4 Detailed Analysis of Usage of Open Public Spaces in Modernist and Traditional Urban Blocks

4.1 Introduction and Research methodology:

This book chapter represents a detailed description of the methodology of sociotope mapping and implements the approach towards the modernist and traditional urban blocks of Kaunas which were either created or transformed by the modernization period in the second half of the 20th century. The chapter aims to identify and ascertain the transformation in the open public spaces after the Soviet period, and it analyses the reflection of it in the contemporary world. Furthermore, the chapter tries to provide the needed information regarding the districts which could not be analysed by the content analysis method in chapter 3 due insufficiency of the data.

As it has been stated by the urban sociologist Oldenburg (1997)\(^485\), people need three types of places to live a fulfilled life. These places are: private places, workplaces which are connected with the economic engagement and the third places which are amorphous arenas used for reaffirming social bonds and community identities. In that regard, public spaces can be identified as the third type of place in people’s lives where they find the possibility to interact with each other in a different environment. As it has been stated by Francis et al. (2012)\(^486\), public spaces are the places in a city where people meet and gather outside their home or workspace, which is freely accessible by the members of the public. Even though there are public spaces which are closed areas such as public libraries, shopping malls, etc, most of the time, places which are considered to be public spaces tend to be open-air places such as parks, beaches, public squares, streets, urban stairs, etc. which help people to interact with each other and socialise.

According to Rogers (1999), urban public space should be understood as an open-air room in a neighbourhood, where people can relax and enjoy the urban experience.\(^487\)

Therefore, typically public spaces contain the desire to connect with nature and

\(^{485}\) Ray Oldenburg, “Our Vanishing Third Places”, in: Journal of Planning Commissioners, USA, 1997, Nr.25, p.6-10.

\(^{486}\) Jacinta Francis, Billie Giles-Corti, Lisa Wood, Matthew Knuiman, “Creating Sense of Community: The role of public space”, in: Journal of Environmental Psychology, Elsevier Publishing, 2012, Nr. 32 (4), p. 401-409.

\(^{487}\) Richard George Rogers, Towards an Urban Renaissance: Final Report of the Urban Task Force, Department of the Environment, Transport and the Regions, London, 1999.

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they reflect the characteristics of the social and cultural values of the society or the
neighbourhood it is located in. In that regard, open public spaces are venues for people
where they can perform a range of different activities and have a direct relationship with
space itself and the people who inhabit, work or relax around the area. Furthermore,
it can even create or reinforce the sense of community for the people and the place
attachment. As it has been stated by Walljasper (2007), when people see, meet and
greet neighbours, or start to feel comfortable interacting with the strangers they see on a
daily basis, they tend to feel a stronger sense of place or attachment to their community,
and to the place that fosters these types of social activities. Therefore, sociability is an
essential quality for a place to contain, which has a direct impact on the life quality of
the people who are living nearby. In that regard, public spaces manage to satisfy part of
the needs people require for a fulfilled life. However, most of the time, the usage of the
public spaces and the functions which are available locally, might not be what people
require or compatible with their living conditions or living styles.

Many countries and cities, which endured the Soviet occupation after WWII
experienced colossal changes in their living conditions both economically and
socially regarding the politics and the ideology of the USSR. As it was also mentioned
in Chapter 1, an important feature of Soviet modernization was an aim to improve
living conditions of Soviet society and to form Soviet consumer culture, which would
be implemented through increased consumer goods production and developed
domestic service infrastructure. Zinkus (1984) states, that in the 1940s, almost
80 % of the population in Lithuania were still living outside of the cities and
towns. Therefore, all the mass housing which was built after WWII changed the
demographics and accelerated the migration from the villages and towns towards the
cities, and, consequently, also changed the people's living styles. After the early 1950s
the popular style of inhabitation in the Soviet Union was redefined by replacement
of the individual residential dwellings into the mass housing. Especially under the
ruling of Nikita Khrushchev the modern home and household consumptions were
reformulated by the motivation of projecting tomorrow and constructing the identity
of the citizens all around the Soviet Union (Betts, Crowley, 2005).  

As Zarecor (2017) states, in this era cities became spatial and at the same time
cultural manifestations of the socialist system itself and inextricably linked to the
regimes in power during their design, construction, and expansion. Therefore, in this

488 Jay Walljasper, The Great Neighborhood Book: A Do-it-Yourself Guide to Placemaking, Canada:
New Society Publishers, 2007.
489 Jonas Zinkus, Lithuania: An Encyclopedic Survey, Vilnius: Vilnius Encyclopaedia Publishers,
1984, p.36.
490 See the special issue on “Domestic Dreamworlds: Notions of Home in Post-1945 Europe” edited
by Paul Betts and David Crowley, in: Journal of Contemporary History, 2005, Nr.40(2).
491 Kimberly Elman Zarecor, “What was so Socialist about the Socialist City? Second World Urbanity
in Europe”, in: Journal of Urban History, Sage Publishing, 2017, Nr.44(1), p.95-117.
period the Soviet authorities established a new concept of urban neighbourhood unit called “microrayon” (micro-district).

Micro-districts often contained housing which could shelter from 9000 to 12000 people in multi-story multi-apartment blocks composed around its centre. The centre of a micro-district included buildings, such as: kindergartens, schools, shopping areas and structures which are open for the usage of its residents. Furthermore, open public spaces and playgrounds were also designed in these districts (Dremaite, 2014). Each residential area was supposed to combine different zones and networks which include residential, cultural and utility service providers within walking distance. Therefore, the residential area had to contain both the shopping/public centre and cultural hub accessible to the residents. However, even though the micro-districts were designed and built with a modernist discourse with the intention of creating convenient places for the people to live, the structures were not really well designed and constructed. Most of these buildings contained rather cheap materials which started to disintegrate in a few years after the construction. As Petrulis (2013) states, in 1986 out of all accepted newly constructed buildings in Kaunas, only 69% were evaluated as satisfactory. Therefore, residents of the mass housing cannot be depicted as happy with the conditions they were living inside the buildings, and furthermore, the situation regarding the public spaces around the multi-apartment houses of these micro-districts was not adequate as well.

Since the period of Lithuania’s separation from the Soviet Union and restoration of the state independence in 1990, construction of Soviet-style multi-apartment housing blocks and development of urban micro-districts has stopped. Instead, most Lithuanian cities witnessed a wave of development of suburban areas with private single-family housing.

Therefore, the non-satisfaction of the people who are living in these mass housing areas regarding their living conditions is still on-going. Most of the time, especially the micro-districts in Lithuanian cities were defined as the “sleeping quarters”, since the main function of the people staying in these micro-districts was living/residing; work and active leisure functions were available in other territories (commercial, industrial, leisure, other) of the city.

This book chapter represents the methodology and results of a sociological research aimed to support the general research (presented in more details in Chapter 3), based on the historical visual (photographic) material, with additional data from contemporary period. This research is focused on three particular micro-districts of Kaunas city, regarded in the earlier chapter as the “Grey spots” and understood as the

492 Marija Dremaite, Modern Housing in Lithuania in the 1960s, Survival of Modern from Cultural Centres to Planned Suburbs, Docomomo Publishing, 2014, p.80-91.
493 Vaidas Petrulis, Marija Dremaite, Modernism in Soviet Lithuania: The Rise and Fall of Utopia, in: Modernism: Between Nostalgia and Criticism Conference Proceedings, 2013, p.53-70.
areas insufficiently presented in the visual materials (photographs) of Kaunas city in the selected time periods.

The following objectives were set:

- To identify current patterns of open public space usage in the modernist micro-districts and in the transformed area of the Center of Kaunas city.
- To ascertain the results of the transformations in the open public spaces with regard to the needs of the contemporary space users.

