Chapter 3 Analysis of the Changes in the Content of Public Spaces

One of the important and often overlooked aspects of urban research is the analysis of the uses of space as an object and seeing the urban space as a container of social activities. Sociological surveys, observation on site and mapping can be applied for studying contemporary social phenomena in urban spaces; however, the integration of the substrate of the past generations requires different sociological approaches and the content analysis method can be helpful in this regard. Moreover, the content analysis allows to identify and study not only the functions formally defined by the planning documents, but also to grasp the spontaneous uses of urban spaces. In cases, when ideological bias can be present in the official photographs, the study of amateur pictures and the material from private collections, as it was done in this study, is very important. The view towards modernist and modernized urban spaces through the documented activities of the particular space users in the course of time is quite new in the field of urban studies. This chapter illustrates the study of the modernization of the large Lithuania cities using the content analysis method and includes the literature review on the content analysis method, the description of the methodology design integrating the content analysis method, geographical information systems (GIS), and the sociotope method and the qualitative description of the obtained content analysis results demonstrating the consequences of modernization on the urban structure and social life both in the modernist neighborhoods and in the historic districts affected by modernization of the large Lithuanian cities.

3.1 Presentation of the content analysis method in urban research and general methodology

The origins. Although the principles of this method have deep historical tradition and have been used in science long ago, the term content analysis currently is more than seventy years old. It was formalized in 1950’ and introduced to a wider research community with B. Berelson’s book “Content Analysis in Communication Research”358; however, according to K. Krippendorff (2004), the intellectual roots

358 Bernard Berelson, *Content Analysis in Communication Research*. Glencoe, Ill.: The Free Press, 1952.
of content analysis can be traced far back in history and researchers practiced similar approaches earlier (for example, H. D. Lasswell (1927, 1938)) than Berelson and Lazarsfeld (1948) undertook the first codification of this method. Currently it is recognized as one of the most important research techniques in the social sciences. Content analysis can be broadly defined as “the scientific study of content of communication.” It is a set of procedures for transforming non-structured information into a format that allows analysis. The object of content analysis is communication. According to O. R. Holsti (1969), the content analyst can describe the characteristics of communications in terms of “what,” “how,” and “to whom” in order to infer their antecedents in terms of “who” and “why” and their consequences in terms of “with what effects.”

Procedure and features. The analysis of the literature demonstrates that studies using content analysis usually involve three main phases: preparation, organization, and reporting of results. These stages can be further subdivided into a series of steps, for example: formulation of the research question or objectives, selection of communication content and sample, selection of units of analysis, developing coding categories, coding the material, analyzing and interpreting the results. According to Ph. Mayring (2000), the material must be analyzed step by step, following rules of procedure, devising the material into content analytical units.

Development of coding categories is a very important stage in the process of content analysis. The basic rules for distinguishing the categories for analysis include: “categories should be exhaustive, so that all relevant items in the material being studied can be placed within a category, categories should be mutually exclusive, so that no item can be coded in more than one category, categories should..."
be independent, so that a recording unit’s category assignment is not affected by the category assignment of other recording units”368.

Fig. 3.1. The process of content analysis showing data, the basic steps and possible integration into a wider research context, by K. Krippendorff (1989).

The analysis of images is of particular importance in the context of this research. According to S. Stepchenkova and F. Zhan (2012), several content categories tend to be significant in the analysis of the images including subjects (number of people pictured, their age, gender etc.), dress, presentation (subjects pictured in an action or as a formal portrait), surroundings (studio, outdoor setting, tourist attraction etc.), temporal and geographical aspects (when and where the pictures were taken), production perspective (who photographed and distributed the images)369.

