas from the above ratings. Krasnoflotsky district is moving forward by 4 positions. The number of respondents living within its borders is 211. Despite the fact that only 89 citizens were interviewed in public places of the district.
Figure 4. Distribution of respondents' answers to the question "In which area of the city do you live / work / rest?" in 2017-2019.

This phenomenon can only be explained by the increased mobility of residents of this particular area – since, according to sample data and figure 4, some of the respondents surveyed, with a high probability, in the industrial and Railway areas, were residents of Krasnoflotsky.

This area is also the most popular for work and recreation of Khabarovsk residents according to their reviews. Moreover, during the survey, many respondents assumed that the majority of citizens work in the Central district and choose it as the most frequent place of residence, while they themselves gave the answer in favor of another district.

In fact, the number of businesses and therefore jobs is considered to be the largest in the Central district. In Krasnoflotsky district, this impression is not created because of the larger area and scattered urban development, but there are a number of organizations that provide a large number of jobs for citizens: City clinical hospital No. 10, eye microsurgery named after AK. Fedorov, Pacific University, University of Economics and law, Technical College, Road technical school, Banking College, Palace of creativity of children and youth, children's health resort, etc.

As for almost half (46.90%) of respondents who prefer to relax in the Krasnoflotsky district, the study authors attribute this to the construction of the Northern Park. In addition, many citizens call Krasnoflotsky district the most "eco-friendly", "clean". This public opinion also contributes to the choice of it as a place to relax.

The same question about localization "in what area of the city do you live / work / relax?" citizens were asked in June 2020. (Fig. 5).
In General, it is worth noting that the choice of citizens’ places of residence and employment has not changed, taking into account the sampling error of the conducted sociological survey. However, the localization of citizens for recreation confirmed and strengthened the trend of attraction to the Krasnoflotsky district and, on the contrary, the weakening of the attractiveness of the Central district (the localization index decreased from 10% to 2.56% of respondents). Answers to the following open question: "What are you guided by when choosing a place to stay in the city?" were processed using content analysis. Respondents in one way or another noted the presence of large spaces (in particular, parks), the lack of control by law enforcement agencies of the city in one area and its excessive implementation in another (since April, a "self-isolation" regime has been introduced, for violation of which there is a penalty). We dare to assume that the Krasnoflotsky and Central, Kirovsky districts are opposed, which took polar positions in the choice of recreation places – parks, squares, enterprises of the Central district and the Kirovsky bordering it (including the Admiral Nevelsky Embankment, which enjoys special awe of citizens) were sealed and protected at that time, free single walks continued in the Northern Park.

3. **Features of the epidemic factor manifestation in large locations on the example of the Khabarovsk territory**

41.3% of citizens answered the question "What is your guide when choosing a place to stay in the city?" they noted the densely populated area and, as a result, a greater risk of COVID-19 infection. It is not possible to verify such a public assumption within urban areas for a number of objective reasons: there are no statistics on the spread of the virus in administrative or vernacular areas of the city, and medical information about the number of cases and their localization cannot be provided in open sources, because this violates the rights of specific individuals. Therefore, to check the question about the dependence of the population and the percentage of infected people, it was decided to go to the meso-level and consider the statistical data of COVID-19 infection in different locations of the Khabarovsk territory (Fig. 6).
### Figure 6. Number of infected COVID-19 in different locations of the Khabarovsk territory

The number of detected cases of COVID-19 infection generally decreases along with the population in the city or village – Khabarovsk is the leader, followed by Komsomolsk-on-Amur with 16 times fewer cases. At the same time, when comparing the percentage of the number of infected people to the number of people living in the location, Khabarovsk takes only the fifth place. The leader is a small village Bogorodskoe with a population of just over 3 thousand people (4.83%), the second place is taken by Pereyaslavka (1.27%), the third – Chegdomyn (1.16%), the fourth – Okhotsk (0.69%). It should be concluded that the dependence of the number of locations is not directly proportional to the risk of COVID-19 infection. There are factors that influence it that need to be identified in the course of upcoming research.

### 4. Conclusion

The use of various methods for delineating urban space is a necessary element of studying the preferences of the population in relation to the quality of the environment. The results of a sociological survey of the population allow us to conclude how the public perception of different urban areas has changed due to the threat of COVID-19 infection, in particular, the criteria for choosing places for recreation have changed: the epidemic and legal security of staying in the location have been added to the convenience and accessibility.

Thus, the study confirms the authors’ assumption about changes in public opinion regarding different urban vernacular areas due to the threat of infection in the most densely populated locations.

At the same time, the statements of respondents identified during the content analysis of the survey results that the most densely populated urban areas are most vulnerable to the spread of COVID-19 due to the number and density of the population are not confirmed at the meso-level. In the compiled rating of settlements of the Khabarovsk territory, small settlements with a population of up to 12 thousand people are leading in terms of the percentage of infected residents, while Khabarovsk with a population of over 600 thousand people is only in the fifth position.

### 5. References

[1] Vagin V V 2003 The city sociology (Moscow: MONF) p 168
[2] Dolgij V M, Levada Y A and Levinson A G 2006 The urbanization as a Socio-Cultural

---

1 Official information is valid on July 1, 2020.
[3] Simonyan R H 2017 Migration moods of the Russian youth: regional aspect Monitoring of public opinion: Economic and social changes (Moscow) pp 313-326
[4] Abramova E 2011 The collective memory in urban space (Moscow: Novoe literaturnoe obozrenie) 6 pp 483-487
[5] Kostko N A 2005 The social management of the city: methodological foundations of research and development trends (Vestnik RUDN) 6-7 pp 237-245
[6] Yarulin I F, Garnaga A F 2019 Features of the Interaction of the Population of Khabarovsk City with the Urban Environment (Khabarovsk: Regionalistica) 1 pp 40-50
[7] Weber M 2017 The City (Moscow) p 252
[8] Dmitriyev A V, Mikhaylov E A 2017 Expected modeling of the interethnic relations in Russian regions on the basis of the analysis of identification strategy of diasporny and compatriot groups Monitoring of public opinion: Economic and social changes (Moscow) p 97-124
[9] Kazakova G M 2017 Vernacular district as a condition for the intensification of social processes (Moscow: Sociologicheskie issledovaniya) 9 pp 57-65
[10] Lysova N Y 2011 City as a space of cultural and historical memory (Moscow: Regionology) p 290