To achieve the objectives, a sociotope mapping methodology was applied. It was first developed within the Stockholm City Urban Planning Administration by Swedish planners and applied for the first time in 2000 in Stockholm city. Subsequently, it was also applied on Goteborg, Uppsala, Kungsbacka, Sollentuna and other cities in Sweden. According to Alexander Ståhle, the primary purpose of the sociotope mapping was defining the commonly perceived direct use values of a place by a specific culture or group. Therefore, it is focused on analysing and understanding the space through the perception of its users and evaluate the use-value of the open public spaces. Because how people experience the environment that they inhabit can be subjective and can be dependent on different factors; therefore, it might not always be the same as the experts evaluate it.

Furthermore, sociotope mapping is also focused on collecting actual data from observations and dialogues with the residents and frequent visitors. In that regard, open public spaces - such as parks, squares, piers, beaches, playgrounds, tracks, pedestrian zones, other - are the focal points of the sociotope mapping. However, other open public spaces depending on the specific characteristics of a city can be

494 Karl Samuelsson, Matteo Giusti, Garry D. Peterson, Ann Legeby, Anders Brandt, Stephan Barthel, “Impact of Environment on People’s Everyday Experiences in Stockholm”, in: Landscape and Urban Planning, 2018, Nr.171, p.7-17.
495 Emelie Ask, To Map Social Values in the Outdoor Environment of the City, Stockholm: Stockholm and Göteborg, Institution of Landscape and Planning Press, 2013, [accessed: September, 2018], retrieved from https://stud.epsilon.slu.se/5749/3/ask_e_130704.pdf
496 Alexander Ståhle, Sociotope mapping – exploring public open space and its multiple use values in urban and landscape planning practice, in: Nordic Journal of Architectural Research, 2006, Nr. 19(4), p.59-71.
497 Sociotopkarta. Kungsbacka stad. Sammanställning av observationer, intervjuer och enkätundersökning. Kungsbacka Kommun, Förvaltningen för Teknik, 2016, [accessed: September, 2018], retrieved from https://www.kungsbacka.se/globalassets/gator-trafik-och-utemiljo/dokument/sociotopkarta_sammanstallning.pdf
498 Sollentuna sociotopkarta. Sollentuna Kommun. 2014, [accessed: September, 2018], retrieved from https://www.sollentuna.se/globalassets/trafik-stadsplanering/stadsplanering/urban%20gronstruktur/sociotopkarta/sollentuna_sociotopkarta.pdf
499 Alexander Ståhle, Sociotope mapping – exploring public open space and its multiple use values in urban and landscape planning practice, in: Nordic Journal of Architectural Research, 2006, Nr. 19(4), p.59-71.
investigated and modified during the application of this methodology. Therefore, sociotope mapping can be customised, which would result in a better analysis when it is applied in case studies with place-based outcomes.

According to Campbell (2002), the judgment and the notion of value are at the heart of what planners should do. Therefore, they need to make distinctions in between good or bad, or better and worse. However, these values can be subjective regarding the person who is experiencing it. As Simmel (1900) states, value resides in subjective judgments while it is relying on socio-cultural references. Therefore, sociotope mapping helps to identify the values and perceptions of the individuals who are experiencing it.

Sociotope methodology is a new approach to analyse the ex-soviet cities. This research was the first attempt to apply it for a Lithuanian (ex-soviet state) context. One tool of the original methodology - the space users’ survey - was amended by the authors of this research. Instead of separate questionnaires developed and adapted for different age groups of respondents, here, on the basis of the content of the separate questionnaires one general survey form was prepared and applied.

The original sociotope mapping methodology is carried out in the following five main steps - stages:
- Open space definition
- Expert evaluation
- User evaluation
- Synthesis
- Mapping

The process and tools applied in each stage are explained in more details in respective sections of this subchapter, below.

### 4.2 Application of sociotope methodology for in-depth analysis of the usage of public spaces in three selected urban blocks

The first step of the sociotope mapping method is the identification and definition of the open public spaces, which would be the object of the research. The identification can be made by various parameters that are directly related to the aim of the research

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500 Heather Campbell, “Planning: An Idea of Value”, in: The Town Planning Review, Nr.73 (3), 2002, p. 271-278.
501 Georg Simmel, “A Chapter in the philosophy of value”, in: American Journal of Sociology, 1900, Nr.5(5), p.577-603.
502 Alexander Ståhle, Sociotope mapping – exploring public open space and its multiple use values in urban and landscape planning practice, in: Nordic Journal of Architectural Research, 2006, Nr. 19(4), p. 59-71.
however, the definition of open public space can vary in academic literature. The more detailed definition regarding this matter can be found in Chapter 1.

As Zaleckis et al. (2016) state, open public space is the space with the following features:

- Open - unrestricted by any roof or wall,
- Any person has the right to use it at any time of the day/night/year.

In accordance with the description of open public spaces which is defined above, experts visited case territories in 3 administrative districts/eldership (eldership is the smallest administrative unit in Lithuania) of Kaunas City: Centro, Eiguliai (Kalniečiai), Šilainiai. The districts of Eiguliai and Šilainiai were built in the Soviet period and represent the typical soviet modernist residential areas (Fig. 4.1.).

![Kaunas administrative map with indicated surveyed micro-districts: Centro, Eiguliai, Šilainiai.](image)

The territories of Kaunas were selected as a result of the content analysis which was performed in Chapter 3 as the most characteristic urban areas where the sociotope mapping should be applied in order to get more detailed information, such as a

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503 Kestutis Zaleckis, Irina Matijošaitienė, Jolita Sinkiene, Inga Stankevičė, Kristina Navickaitė, *Spatial Urban Structure and Security Inhabitants*, Science Study, Kaunas: KTU Publishing, 2016, p. 88.
segment of the city center, which was affected by the Soviet-era modernization, and two segments of modernist inner-urban residential areas representing the peak and the last stage of modernist development. The particular spots in the case territories were chosen by the experts based on the following criteria: any person (despite their age, physical abilities, gender, other social characteristics) is free to access the spot without any restrictions on any time of the day in any season of the year, and regarding the diversity of the functions of the spots (street, park, backyard, square, parking lot, court, passage).

Šilainiai eldership (Šilainiai)
It is one of the newest and largest parts (micro districts) of Kaunas city built from 1981. It covers 25.33 hectares and houses around 20,000 people. There were 3033 residential buildings; 422 multi-apartment houses (more than 3 apartments), and 2061 private house in 2015 (Kaunas City Municipality, 2015). It is one of the youngest parts of the city, as the majority of its residents are children and working-age people. The condition of the housing stock is generally good. There is a lack of parking lots. The greenery of the neighbourhood is considerably young. The condition of greenery in the first districts - good, later built - satisfactory and even bad. The state of engineering networks is good (Kauno planas, 2011).  

Eiguliai eldership (Eiguliai)
The territory includes Eiguliai and Kalniečių micro-districts and Kleboniškis settlement. Construction of the Kalniečių micro-district started in 1974. As a continuation of the Kalniečiai, construction of the Eiguliai micro-district began in 1978. There are many renovated houses in this part of the city. The passage areas and courtyards in the neighbourhood must be repaired. There is a great lack of car parking spaces, therefore cars destroy green areas, playgrounds, sidewalks. The status of existing non-horticultural greenery and green areas is quite good. Engineering outdoor networks are moderately depleted. (Kauno planas, 2011).  

Jakimavicius (2010) describes specific features of Eiguliai open public space elements: “reinforced concrete slabs were used for courtyard pavement, children’s playgrounds were constructed from construction waste applying them originally”.