H. S. Hsieh and F. E. Shannon (2005) and H. Hashemnezhad (2015) distinguish three approaches how categories can be formulated 370,371:
- conventional approach, in which coding categories are derived directly and inductively from the raw data;
- directed content analysis, in which initial coding starts with a theory or relevant research findings; then, during the data analysis, the researchers allow additional themes to emerge from the data;

368  Content Analysis: A Methodology for Structuring and Analyzing Written Material: Transfer Paper, United States General Accounting Office, [interactive], 1989.
369  Svetlana Stepchenkova, Fangzi Zhan, Visual destination images of Peru: Comparative content analysis of DMO and user-generated photography, in: Tourism Management, Vol.36, 2012, p. 1-12, 2012.
370  Hsiu-Fang Hsieh, Sarah E. Shannon, Three approaches to qualitative content analysis, in: Qualitative Health Research, Vol. 15(9), 1277-1288 [interactive], 2005.
371  Hossein Hashemnezhad, Qualitative Content Analysis Research: A Review Article, in: Journal of ELT and Applied Linguistics (JELTAL), Vol. 1(3), 54-62. [interactive], 2015
– summative content analysis, which starts with the counting of words or manifest content, then extends the analysis to include latent meanings and themes.

**Quantitative and qualitative.** It is important to note, that the content analysis method is constantly evolving, growing into different branches or even separate methods and its’ field of application is expanding. Initially, when the method had emerged in the field of communication research\(^{372}\), it was seen as quantitative and objective. This classical view is reflected in the definitions of the method such as “an overall approach, a method, and an analytic strategy that entails the systematic examination of forms of communication to document patterns objectively”\(^{373}\). B. Berelson (1952) suggested that content analysis is objective, systematic, and quantitative\(^{374}\). However, the rise of qualitative approaches and the acknowledgement of subjectivity in social sciences in 1970s had affected the content analysis methodology\(^{375}\) and qualitative content analysis had been developed around 1985\(^{376}\). Currently, both strongly quantitative and strongly qualitative content analysis and the whole spectrum of intermediary approaches exist\(^{377,378}\).

Qualitative content analysis is defined as a method for systematically describing the meaning of qualitative data\(^{379,380}\). Some authors even identify the qualitative

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372 Klaus Krippendorff, *Content analysis*, in *International encyclopedia of communication*, ed. E. Barnouw, G. Gerbner, W. Schramm, T. L. Worth, & L. Gross, Vol. 1, pp. 403-407. New York, NY: Oxford University Press, [interactive], 1989.
373 Ciaran Trace. *Applying Content Analysis to Case Study Data: A Preliminary Report*. Department of Information Studies. University of California, Los Angeles, [interactive], 2001.
374 Bernard Berelson, *Content Analysis in Communication Research*. Glencoe, Ill.: The Free Press, 1952.
375 Peter Gavora, *The State-of-the-Art of Content Analysis*, in: *Education sciences*, Vol. 1, 6-18, [interactive], 2015.
376 Philipp Mayring, *Qualitative Content Analysis*, in: *Forum: Qualitative Social Research*. Vol. 1, No. 2. [interactive], 2000.
377 Bruce L. Berg, *Qualitative research methods for the social science*. California State University: Pearson Publications, 2009.
378 Hossein Hashemnezhad, *Qualitative Content Analysis Research: A Review Article*, in: *Journal of ELT and Applied Linguistics (JELTAL)*. Vol. 1(3), 54-62. [interactive], 2015.
379 Philipp Mayring, *Qualitative Content Analysis*, in: *Forum: Qualitative Social Research*. Vol. 1, No. 2. [interactive], 2000.
380 Margrit Schreier, *Qualitative Content Analysis in Practice*, London: Sage, 2012.
analysis of contents as semiotic analysis\textsuperscript{381, 382} or critical visual methodology\textsuperscript{383, 384}. Accordingly, qualitative content analysis pays attention to unique themes that illustrate the range of the meanings of the phenomenon and quantitative content analysis rather focuses on the statistical significance of the occurrence of particular texts or concepts, it requires that the data are selected using random sampling or other probabilistic approaches, so as to ensure the validity of statistical inference\textsuperscript{385, 386}.

Table 3.1. Types of content analysis according to M. Schreier\textsuperscript{387} (2012)

| Purpose | Quantitative content analysis | Qualitative content analysis |
|---------|-------------------------------|------------------------------|
| Purpose | Developing themes based on how many times relevant information occur in the data (frequency-based purpose) | Developing themes to capture the underlying meanings of data portions (latent meaning-based purpose) |
| Process | Identifying relevant data Coding by examining the text including the context and background Generating themes to represent the underlying meanings of data Using the themes to address the research question(s) | Identifying relevant data Coding by examining the text including the context and background Generating themes to represent the underlying meanings of data Using the themes to address the research question(s) |
| Product | Reliable and context-free results | Credible and context-bound results |

These developments of content analysis reflect its flexibility and adaptability. From one point of view, this method can effectively quantify qualitative contents and, from another point of view, it is context-sensitive and therefore can process symbolic

\textsuperscript{381} Svetlana Stepchenkova, Fangzi Zhan, \textit{Visual destination images of Peru: Comparative content analysis of DMO and user-generated photography}, in: \textit{Tourism Management}, Vol.36, 2012, p. 112, 2012.
\textsuperscript{382} Terry Ownby, \textit{Critical Visual Methodology: Photographs and Narrative Text as a Visual Autoethnography}, in: \textit{Online Journal of Communication and Media Technologies}, Special Issue – January 2013, [interactive], 2013
\textsuperscript{383} Gillian Rose, \textit{Visual methodologies: An introduction to researching with visual materials} (4th ed.). London: Sage, 2016.
\textsuperscript{384} Terry Ownby, \textit{Critical Visual Methodology: Photographs and Narrative Text as a Visual Autoethnography}, in: \textit{Online Journal of Communication and Media Technologies}, Special Issue – January 2013, [interactive], 2013
\textsuperscript{385} Bruce L. Berg, \textit{Qualitative research methods for the social science}. California State University: Pearson Publications, 2009.
\textsuperscript{386} Hossein Hashemnezhad, \textit{Qualitative Content Analysis Research: A Review Article}, in: \textit{Journal of ELT and Applied Linguistics (JELTAL)}, Vol. 1(3), 54-62. [interactive], 2015.
\textsuperscript{387} Margrit Schreier, \textit{Qualitative Content Analysis in Practice}, London: Sage, 2012.
meanings of data. According to Ph. Mayring (2000), it is possible to preserve the advantages of quantitative content analysis (objectivity, systematic approach, generalizability) and to transfer and further develop them to qualitative-interpretative steps of analysis.

![Diagram of content analysis process](image)

**Fig. 3.2.** The process of qualitative content analysis according to Ph. Mayring (2000); it can be seen that this process can be integrated with the more rigorous general content analysis process, presented in figure 1.

*Broad spectrum of data used.* K. Neuendorf (2002) describes content analysis as “the primary message centered methodology.” The content of communication forms the material for content analysis. Even if traditionally content analysis was applied to narrative texts such as political speeches, transcribed interviews, and published literature, the spectrum of potentially usable data currently has considerably expanded and nowadays content analysis may be used with different kind qualitative

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388 Devi B. Prasad, *Content Analysis: A Method in Social Science Research,* in: *Research Methods for Social Work,* ed. D.K. Lal Das, pp.174-193, New Delhi: Rawat Publications, 2008.
389 Philipp Mayring, *Qualitative Content Analysis,* in: *Forum: Qualitative Social Research.* Vol. 1, No. 2. [interactive], 2000.
390 Kimberly A. Neuendorf, *The Content Analysis Guidebook,* Thousand Oaks, CA: Sage Publications, 2002.
391 Devi B. Prasad, *Content Analysis: A Method in Social Science Research,* in: *Research Methods for Social Work,* ed. D.K. Lal Das, pp.174-193, New Delhi: Rawat Publications, 2008.
392 Ciaran Trace. *Applying Content Analysis to Case Study Data: A Preliminary Report.* Department of Information Studies. University of California, Los Angeles, [interactive], 2001.
or quantitative, textual and imagery data\textsuperscript{393, 394, 395, 396}, with manifest and latent content\textsuperscript{397} and in an inductive or deductive way\textsuperscript{398}.