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504 Kauno planas, 2011. Status of Residential Housing Stock. General Plan of Kaunas City 2013 - 2023. Analysis of existing status city environment, Part - B: Social Environment. p. 52-53. Adopted 2014-04-10 Decree No. T-209.
505 Kauno planas, 2011. Status of Residential Housing Stock. General Plan of Kaunas City 2013 - 2023. Analysis of existing status city environment, Part - B: Social Environment. p. 52-53. Adopted 2014-04-10 Decree No. T-209.
506 Mindaugas Balkus. Kauno istorija (29): Eigulių rajono raida sovietmečiu. Published by Renatas Jakimavičius, [accessed: September, 2018], retrieved from https://kaunozinios.lt/naujienos/kauno-istorija-29-eigulių-rajono-raida-sovietmečiu_24177.html
Center eldership (Center)
The condition of the Old Town and the New Town buildings is moderate. Part of the buildings, especially in the main the streets are well maintained, repaired. Most of the poor buildings in the Old Town were demolished or reconstructed. There are not many new residential buildings in the Old Town. In this part of the city public areas are managed quite well. However, here, according to the prevailing build-up, there are very few of green areas, lack of parking areas (especially in the Old Town), therefore very often spaces in the courtyards are used for car parking functions, often disorderly and on pathways. Most of the courtyards in this city part are covered with asphalt or stones or pavers. (Kauno planas, 2011) 507

In total 20 unique sites were observed: in the Center - 6, in Eiguliai - 8, in - 6. The table which has been prepared regarding the observed sites and addresses in Center, Eiguliai and Šilainiai districts can be seen below (Table 4.1):

| District | Address           | Major object                                      | Photo |
|----------|-------------------|---------------------------------------------------|-------|
| Center   | Laisvės ave. 55/68| Fountain in the central pedestrian street         |       |
|          | Laisvės ave. 70-72-72A | Courtyard, parking lot, passage                   |       |

507 Kauno planas, 2011. Status of Residential Housing Stock. General Plan of Kaunas City 2013 - 2023. Analysis of existing status city environment, Part - B: Social Environment. p. 52-53. Adopted 2014-04-10 Decree No. T-209.
| District     | Address                        | Major object                                      | Photo |
|-------------|--------------------------------|---------------------------------------------------|-------|
| Center      | Putvinskio st. 53              | Business centre BLC                               |       |
|             | Putvinskio st. 23              | Vytautas Magnus University courtyard              |       |
|             | Putvinskio st. 22              | Funicular                                         |       |
|             | K. Donelaičio st. 64           | Vytautas Magnus War Museum, public square         |       |
| Eiguliai    | P. Lukšio str., S. Žukausko street, Savanorių avenue | Kalniečių park (with a pond)                      |       |
|             | P. Lukšio st. 60               | Shopping center “IKI”, Cecenijos Square           |       |
| District    | Address                        | Major object                                          | Photo |
|------------|--------------------------------|-------------------------------------------------------|-------|
| Eiguliai   | P. Lukšio st. 40 (front side)  | “Rasos” Gymnasium of Vytautas Magnus University      |       |
|            | P. Lukšio st. 40 (backside)    | Stadium, joint courtyard                              |       |
|            | P. Lukšio st. 14, 12, 10       | Multi-apartment housing, joint courtyard              |       |
|            | / Savanorių blv. 397 / Geležinio Vilko g. 17 |                                        |       |
| Geležinio Vilko st. 7 | Courtyard                      |                                                       |       |
| Savanorių blv. 375 | Shopping centre “Maxima”   |                                                       |       |
| Šiaurės blv. 37, 39 | Sports field in between multi-apartment houses and a school | |   |
| District   | Address     | Major object                                              | Photo |
|------------|-------------|-----------------------------------------------------------|-------|
| Šilainiai  | Jotvinių st. 15 | Shopping centre “IKI”                                     |       |
| Rasytės st. 2 | Multi-apartment housing courtyards, parking lots, street |       |
| Rasytės st. 8 | Multi-apartment housing courtyards, parking lots, playground |       |
| Rasytės st. 9 | Kindergarten surrounded by multi-apartment housing and parking lots |       |
| Rasytės st. 28 | Multi-apartment housing courtyards, park, small square |       |
| Rasytės st. 42 | Multi-apartment housing courtyards, parking lots, street |       |
Expert evaluation stage

The second step - the observation - was performed with the use of special research tool - observation protocol. In the original methodology of the sociotope mapping, introduced and applied in Sweden, the protocols were used for 10 minutes observations in every case area in two different seasons. The reason for applying the observation protocols in two different seasons is related to weather conditions which might change the usage of the places. The aim of the implementation of the observation protocols in the targeted spots was to perform pilot research to test this research tool in the context of Lithuania and to generate preliminary results for the decision-makers which they can use in their strategies of the development of the city.

The content of the observation protocols used in this research was identical to the observation protocol provided in the sociotope mapping methodology (Fig. 4.2.).

There are 12 main categories of site characterises in the document: space type, form, identity, pedagogy, socializing, recreation, security, participation, supply, temporality, structure.

Each of the categories is divided into 2-6 factors, each factor is divided into 2-11 elements.

Also, the protocol features important characteristics such as the date, space/ location, and time of the observation.

In the remarks section provided at the end of each protocol, the researchers noted additional information - personal observations relevant to the research aim (for example, ideas for potential (re)development and/or a new adaptation of the space to the needs of local users).

The sites were visited twice with a 6 months period: in autumn (October) of 2017 and in spring (May–June) of 2018. This allowed seeing how the same space is used in different season of the year, different day of the week and in different time of the day.

The 10 min observation sessions took place during the daytime of a working day and at the weekend.

In total, 40 protocols have been filled in.

The chosen spots in the selected districts were visualised by taking images and marking them on the map. It is important to note that this report provides an illustration of the general situation in 20 spots in 3 target territories as they were seen and recorded at the time of the actual observations (Fig 4.3.).

508 Alexander Ståhle, Sociotope mapping – exploring public open space and its multiple use values in urban and landscape planning practice, in: Nordic Journal of Architectural Research, 2006, Nr. 19(4), p. 59-71.
Bilaga 2

Observationsprotokoll

| Datum: |
|--------|
| FRIYTA: |
| Tid: |
| Vården kliert mjulet regn snö temp: <-5 5 10 20 <- Besökare/barn: hundar |
| Del i förmiddaga: |
| nej baby skog park/hage odlingsäng gräsp. vitmark strand kaj kanal vatten |
| Stadsdel/försätta: |
| nej tord. berg köpurper strand stadsark kyrk stottsp trottisgar torg götgens kaj |
| Runtighet* |
| öppet halvöppet halvslutet slutet |
| Markförändring: |
| nej Market vatten berg örtild gräs gras stemp asfalt odlingsområdet mycket buskar |
| Träd: |
| barbetsk/blanda löve strand många parkrader enst parkträd trädrad blomträd nej |
| Belysning: |
| övergripande ljus ljus på gångstråk stora delar mörkt skulpturalt ljus förekom |
| Växlande namn: |
| turism regionalt lokalt |
| Kulturmiljö: |
| forminnen arkitektur historiskt mark litteraturkonst riksintresse nej |
| Trädgårdsfall: |
| kommunal odl. botanisk trädgård kolonistäder odlingsområdet nej |
| Tidsskala: |
| före 1800 1800-1910 1910-1930 1930-1980 1980- nej |
| Konstrukt: |
| biopark formkänt vattenkonst skulpturer arkitektur nej |
| Båt: |
| båtar vid kedje smulaflathamn nej |
| Landsform: |
| norrbrant del i ås dalstrav förkastingsbrant strand vatten nej |
| Vilda natur: |
| m. naturnatur skogslandskap träd bergfjäder fallförmåga djupar vattenliv nej |
| Lyckligt: |
| m. tyst eendelat naturstå villfall sommarrörelse villfall tillskott mycket bullerstör |
| Utomhusplats: |
| fantasisk rätt fin nej |
| Pedagogik: |
| kultur agrar natur nej |
| Sanitär: |
| picknick barnliv fritidsförening hej och kvällsaktivitet sällan folkliv |
| Rekreation: |
| festivaler/tvilling sportlopp musikkonserter teaterföreställningar nej |
| Redskapslås: |
| kämmelställning gungor sandlåsne nej |
| Vinteraktivitet: |
| pulka/kåkning skidåkning skridskoåkning nej |
| Lokal historia: |
| ja dessutom bemannad parklek något nej |
| Dyraktivitet: |
| djurhållning ridning hundrastgard nej |
| Motion: |
| promenad löpträning inline skate cykel nej |
| Buller: |
| gränsplan grupplan bouleplan asfaltplan beachvolley minigolf nej |
| Vattenaktivitet: |
| plaska bad simning sejla spadda motorbåta nej |
| Överlåtbarhet: |
| stor delvis illa |
| Trygg: |
| hel dygnet hundproblem missbrukare ej på natten |
| Ro: |
| avskräckhet lugn och avkoppling nej |
| Säkerhet: |
| säkerhet halt på vintern nära trafikleden näbar nära stup nära kaj |
| Sista: |
| m. bänkar trappar gråsmatta/köpor daltigt |
| Offentligt: |
| ja nej, men privat i mindre delar halvprivat privat/avstående |
| Nätverket: |
| något gångväg mycket kuperat innehåll nära trafikled inga/dåliga övergångsrutiner |
| Demonstrationer: |
| förekommer inte troligt |
| försörjning: |
| servering & service iuteservering kiosk off. toalett nej |
| Nåra handel: |
| torghandel affärer i närheten "annan" handel nej |
| Tidsvärld: |
| dag kväll vardag helg sommartid vinter |
| Växtsandvik: |
| genomgångspåplatshjort tabtippslag långhålspets |
| Klimat: |
| sydlig solarterna lövskugga vindskyddad regnskydd "värmeugna" |
| Tillgänglighet: |
| väl integrerad vid nod något integrerad isolerat |
| Kollektivtrafik: |
| t-bana buss spårvagn båt däligt försörj |
| Ruinsstruktur: |
| stenålder, vård, punktövergång, sammanhållningsdetalj, märkning, totalomranta, se ovan |