The data used in content analysis includes: various types of published and non-published texts including books and journal articles, transcripts of interviews and discussions, protocols of observations, letters, diaries, legislation, regulations, other public documents etc., the editorial and advertising content of newspapers and magazines, the narrative and form of films, TV programs and other audio and video material\textsuperscript{399, 400, 401, 402, 403}, all sort of other recorded communication\textsuperscript{404}, paintings, maps, digital images\textsuperscript{405}, software\textsuperscript{406}, internet contents including user-generated content, social media websites\textsuperscript{407}. Even landscapes and cityscapes are often considered as a form of ‘text’\textsuperscript{408}, for example, J. M. Jacobs (1996) developed the

\begin{thebibliography}{99}
\bibitem{393} Satu Elo, Helvi Kyngas, \textit{The qualitative content analysis process}, in: Journal of Advanced Nursing, Vol. 62(1), 107–115, [interactive], 2008.
\bibitem{394} Svetlana Stepchenkova, Fangzi Zhan, \textit{Visual destination images of Peru: Comparative content analysis of DMO and user-generated photography}, in: Tourism Management, Vol.36, 2012, p. 142, 2012.
\bibitem{395} Terry Ownby, \textit{Critical Visual Methodology: Photographs and Narrative Text as a Visual Autoethnography}, in: Online Journal of Communication and Media Technologies, Special Issue – January 2013, [interactive], 2013
\bibitem{396} Hossein Hashemnezhad, \textit{Qualitative Content Analysis Research: A Review Article}, in: Journal of ELT and Applied Linguistics (JELTAL), Vol. 1(3), 54-62, [interactive], 2015.
\bibitem{397} Peter Gavora, \textit{The State-of-the-Art of Content Analysis}, in: Education sciences. Vol. 1, p. 6-18, [interactive], 2015.
\bibitem{398} Satu Elo, Helvi Kyngas, \textit{The qualitative content analysis process}, in: Journal of Advanced Nursing, Vol. 62(1), 107–115, [interactive], 2008.
\bibitem{399} Content Analysis: A Methodology for Structuring and Analyzing Written Material: Transfer Paper, United States General Accounting Office, [interactive], 1989.
\bibitem{400} Philipp Mayring, \textit{Qualitative Content Analysis}, in: Forum: Qualitative Social Research. Vol. 1, No. 2. [interactive], 2000.
\bibitem{401} Jim Macnamara, \textit{Media content analysis: Its uses, benefits and Best Practice Methodology}, in: Asia Pacific Public Relations Journal, Vol. 6(1), 1–34. [interactive], 2005.
\bibitem{402} Tom Bielavitz, \textit{A Content Analysis of the Strategic Plans of the Coalition of Urban Serving Universities’ Academic Libraries}, in: Urban Library Journal, Vol. 17 (1), [interactive], 2011.
\bibitem{403} Devi B. Prasad, \textit{Content Analysis: A Method in Social Science Research}, in: Research Methods for Social Work, ed. D.K. Lal Das, pp.174-193, New Delhi: Rawat Publications, 2008.
\bibitem{404} Philipp Mayring, \textit{Qualitative Content Analysis}, in: Forum: Qualitative Social Research. Vol. 1, No. 2. [interactive], 2000.
\bibitem{405} Xenophon Zabulis, Stelios C. Orphanoudakis, \textit{Image Content Analysis and Description}, in: State-of-the-Art, in: Content-Based Image and Video Retrieval, ed. R.C. Veltkamp et al. pp. I-19, Printed in the Netherlands: Kluwer Academic Publishers, 2001.
\bibitem{406} Zahra Kordjazi, \textit{Images Matter: a Semiological Content Analysis of Gender Positioning in Contemporary English-Learning Software}, in: Novitas-ROYAL (Research on Youth and Language), Vol. 6 (1), 59-80 [interactive], 2012.
\bibitem{407} Svetlana Stepchenkova, Fangzi Zhan, \textit{Visual destination images of Peru: Comparative content analysis of DMO and user-generated photography}, in: Tourism Management, Vol.36, 2012, p. 142, 2012.
\bibitem{408} Ibid.
\end{thebibliography}
concept of “representational cities,” where messages encoded in the environment can be read as texts\textsuperscript{409}.