Fig. 4.2. Observation protocol (in original - Swedish - language). Source: (2002)⁵⁰⁹, p.50.

⁵⁰⁹ Stadsbyggnadskontoret, Sociotopkarta för Stockholms innerstad: metoden och resultatet, Rapport SBK, 2002.
Fig. 4.3. Example of an observed spot in Eiguliai area in the spring season, weekend, an afternoon with a visible variety of functions of the public park.

**User evaluation stage**

The third stage of the sociotope methodology process is the analysis of the place users’ opinion. The users’ perspective towards the existing and prospective functions of the spaces can be identified with the help of surveys/questionnaires. The questionnaires can be used for one-to-one interviews or online surveying methods towards the people who are inhabiting or often visiting the areas.

The intention to apply this research method is to learn how local residents or frequent visitors, i.e. current users of the public spaces, use them and what their needs towards these spaces are. Knowledge about the existing and potential usage allows to compare two perspectives and generate insights for more intensive and efficient use of the spaces.

In the original sociotope mapping methodology, there are four separate questionnaire forms developed for four different age groups of space users (children, youth, adults, and elderly). In this research, one general questionnaire form addressing all groups of respondents in one was developed due to the limitations of the research process without negatively affecting the importance and relevance of the data required for the research aim.

This questionnaire template was developed as a result of the combination of four separate questionnaire templates used in original sociotope mapping methodology in Stockholm city [14] aimed at collecting the information from four age groups of
the local residents: children, youth, adults, and elderly. Authors of this research developed one general questionnaire template. Several additional questions relevant for the wider interdisciplinary research were added. The final questionnaire template consists of 13 questions.

In the design of the survey, a qualitative approach and non-probability sampling have been adopted. The goal of adopting a non-probability sampling was not for achieving objectivity in the selection of samples or attempting to make generalisations (i.e., statistical inferences) from the sample being studied to the wider population of interest. Therefore, making generalisations from the sample to the population under study is a secondary consideration. Consequently, the experiment is a pilot study.

The final questionnaire template developed for this methodology stage consists of the following 13 open and closed-ended questions:

- Your gender [closed-ended question];
- Your age [closed-ended question];
- In the territory of [city district name] you: [closed-ended question];
- Name your ONE favourite public space (yard, court, trail, park, square, street, etc.) in [city district name] [open-ended question];
- This place is near your [closed-ended question];
- Why do you like to visit this place? (tick three the most relevant answers from the list) [closed-ended question];
- What do you do most often in that place? [open-ended question];
- Usually you are in this place [closed-ended question];
- How often do you visit this place at different times of the year? [closed-ended question];
- What should be done to make this place even more attractive to you? Select the three most relevant answers for you or please enter your other suggestions (if any) here [closed-ended question];
- Which public spaces/places in [city district name] you are avoiding during the day [open-ended question];
- Which public spaces / places in [city district name] you avoid at night [open-ended question];
- Why do you avoid these places [open-ended question];
- Which of the following elements of public space create a greater sense of personal security to you [closed-ended question];

The questionnaires were distributed and filled in during a 6 months period (November 2017 – May 2018). The forms were distributed physically (paper templates were given to local residents and members of local educational institutions,) and via electronic channels (e-mail, Facebook accounts of most active local community groups, community administration, local institutions). An electronic questionnaire was placed on the www.apklausa.lt site (a national web portal specializing in social surveys).
In total, 316 questionnaires were completed (for Center district – 101, for Eiguliai district – 113, for Šilainiai district – 102). The results were processed by MS Excel and presented in the form of graphs, charts, and text (responses to questions).

By summarizing the results of this survey, the most and least visited zones of public spaces, their functions in different seasons and at different times of the day were determined, and the potential value of these zones was identified.

**Synthesis stage**

Based on the results achieved by the three above mentioned steps, sociotope mapping methodology contains a fourth step, which is the synthesis of the data. In this step, all collected data are compiled together for analysis of the use-value of the areas. Furthermore, the synthesis step also helps to identify the different activities and various groups of people who are performing these activities.

**Expert evaluation data**

The data collected during the expert evaluation stage (observation protocols) was processed with MS Excel software. The data were entered into the database and coded (0, 1). This helped to identify the most prevalent functions in 20 observed locations. It allowed identifying the main general as well as unique functions and values of each surveyed space (Fig.4.4.).

![Fig. 4.4. A segment of the Excel spreadsheet with coded data from Eiguliai district observation protocols.](image)

The results of the analysis of data collected using the observation method were analysed and presented in the illustrated form. The presentation of the results differs from the original sociotope methodology because in the original methodology the generalised data was illustrated in the form of maps with functions prevailing in a particular area indicated by a certain colour (see Appendixes of the original sociotope methodology by Ståhle, A. 2006), whereas in this case the results were illustrated by...
adding special pictograms to the map of the territory. Thus, a more systematic and easy to understand the form of the general results of the research was developed.

Following the methodology developed in the previous stage of the modernist open public spaces research (see Chapter 3-Table 3.2), where 33 functions typical to open public spaces were identified, all functions recorded in the observation protocols were assigned represented as below (Table. 4.2., Table.4.3., Table. 4.4.):

**Table. 4.2.** Sample of pictograms representing groups of functions of open public space spots in Center district.

![Pictograms representing functions in Center district](image1)

**Table. 4.3.** Sample of pictograms representing groups of functions of open public space spots in Eiguliai district.

![Pictograms representing functions in Eiguliai district](image2)
Table. 4.4. Sample of pictograms representing groups of functions of open public space spots in Šilainiai district.

User evaluation data
According to the data collected during the survey, the activities taking place in open public spaces are matched with specific pictograms which have been identified in Chapter 3. The reason for matching the activities with pictograms is related to make the results of the survey and the overall research in general easier for readers to observe and understand.