Moreover, qualitative content analysis allows to extract a wide spectrum of important data from any image under analysis. G. Rose (2016) presents the methodology for the comprehensive analysis of images, where it demonstrates diverse layers of information each image can contain\textsuperscript{410}. Figure 3 demonstrates that not only the image itself, but also the context in which it is presented and circulated, how and for whom it is made are important.

**Fig. 3.3.** Layers of information present in the images distinguished by G. Rose (2016)\textsuperscript{411}.

*Broad field of applications.* The above-discussed spectrum of usable data demonstrates that the application of the content analysis method has long ago crossed the boundaries of communication studies; currently the method is used in photo-documentation research, sociology, anthropology \textsuperscript{412}, psychology, media research,

\begin{footnotes}
\item[409] Jane M. Jacobs, *Edge of Empire: Postcolonialism and the City*, London: Routledge, 1996.
\item[410] Gillian Rose, *Visual methodologies: An introduction to researching with visual materials* (4th ed.), London: Sage, 2016.
\item[411] Ibid.
\item[412] Terry Ownby, *Critical Visual Methodology: Photographs and Narrative Text as a Visual Autoethnography*, in: *Online Journal of Communication and Media Technologies*, Special Issue – January 2013, [interactive], 2013
\end{footnotes}
historical and political research, language studies\textsuperscript{413}, educational research\textsuperscript{414}, applied by governmental agencies\textsuperscript{415} etc. The fields of landscape research and urban studies are no exception too as it was demonstrated by the literature review.

\textit{Application in urban studies.} The definition of urban studies is necessary in order to understand the potential scale and scope of application of the content analysis to this field. Various sources define urban studies as a spectrum of disciplines engaged in the studies of the city. The urban studies as an umbrella term encompass not only urban planning, architecture, urban design\textsuperscript{416}, but also economics, sociology, geography, political science, anthropology\textsuperscript{417}. Researchers and students of urban studies are interested in “urbanization and issues surrounding metropolitan dynamics, the process that links cities with the wider economy, their governance, and their spatial structure and change expressed in physical, economic, social, and cultural dimensions\textsuperscript{418}”. These are usually interdisciplinary issues.

The major traditional interdisciplinary approaches in urban studies according to R. Paddison (2001) are: locational analysis (urban geography, spatial patterns of urban land use etc.), studies of structure and management of cities in the fields of urban planning, urban design, and architecture, spatial network analysis concerning the distribution of systems of cities, sociocultural and institutional approaches focusing on the peculiarities and aspects of urban social life, political economy studies linking urban issues to inequalities in power and property etc.\textsuperscript{419}, and so-called postmodern approaches, criticizing the paradigm of modernism and focusing on cities as centers of consumption, centers of recreation, and centers of image\textsuperscript{420}. There can be historical, spatial, historical-spatial, social-spatial, theoretical, practical, qualitative, quantitative approaches in this field. It is evident, that the majority of these researches involve the social dimension and the analysis of different contents of communication, thus content analysis method can be a handy tool in this broad field.

\textsuperscript{413} Devi B. Prasad, \textit{Content Analysis: A Method in Social Science Research}, in: \textit{Research Methods for Social Work}, ed. D.K. Lal Das, pp.174-193, New Delhi: Rawat Publications, 2008.

\textsuperscript{414} Peter Gavora, \textit{The State-of-the-Art of Content Analysis}, in: \textit{Education sciences}, Vol. 1, 6-18, [interactive], 2015.

\textsuperscript{415} Content Analysis: A Methodology for Structuring and Analyzing Written Material: Transfer Paper, United States General Accounting Office, [interactive], 1989.

\textsuperscript{416} Definition of ‘urban studies’, in: \textit{Collins English Dictionary}, [interactive], 2018

\textsuperscript{417} Thompson Gale, Urban Studies: Approaches, Concerns, and Disciplines, in: \textit{International Encyclopedia of the Social Sciences}, [interactive], 2008

\textsuperscript{418} Ibid.

\textsuperscript{419} Ronan Paddison, \textit{Studying Cities}, in: \textit{Handbook of Urban Studies}, ed. Ronan Paddison, London: Sage, 2001.

\textsuperscript{420} Thompson Gale, Urban Studies. Approaches, Concerns, and Disciplines, in: \textit{International Encyclopedia of the Social Sciences}, [interactive], 2008
Sociological research and various sociological research methods from surveys to observation are deeply rooted in the field of urban studies\textsuperscript{421} and architectural research and content analysis method is not an exception. However, the analysis of literature revealed that the applications of content analysis in this field are relatively rare. Several trends of application of content analysis in urban studies and related fields can be distinguished after the analysis of literature:

- analysis of urban planning literature and graphical and text parts of planning documents;
- analysis of other types of media related to urban planning;
- content analysis of contemporary and historic maps;
- understanding of different environments and related aspects through content analysis of photographs;
- content analysis of interviews and surveys data.

Content analysis of urban planning documents and planning literature is the most extensive category with substantial history. Content analysis of urban planning literature was carried out from the initial stages of development of the method\textsuperscript{422}. Various examples of such studies can be presented. For example, T. Ishikawa (2012) examined nine major textbooks in urban planning and identified 127 important terms from the textbook indexes, the degrees of similarity between pairs of the terms were computed through the analysis of the pattern of co-occurrence, the important terms were further classified based on this similarity measure\textsuperscript{423}. Y. Kumagai and P. Filion (2012) carried out the content analysis of the planning documents from the major urban areas in Japan and Canada in the frame of the analysis of planning and the risk of disasters\textsuperscript{424}. E. H. da Silva Oliveira (2015) carried out the content analysis of development plans, strategic initiatives and policy documents in the context of the study of place branding and strategic spatial planning\textsuperscript{425}. R. K. Norton (2008) developed the proposals for the adaptation of the content analysis method for the analysis of local master plans and zoning codes and developed a series of criteria for

\textsuperscript{421} Ronan Paddison, \textit{Studying Cities}, in: \textit{Handbook of Urban Studies}, ed. Ronan Paddison, London: Sage, 2001.
\textsuperscript{422} Albert Z. Guttenberg, \textit{Content analysis for city planning literature}: in: Committee of Planning Librarians. \textit{Exchange bibliography}, No. 37. University of Illinois Urbana-Champaign, [interactive], 1967.
\textsuperscript{423} Toru Ishikawa, \textit{Content analysis of textbooks in urban planning}, in: \textit{Journal of Architecture and Planning. Transactions of AIJ}. Vol. 77 (2012), Issue 679, p. 2137-2142. [interactive], 2012
\textsuperscript{424} Yoichi Kumagai, Pierre Filion, \textit{A Content Analysis of Planning Documents from Major Urban Areas in Japan and Canada}, in: \textit{presentation material, Resilient Cities 2012 Congress, Bonn, Germany, May 14, 2012}, [interactive], 2012.
\textsuperscript{425} Eduardo Enrique da Silva Oliveira, \textit{Place branding in strategic spatial planning: A content analysis of development plans, strategic initiatives and policy documents for Portugal 2014-2020}, in: \textit{Journal of Place Management and Development}, Vol. 1(8), 2015.
evaluation of these documents based on the case study of central Michigan⁴²⁶. Th. Bielavitz (2011) carried out the content analysis of strategic plans of academic libraries in order to find out how academic libraries support their universities’ goals of urban engagement and community involvement⁴²⁷. The analysis of the contents of historic and contemporary maps can be mentioned as well. For example, I. Muehlenhaus (2011) had analyzed 256 historic maps published since 1800 and used for persuasive purposes⁴²⁸.