Mapping stage
The last - fifth - step of the process is the preparation of the map(-s) to classify the activities. The classification of the activities and preparation of the maps were performed differently for the results of the expert evaluation and for the results of the user evaluation. In the expert evaluation mapping, the activities are connected to the selected open public spaces. However, in the user evaluation, activities are mapped in the whole area of the district since the participants of the surveys did not specify the areas they are mentioning while they are answering the survey. Therefore, based on the observations of the experts and the evaluations of the users, open spaces are registered with their specific composition of use-values into the sociotope map.

4.3 Results of sociotope analysis

Results of the Expert Evaluation / Observation Protocols Stage
The data collected with the help of observation protocols in the target 20 open public spaces of three selected Kaunas multi-apartment districts (Research method 1) provide
All observed open public spaces were divided into seven groups: river shore or bank, city park, courtyard, sports field, square, pedestrian path, pier. The availability of these public spaces in three districts varies significantly. The areas observed by researchers featured pedestrian pathways in all spots of Šilainiai (100%), half of the spots in the Center (58%) and only a quarter of spots of Eiguliai (25%). There were no sports fields in the Center spots, while in 63% of observed spots of Eiguliai included sports fields. In the Center there were some park areas (17%), while in Eiguliai every fourth (25%) observed spot had a park function. In Šilainiai, only several observed spots (17%) had park functions. In the Center, every third observed spot was a courtyard (33%), in Eiguliai this function was more common (38%), and in Šilainiai - almost half of the surveyed spots were characterised as a courtyard (42%) (Fig. 4.5).

Spaces open to everybody’s use 24/7 and having no borders are dominant in the observed districts of Kaunas (Fig. 4.6.). “Open” type means that the territory can be accessed by all people at any time of the day and year from any direction and without any restrictions. Semi-open type can be defined as territory restricted by a wall (-s), fence (-s), greenery, gate (-s), other physical elements for any person’s access and passage. There were no “closed” type spaces for the public in any of the selected districts. The highest number of open spaces was in Eiguliai territory (75%). In the Center and Šilainiai areas, half of the observed territories (50% and 50%) were identified as “open”. Also, one third (33%) of observed areas of the Center and Šilainiai fall into the category of “semi-open” public spaces, whereas in Eiguliai there were only 13% of such territories.
Level of light in public spaces is an essential requirement for both security and comfort. People tend to avoid areas where there is not enough light, especially in the areas they do not know, or they haven’t been previously. Therefore, natural light in public areas is important for both people living there and also for long-term or short-term visitors. According to the results collected during the daytime, half (50 %) of the observed public spots in the Center micro-district can be characterised as overall light, while in Eiguliai much more (88 %) spots were receiving full natural light, and in Šilainiai - all (100 %) observed spots were overall light (Fig. 4.7). Naturally, the territory in the Center (large parts of it were built 100 years ago) has narrower streets and smaller courtyards than in the micro-districts of Eiguliai and Silaniai, developed in the post-modernism period. Therefore, there is a greater potential in these two micro-districts to generate a larger variety and number of outdoor activities in different day periods and year seasons.
The transparency of the public space is also an important characteristic for the feeling of personal security, which encourages people to use a certain space or avoid it. If people feel secure in an environment, it is more likely that they will revisit these locations and would stay there longer. In this research, the level of transparency displays diverse results in different micro-districts. As the analysis of the results suggests (Fig 4.8.), that the highest level of transparency of the observed public spaces can be detected in Eiguliai (88 %). In the Center, it is 25 %, and in Šilainiai it is 42 %. On the other hand, partly transparent places are spotted more often in Center (75 %) if compared with Eiguliai (13 %) and Šilainiai (42 %). This shows the potential for exercising of diverse outdoor functions and more intense use of the public spaces in these parts of the city.

The observations demonstrated that in most open public spaces, the sound is an issue to be addressed (Fig. 4.9.). In order to motivate local users to spend more quality time outside rather than their private spaces (apartments, houses, offices, clubs, shops, etc.) in any time of the year, it is important to assure that the environment is pleasant and comfortable. In that regard, high level of noise is an important obstruction. In observed public open spaces, the main source of high noise level is street traffic, especially in Šilainiai (92 %). In the observed spots of Center (50 %) and Eiguliai (38 %), the sound levels are lower, mainly to the fact that the transit transport is organised outside the residential areas, while in the Center there almost all larger streets are used for transit. Also, as the Center has more pedestrian zones, a higher level of people sounds (33 %) can be naturally detected there if compared to other observed areas in Šilainiai (25 %) and Eiguliai (13 %) districts. Yet there is a reasonable choice of silent spaces in Center (17 %) and mostly in Eiguliai (63 %). In Šilainiai many spaces (67 %) with only nature sounds were observed. Based on these results, a general observation can be made that the level of loud sounds generated by traffic of people is not a serious issue that would stop local residents or visitors to avoid spending a long time in the observed public spaces. Level of noise is not a significant negative factor.
Analysis of the data regarding the space users’ access to wild nature (flora, fauna) in the observed areas suggests that the accessibility of wild nature in Šilainiai micro-district is higher than in the other micro-districts observed (Fig. 4.10.). It is possible to reach to uncultivated areas (33 %), routes (17 %), birdlife (50 %), wild animal tracks (50 %) from this district. However, in Eiguliai, only birdlife (13 %) was seen as a characteristic accessible in general. Center territories can be regarded in a better position than Eiguliai by the reach to uncultivated areas (17 %), woods (17 %) and birdlife (33 %), however, the level of access is still low in this area. In general, wild nature observation function is very limited in public spaces of all three districts and therefore should be re-considered by the urban planners and other local decision-makers. Access to wild nature, especially in a country such as Lithuania, with an immense amount of natural resources, should be considered as an important aspect which can be added to the quality of the city life.
The ground cover of open public spaces determines and/or restricts its possible use and function. The walking paths of the majority of surveyed open public spaces (Fig. 4.11.) have asphalt covers, especially in Šilainiai areas. 63% of surveyed spaces in Eiguliai and 25% in Center have ground areas covered by asphalt. The analysis of this observation reveals that the usage of asphalt is lower in the Center (more areas are covered by stone), if compared with the other residential areas. Grass covered public spaces are more often available in Eiguliai. It is important to notice that both local residents and visitors lack possibilities to perform daily recreational and other activities in public spaces in/on/near the water, meadows in the territories of all three surveyed micro-districts. In order to provide conditions for more diverse activities outside for space users of all age groups and different interest groups for different functions (for example, walking, jogging, cycling, relaxing, eating, reading, communicating, performing, playing, ...), a much bigger diversity and a better balance of different ground cover types should be provided.