Content analysis method can be applied to other types of media in the field of urban studies as well. For example, S. J. Velasco (2016) performed the analysis of the contents of urban planning related YouTube channels. The study analyzed how the U.S. City Planning Departments can involve citizens more comprehensively into planning processes by sharing educational videos through online platforms⁴²⁹.

The contents of the images of different architectural, urban, natural environments can be analyzed as well. E. Byrne (2014) analyzed the contribution of photography to understanding the mental health hospital environment⁴³⁰. S. Stepchenkova and F. Zhan (2012) had analyzed and compared images of Peru collected from a destination marketing organizations sites (530 images) and from photo-sharing website Flickr (500 images) in their analysis of destination photography⁴³¹.

The content analysis of surveys and interviews data is used in urban studies. For example, J. A. O’Neil and C. A. Gallagher (2014) used the content analysis method to assess the views of practitioners at workshops in the field of development of urban green networks⁴³². M. de Alba (2012) used content analysis in order to understand

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⁴²⁶ Richard K. Norton, *Using content analysis to evaluate local master plans and zoning codes*, in: *Land Use Policy*, Vol. 25, No. 3, [interactive], 2008.
⁴²⁷ Tom Bielavitz, *A Content Analysis of the Strategic Plans of the Coalition of Urban Serving Universities’ Academic Libraries*, in: *Urban Library Journal*, Vol. 17 (1), [interactive], 2011.
⁴²⁸ Ian Muehlenhaus, *Genealogy That Counts: Using Content Analysis to Explore the Evolution of Persuasive Cartography*, in: *Cartographica: The International Journal for Geographic Information and Geovisualization*, Vol. 46(1), pp. 28–40, [interactive], 2011.
⁴²⁹ Stephanie J. Velasco, *Online Video as a Tool for Planning Education and Engagement: A Content Analysis of U.S. City Planning Departments’ YouTube Channels*. University of Washington, [interactive], 2016.
⁴³⁰ Ellie Byrne, *Visual data in qualitative research: The contribution of photography to understanding the mental health hospital environment*, PhD thesis, University of the West of England, Bristol, [interactive], 2012.
⁴³¹ Svetlana Stepchenkova, Fangzi Zhan, *Visual destination images of Peru: Comparative content analysis of DMO and user-generated photography*, in: *Tourism Management*, Vol. 36, 2012, p. 1-12, 2012.
⁴³² John A. O’Neil, Caroline E. Gallagher, *Determining What is Important in Terms of the Quality of an Urban Green Network: A Study of Urban Planning in England and Scotland*, in: *Planning Practice and Research*, Vol. 29, No. 2, [interactive], 2014.
urban collective memory, the experiences and social representations of the people who have lived in Mexico City for the last five or six decades. Integration with other methods. The interdisciplinary nature of urban studies requires effective integration of methods applied. According to R. Xerez and J. Fonseca (2011), the integrated research methods matter to enrich theoretical and empirical urban research. According to J. W. Creswell (2009), mixed methods approach can offer a better understanding of the research problem than either method on its own. Literature demonstrates, that content analysis can be successfully integrated with various research methods and tools. For example, R. Xerez and J. Fonseca (2011) carried out the analysis of the contents of movies, photos, maps, literature in their study of community networks in Alvade (Portugal) and integrated the content analysis in their methodology design encompassing qualitative and quantitative data, interviews, ethnographic observation, research in archives and identified it as a mixed methods approach. J. W. Creswell (2009) even identifies the mixed method approach integrating the qualitative and quantitative methods as the third perspective in research methods in addition to the qualitative and quantitative methods. Z. Rucks-Ahidiana and A. H. Bierbaum (2017) discuss the integration of spatial analysis of environment and social sciences; they note that “spatial context matters for qualitative social science inquiry”. Content analysis approach can play an important role in such studies as well. However, they note that consistent integration of spatial analysis and sociological data has largely been segregated to the spatial sciences, geography and urban planning; meanwhile they argue that “including spatial analyses in inquiries of social phenomena enhances depth and rigour to qualitative work across the social sciences”. According to K. H. Leetaru (2012), spatial analysis is a relatively untouched topic in the discipline of content analysis due to complexity of necessary GIS tools; however, geocoding and spatial analysis can play an integral role in any content analysis project, creating a new and rich dimension of locative information.