According to the survey results, most of the observed spaces (Fig. 4.12) lack artwork elements, especially in the residential areas of Kaunas. In the Center, it is possible to spot some floral splendours (17%), fountains (25%), sculptures (67%) and architectural elements (67%). There is a great lack of flowers in Šilainiai. Architecture-wise, none of the surveyed residential areas in Eiguliai and Šilainiai contain any artwork.
Cultural and sporting events in open urban areas encourage residents and visitors to spend more time outside of their immediate living or working space. It is important for urban planners and event organisers to foresee areas with necessary conditions for events and activities suitable for all age groups at different day times and seasons. Even though infrastructure for various physical activities of children increasingly becomes an integral part of most Kaunas city public parks, squares, yards and other recreational zones, residents of other age groups, especially youth and elderly, still have very limited possibilities to actively spend their leisure time alone or in a group in the nearby open public space. Analysis suggests that observed public spaces of Šilainiai (83 %) were suitable for most common outdoor sports activities. In Eiguliai more than a half (62%) observed areas were suitable for them, while only 25% of observed areas in the Center offer outdoor sports possibilities. Musical events, such as concerts, performances and other stage arts have the highest potential to be performed in Eiguliai, while performances of outdoor theatres, art festivals and similar social events seem to have insufficient conditions to take place in surveyed open public spaces of Šilainiai (Fig.4.13.). However, there are great natural conditions and spaces for the development of infrastructure for various stage arts. The reason for more social events happening in Eiguliai might be related to the already provided public infrastructure - outdoor stages (amphitheatre), seating areas. In the Center areas, open spaces are often used for theatre, concert, festivals or sports events, however, most of the time, the necessary infrastructure is temporary.
In order to identify the main functions of surveyed public open spaces, i.e. what purposes the spaces can be used by local residents and visitors for, the potential for 18 types of activities was assessed. The results of observation protocols analysis show that the conditions of the observed spaces provide good possibilities to carry out the following activities: walking (Center - 92 %, Eiguliai - 75 %, Šilainiai - 100 %), running (Center - 50 %, Eiguliai - 75 %, Šilainiai - 83), cycling (Center - 75 %, Eiguliai - 38 %, Šilainiai - 100 %), with low potential for skating (Center - 8 %, Eiguliai - 13 %). Sports which can be performed on special fields were not detected in the observed Center areas, whereas Eiguliai and Šilainiai provide rather good opportunities (except minigolf and beach volley) to carry out ball sports activities outdoors. In observed areas of all three micro-districts of Kaunas the interaction of people with water elements is very limited: splashing, bathing, swimming, sailing, motorboat activities were not observed (Fig 4.14.). A city like Kaunas, surrounded by two largest rivers of Lithuania, should incorporate the rivers and other local open water resources into the city structure. This would undoubtedly attract all groups of city users to the spaces offering outdoor activities in, near and on the water, and not only in the summer period.

Most often the observed open public are being used just for passage (Center - 75 %, Eiguliai - 88 %, Šilainiai - 100 %) or short term stay (Center - 100 %, Eiguliai - 50 %, Šilainiai -100 %) instead of long-term stay (Center - 17 %, Eiguliai - 25 %, Šilainiai - 33 %) and for experiencing different kinds of activities in the open air (Fig 4.15.). This can be explained by the shortage of possibilities (infrastructure) carry out individual or group activities in the open area, unfavourable outdoor weather conditions (lack of sun and warmth, or insufficient protection from the sun, rain, snow or wind) or culture aspects (low level of personal safety, other).
Small scale commercial services such as selling / serving food (kiosks, cafes, restaurants) and access to public outdoor toilets should be considered as an important attraction factor for the local population to leave their residential premises and spend more time outdoors in the neighbourhood. The figures of the identified supply of such services in the surveyed areas suggest that there is a lack of serving and servicing functions in all three districts (Fig. 4.16.), especially Eiguliai and Šilainiai. Therefore, aiming to encourage a more active usage of the open public spaces in the observed
areas and in urban open public spaces in general, outdoor food selling/ serving services have to be encouraged as an important local function. As the results imply, in Center areas the outdoor seating is quite common (58 % - in autumn/spring period), while outdoor WCs are available to visitors of only a few locations. In observed open public space locations of Šilainai, the outdoor WCs were not available at all (0 %). Therefore, the lack or shortage of these services does not encourage local people to spend longer time outdoors.

![Fig. 4.16. Types of outdoor services in the surveyed spaces.](image)

In observed locations of three micro-districts of Kaunas city, outdoor trade possibilities (such as open markets, small corner shops, kiosks or similar) are also limited (Fig 4.17). As the research results suggest, possibilities for local residents and visitors to do slow daily shopping in nearby open market, shop or kiosk are not easy, as these functions are concentrated in more distant areas of the micro-district or the city. A slightly better possibility to reach an open market, a grocery shop or a kiosk have residents and visitors of observed territories of Eiguliai, while possibilities of members of Center (83 %) and Šilainiai (83 %) territories are lower. It might be concluded that residents and visitors of the surveyed territories have very few possibilities to perform a daily shopping function by just walking or cycling to the trade point; instead the is a strong tendency to go (often - by a car) to shopping malls.
To summarise the results collected with the help of observation method and its tool - observation protocols in 20 individual locations of three modernist micro-districts of Kaunas, it can be stated that majority of the open public spaces are open to everyone all day and all year, there is much light, the level of transparency is high, noise level - high (from traffic and people) in the Center; low - in Eiguliai and Šilainiai. Ground cover types should be more diverse and balanced in order to provide comfortable conditions and thus facilitate the exercising of different outdoor activities. Natural water is not incorporated in the spaces sufficiently, especially in Šilainiai and Center. Possibilities to observe wild nature (flora and fauna) are not yet developed in all the districts. There are almost no public art objects in all territories. Each district has different conditions for the organization of social events, Šilainiai territory lacking the permanent infrastructure in particular. There is a great shortage of outdoor eating and trade services, especially in Šilainiai micro-district.

These facts can be seen as a pre-condition for or as a consequence of the rather simple and monotonous activities available for and performed by local residents and visitors there. Open public spaces are used for short passage mostly. Walking and cycling were identified as the functions with the greatest potential in the observed territories. Functions related to water were identified as having the least potential in the micro-districts at the moment of observation.

The analysis showed that despite the significant differences of the three modernist districts (based on the period of their development, area size and geographical (natural) location), very similar characteristics of the public spaces can be emphasized. There is a clear need for (re)development of the spaces to provide more diversity and balance in the functions for both group and individual use: culture, sports, gathering, entertainment, relaxation, wild nature observation (plants, birds, water, animals, etc.). If more natural materials (stone, brick, wood)
were used for pathways, courtyards, squares and stairs and less asphalt, it would create a more natural and therefore more attractive outdoor environment for its users. Various art elements – both permanent art objects and also art activities – should be introduced in the modernist public spaces of Kaunas more intensively. In other words, the planning of open spaces should aim to provide well-balanced possibilities for different users (individual and groups representing all ages and interests), for different functions (leisure, learning, culture, sports, work, movement, etc.), at different times of the day and year. Achieving this aim would allow to correct the mistakes of the previous planning strategies and to achieve more sustainable development of the districts and the city in general.

**Results of the User Evaluation Stage**

In this stage of the research, a survey aimed to collect information from different groups of space users in order to understand what value they give to space and what potential space carries. The survey was conducted in the same three micro-districts of Kaunas.

Respondents’ profile: gender: in all three districts the most active participants of the survey were female: 84,6% in Šilainiai, 69,3% in the Center, and 61,1% in Eiguliai (4.18.). Therefore, the opinions characterising open public spaces in these micro-districts, in Šilainiai in particular, discussed below in this chapter, represent mainly the views of females.

![Fig. 4.18. Distribution of respondents by gender.](image)

Respondents’ profile: age: there is a clear division of respondents into three age groups (Fig. 4.19.): the majority of respondents in the Center micro-district are 21-30 years of age (68%) group, in Eiguliai micro-district - 14-17 years of age (46,9 %), while the largest part of respondents of Šilainiai micro-district represents people of 31-50 years of age (50%).
Such a diversity of respondents’ age provides a possibility to learn about the differences in their perception of the various aspects of the public space analysis. Also, the above social profiles of the respondents must be taken into account when evaluating the responses about the public space situation in a given neighbourhood. I.e. to realize that the assessment of, for example, Eiguliai district is presented by young, predominantly female persons, and this does not reflect the views of men of older age. Extensive research is needed to assess the larger diversity of views.

The aim of the next question “How are you affiliated with this micro-district?” was to determine the relationship between the interviewees and the target neighbourhood (Fig.4.20.). Most of the respondents (48%) in the Center selected the answer “to study” as their main aim to use the space of this micro-district. In this part of the city there is a number of institutions of higher education. In Eiguliai, which is a typical modernist residential micro-district with a large concentration of multi-apartment/ multi-story buildings, the majority of respondents identified themselves as local residents (option “to live” selected 54,9 %of respondents). The majority (93,33%) of respondents in Šilainiai micro-district live there, too.
Results of sociotope analysis

This data indicates that the users of the space from the Centre micro-district participating in the survey were mainly 21-30 age group females passing the space in the daytime, whereas Eiguliai public space value is presented by a more balanced female-male group of young age group persons mainly living in the area. Šilainiai micro districts open public space value characteristics were 31-50 age group females spending in the area a significant time of the day, week and year as their main function in the area are residential.

All respondents were asked to name one favourite open public space in their neighbourhood by selecting it from a list of 16 types (Fig. 4.21.). The most popular type of open public space for respondents of all three micro-districts was “park”. The largest group of park visitors come from Eiguliai micro-district, which can be explained by the fact that in this area there is a large (21,1 ha) public park “Kalniecių parkas” with a pond, pathways, seating, play areas. More than half (57%) of respondents from the Center area indicated “pedestrian street” as their most favourite open public space. Such choice can be expected as in this area there is a central pedestrian street of the city (total length – 1621 m) - a popular place not only for local users, but also for residents and visitors of Kaunas city, and visitors from Lithuania and abroad. It is worth to notice that there are no other very significantly valued public spaces in all the surveyed areas. However, “square” is the second most popular answer among respondents from Center (10%) and Eiguliai (14%), while Šilainiai representatives indicated “courtyard” (11 %). The least popular types in all groups were “meadow”, “fountain” and “riverbank”, indicating the absence or very limited supply of water-related or comfortable green grass areas in open public spaces of the micro-districts.

Fig. 4.21. Distribution of the most favourite open space types.

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510 During the survey period, a large redevelopment project was implemented in the territory of “Kalniečių park”. Old functions of the park were strengthened, new ones added.
Popular choices of “park” or “square” indicate that respondents do not favour spending leisure time in the immediate surroundings (courtyard, garden) of their residential houses, but prefer to go to common public areas available in the walking distance.

In order to learn where the users of the open public spaces come from, the respondents were asked to indicate where their most favourite public space is. Responses well correspond with the results of the question regarding the affiliation to the analysed areas (see above, Fig. 4.22). In Šilainiai respondents prefer visiting open public spaces located near their places of residence (81.7%), in Eiguliai - both near home (50.4%) and work/school (38.1%); users of Center’s areas, as they come here for work or studies from other micro-districts of Kaunas, their favourite public spaces here are close to work/school (39.6%), too. It is worthy to pay attention to the fact that public open spaces near “shopping and other services” are not popular among participants of the survey from “residential” micro-districts Eiguliai and Šilainiai, while in the Center, where is a high concentration of shops and similar service providers, together with a pedestrian street, generate almost 1/5 of Center’s representatives’ usage.

With a next question “Why do you enjoy visiting this place?” the authors of the research were eager to learn the main reason why/what for the people use it and to specify most popular present functions of the spaces. In total, 22 options were provided to choose the three answers from (Fig. 4.23).

![Fig. 4.22. Relationship between the respondents’ favourite public spaces and their location.](image-url)
As the results of the responses to this question show (Fig. 4.23.), the motives are very diverse; there are no one or two clearly popular motives present in all three districts. Meeting with friends (9.2 %), enjoying a view (9.2%), meeting other people (8.3 %) are most popular reasons to go out to local open public spaces for representatives of the Center. In Eiguliai, they look there for possibilities to exercise (walking and running - 8.1%), sit (7.3%), relax (6.6%), meet friends (6.6%), and cycle (6.6%). In Šilainiai, respondents’ favourite open public spaces attract them for active movement (walking, running - 10 %), to meet with friends (8 %), and to sit (7.3 %). The least popular motives to go to open public spaces in all micro-districts are swimming, observing wildlife and art. This clearly indicates an insufficient supply of elements corresponding with these interests.

In order to better understand what activities actually are carried out in the open public spaces of the micro-districts, the respondents had to answer to the open-ended question “what do you usually do in that place?”. The most popular answer (Fig. 4.24.) in all three respondent groups was “walking” (Center - 50%, Eiguliai - 33 %, Šilainiai - 42%), followed by “meeting friends” (popular in the Center - 30,68%, but not Šilainiai) and “playground” functions (popular in Šilainiai - 25,26%, but not the Center - 0%). Very few respondents named “shopping”, “studying”, “observing panorama”, “playing ball sports” functions in all areas.
Most often favourite public spaces (parks, squares, pedestrian streets, courtyards) are used by a small group of people: mostly with friends - in the Center (72,30 %) and Eiguliai (59,30%) and family member - in Šilainiai, 59,60%. A small part (up to 7%) of respondents in all areas go to space with a pet. Center is a more popular location to visit the open public place alone (16,8%) than in Eiguliai (5,30 %) (Fig.4.25.). This result indicates that currently open public places are more attractive for joint activities of friends or family, than to go and stay there individually. This might be related with available functions of the space or/and its other characteristic (for example, level of safety: less safe to be there alone).
Time of the year and day, and the average duration of the visit to space differ in separate micro-districts (Fig.4.26).

A very important aspect of this research is an effort of its authors to find out what potential the open public spaces in modernist micro-districts have, therefore the respondents had an opportunity to express their wishes on how the favourite public space can be improved and become even more attractive - used more often, more intensively and in more ways. Each respondent could provide his/her answer in two ways: first to choose answers from the closed-ended list of 20 general factors (Fig 4.27.) and, additionally, to write personal wish and comment in the open form (open-ended question type).

The summary of responses from all three micro-districts shows that the most popular wish in all three areas is related with “better maintenance, cleaning”, followed by “plant more flowers or trees”, “build benches” and “install more art objects”, “build shelter from the rain”, “better lighting”. Very few respondents wish to see there a water pond or experience more protection from the noise. The answers indicate that space users lack certain aesthetic qualities in the spaces they like to visit, with less orientation towards the development of new improvement of current infrastructure for various activities.

In the open-ended question line, the survey participants from the Center and micro-district wished for: more kiosks, better pathways, more playgrounds, a dog park, more national symbols, more parking lots, more art objects. In Eigeliai: more parking lots, more outdoor grilling zones, more monuments, more sports equipment, more trash bins, more playgrounds for different age groups, not only small children,
more pathways, more places for families to spend time together. In Šilainiai: to take a better care of greenery, to drain the trails, more parks, more trees, more cleaning, more benches near multiapartment houses, more infrastructure for elderly, more and better paved pathways, better clean, more events, more facilities for sports, active leisure, improve existing and build new playgrounds, especially for teenagers, to prone trees to open the panorama, renovate park, more grilling spaces, more places for picnic, ramp for skateboarding, to drain the meadow, lighting in Santarvės park, create a clean and safer panorama lot, café, more trash bins, to drain the park lawn and playground, better light, stop motorcycles and motorbikes passing through the rest spaces, to drain lawns, spaces for youth activities, to create a volleyball court, to protect basketball court from car parking.

"Which public spaces do you avoid in the daytime" - was another question included in the survey form as an open-ended question. In the Center micro-district, 11% of respondents named at least one place they avoid; remaining part did not indicate the open public place that they avoid in the daytime in the Center. In Eiguliai 45% of respondents named at least one such place, and in Šilainiai - 27 % (Fig.4.28.). The main types of public areas not safe for respondents in the day time in all three districts are very similar: dark courtyards, small narrow streets, areas near neglected buildings or kiosks, underground passages or covered passages from the street to inner courtyards, urban stairs.
In Center micro-district the following spaces were named as causing fear / prevent from visiting them: distant streets, neglected houses, main streets, park, pedestrian street, because there are many people, shopping centers, urban stairs, passages. In Eiguliai the indicated factors are: courtyards, dark areas, dark courtyards, dark places, inner courtyards, market near shopping center, lots near kiosks, open market, park, parking lots, school courtyard, entrances to houses, spaces near the public cemetery. In Šilainiai: bus stops, busy streets, courtyards of multi-apartment houses, kiosk, near garages, neglected building, school courtyard, night kiosk, panorama lot, park, underground passage, where greenery is not kept well.

At night respondents avoid the following open public spaces in their micro-districts: Center: all internal streets and courtyards, areas near neglected buildings, badly lit areas, dark passages, dark streets, narrow streets, night bars, park, passages, smaller streets, streets intersections, underground passages. In Eiguliai: badly lit areas, bars, dark courtyards, dark spaces, entrances to houses, inner courtyards, kiosks, open market, park, parking lots, school courtyard, shopping center, shopping center parking lot, square. In Šilainiai: bus stop, cycling track, courtyards, dark courtyards, dark spaces, kiosk, empty buildings, open market, panorama territory, park, school courtyard, school stadium, shopping center, spaces between houses, underground passages. 31% of respondents in the Center named certain public spaces they avoid at night time, while in Eiguliai 50,44% and in Šilainiai 55,77% respondents answered to the question about the most unsafe for them personally spaces in the district. These results allow a preliminary observation, showing that the Center district’s public spaces are considered safe during the day and night, while the safety in public spaces of Šilainiai, and, especially, Eiguliai, has to be improved.
“Why are you avoiding these places?” was the last question all respondents answered for the general aim of this survey. As the summarised results of this part of the survey shows, the most important factor affecting the fear of respondents to be in the open public spaces of their micro-district is the sense of “personal unsafety”, which can be caused by other people (“there are aggressive people gathering”, “youth likes to hang out there”, “too many people are there” or “too little people”) or insufficient or no light, which - consequently - can impact personal safety or security.

Results of the Mapping Stage
The data which has been collected and presented in the sociotope map can provide the needed information to prepare inventories of physical characteristics, formal purposes or content of public and urban open spaces which can give facts about the social values of these spaces. According to the analysis performed by the observation protocols, three different maps were prepared by using the pictograms, which were demonstrated in Chapter 3 (Fig.4.29, Fig. 4.30., Fig.4.31.).

Moreover, a general map was prepared regarding the analysis of the user evaluation results. (Fig 4.32.)

Fig. 4.29. Sociotope map with pictograms indicating the observed functions in open public spaces in Center district.
Fig. 4.30. Sociotope map with pictograms indicating the observed functions in open public spaces in Eiguliai district.

Fig. 4.31. Sociotope map with pictograms indicating the observed functions in open public spaces in Šilainiai district.
Fig. 4.32. Sociotope map with pictograms indicating the functions which were named as most favourite by the users of the open public spaces.

Sociotope mapping which has been used in this stage can help the creation and the development of new open public spaces, and not merely for evaluation of the existing places. The data sets might also help to cross-check the overlaying patterns in these two different tools. Therefore, it can give more information that would help designers to create areas providing more satisfaction for the users and fulfilment of the expected value.

**Conclusions of the 4th chapter**

The Sociotope mapping methodology applied in this stage of the research helped to collect valuable data contributing to the knowledge about the contemporary usage of the space in selected micro-districts of Kaunas city and thus to understand what transformations these open public spaces went through during periods of interwar, soviet and restored state independence (1918 till 2018). Site observation and users’ survey methods allowed to detect both present and potential patterns in usage of open public spaces.

Below are the insights presenting the major similarities and differences of the three districts both separately and in general.

The way people use the space can be classified into three main types of activities: necessary, optional and social. The research results suggest that the necessary and optional activities are more common in Eiguliai and Šilainiai micro-districts, while in the Center the optional and social activities are more popular. The Center is considered by the respondents as a lively, busy, clean and tidy place with nice environment. However, Eiguliai and Šilainiai were characterised as quiet and relaxing places, yet not as clean and tidy as the Center. In the Center majority of the respondents come there to work or study; while their main motive to be in Šilainiai and Eiguliai is to live.
Therefore the secondary functions performed by the space users in these areas are different: walking, shopping, meeting with friends are most common in the Center, while walking/running, cycling, sitting, meeting with friends and neighbours are most popular in Eiguliai and Šilainiai. In all analysed micro-districts people prefer to use the open public space alone (with a pet) or with the family members or friends, not with other local actors (neighbours, community members, other). Spending time with friends or alone is most common in the Center. Eiguliai micro-district only offers water-related activities. Art objects are more common in the Center; the open public spaces in other two micro-districts lack artistic elements.

Open public spaces in all three Kaunas micro-districts can be characterised by the following general features:

According to the results of site observations, there is insufficiency in:
- Integration of water (rivers, ponds, fountains, springs, pools, ...),
- Access to wild nature,
- Integration of artworks,
- Organisation of cultural events,
- Protection from traffic sounds,
- Provision of outdoor services (eating out, WC etc.) and trade,
- Infrastructure for playing ball games and water sports,
- Application of gravel and other natural materials as ground cover,
- Light in the night time.

There is sufficiency in:
- Open accessibility,
- Light in the daytime,
- Transparency,
- Infrastructure for walking, running, and cycling, playgrounds,
- Outdoor seating areas.

Most of the spaces are used for short-term stay and passage during day time.

According to the results of users’ evaluation (survey), there is insufficiency in:
- Outdoor seating areas,
- Conditions for individual activities,
- Outdoor activities in winter and dark/evening time,
- Elements creating aesthetics (flowers, art objects, etc.),
- Personal safety measures (street lights, etc.),
- Maintenance of natural environment,
- Maintenance of existing outdoor facilities.

There is sufficiency in:
- Squares, pedestrian streets, parks,
- Conditions for walking and meeting friends.
The most often mentioned open public spaces that people avoid in both daytime and night-time are; dark courtyards, small narrow streets, areas near abandoned/neglected buildings or kiosks, underground passages or covered passages from the street to inner courtyards and urban stairs. On the other hand, the open public spaces which are being avoided the most in the night time are; areas near abandoned/ neglected buildings, badly lit areas, narrow streets, night bars, parks, passages, smaller streets, streets intersections, underground passages, entrances to multi-apartment houses, kiosks, open market, parking lots, square, bus stop, cycling track, panorama territory, park, school stadium, spaces between houses.

The supply of open public space features, corresponding to the way of life of contemporary society (local residents) is too narrow.

There is a lack of facilities for common activities of different social groups; most of the time, the main focus is on the children’s and younger people needs (swings, sandboxes, basketball courts, jogging, biking tracks). Teenagers’, middle-aged and especially elderly people’s needs are disregarded. Currently, the majority of open public areas offer activities typical for warm weather, daytime. Recreational functions (detected in earlier time periods, see Chapter 3) had significantly decreased.

It is necessary to include the infrastructure and other conditions that would enable the local actors to use these spaces during all seasons, in morning-day-evening (especially for autumn, winter outdoor activities), they should be attractive to and used by all age groups. It is necessary to develop the conditions for a greater variety of outdoor activities: rest (benches, tables), sharing food (barbecue areas), music, dance, other forms of art; individual or group sports and games (volleyball, ice hockey, skating, swimming, skateboarding, skiing, board games, etc.); observation of wild birds, animals and plants; access to water (fountains, beaches, ponds, springs, etc.). It is also important to encourage the integration of commercial service providers (kiosks, bars). Art objects are another important element (sculptures, street art, artistic lighting, etc.). The spaces should be attractive and used not only by local individuals (residents), but also by locally-based organizations (schools, kindergartens, clubs, enterprises, other public and private institutions).

A sociotope mapping is a useful methodology providing a systematic approach for investigation of the real interests and needs of local population / public space users and can be calibrated and applied to study the cities that are undergoing complex spatial, social and other transformations.

Results of this research supports not only the general findings achieved in the earlier chapter, but also provides valuable and evidence-based insights for researchers and decision makers exploring the possibilities to encourage different groups of society to use nearby open public spaces more actively: in a more diverse manner, in different time periods of the day and year. This would lead to the creation and strengthening of closer interpersonal relationships, identification and representation of shared interests, sharing of resources, and creation of a stronger local community, thus contributing to a sustainable development of the neighbourhood, the city, and the society in general.