433 Martha de Alba, A Methodological Approach to the Study of Urban Memory: Narratives about Mexico City, in: Forum: Qualitative Social Research [interactive], Vol. 2(13), Art. 27, 2012.
434 Romana Xerez, Jaime Fonseca, Mixing Methods in Urban Research: Exploring City and Community Social Capital, ISA RC 21 July 7-9 2011 Amsterdam, [interactive], 2017.
435 John W. Creswell, Research Design: Qualitative, Quantitative and Mixed Methods Approaches, Londres: Sage, 2009
436 Ibid.
437 Romana Xerez, Jaime Fonseca, Mixing Methods in Urban Research: Exploring City and Community Social Capital, ISA RC 21 July 7-9 2011 Amsterdam, [interactive], 2017.
438 Zawadi Rucks-Ahidiana, Ariel H. Bierbaum, Qualitative Spaces: Integrating Spatial Analysis for a Mixed Methods Approach, in: International Journal of Qualitative Methods, Vol.14, 93 – 103, 2017
439 Kalev H. Leetaru, Data Mining Methods for the Content Analyst: An Introduction to the Computational Analysis of Content, New York: Routledge, 2012.
3.2 The content analysis methodology applied in the research describing its integration with GIS

The analysis of literature allowed identifying the potential of content analysis as a flexible tool for quantitative, qualitative and integrated research. The existing experience of its application in urban studies, as well as its potential of integration with spatial analyses, justify the further analysis of the topic using the case of the study of modernization of Lithuanian cities during the Soviet period and its influence on contemporary urbanism. The main research question and general objectives were formulated in the methodological framework of the study presented in the introductory chapter. The content analysis method and the sociotope methodology were selected as the tools for analysis of the phenomena of functioning and uses of public spaces before and during the Soviet period and nowadays. The challenge was to design the content analysis study and to ingrate it into the overall methodology of the project, finding its meaningful and beneficial links with sociotope methodology, GIS, and multi-modal graph.

Data used, sources. The selected communication content for the analysis was the material accumulated in the course of the study: a volume of historical and contemporary photographs, postcards, images from newspapers, books and other media that constitute the evidence of activities, functions, and users in public spaces of different types.

The approach towards selection of the images of different periods for analysis was the following: all the available images of public spaces around the year 1939 were collected bearing in mind the limited amount of the photographs of this period; when collecting the images of the later periods, the attention was focused on representing all the possible types of activities in all the distinguished types of public spaces.

All the collected images were classified according to the period, which they represent:
- interwar photographs taken around the year 1939 showing the urban spaces and life in them before the modernist interventions;
- photographs of the Soviet period of the year 1960 – 1990 representing the most intensive modernization;
- contemporary (2010-2017) photographs showing the present day functioning and uses modernist and modernized urban spaces.

All the collected material was placed in the online database used for the purposes of the study. 234 images representing Kaunas city of the Inter-War era around 1939, 909 photographs representing the modernized city of the Soviet period, and 713 images

440 Sociotopkarta for parker och andra friytor i Stockholms innerstadt - om metoden, dialogen och resultatet, [interactive], 2002.
representing the city around 2016 are currently accumulated and placed in the online database. The accumulated material related with Vilnius and Klaipėda is distributed like this: 253 images of Vilnius of the Inter-War era, 968 images of Vilnius of the Soviet period, 300 contemporary images of Vilnius; 125 images of Klaipėda of the Inter-War era, 411 images of Klaipėda of the Soviet period, 200 contemporary images of Klaipėda.

The photographs and postcards representing the public spaces of the Inter-War era were collected from the Lithuanian Central State Archives (Lietuvos valstybės centrinis archyvas, LCVA), M. K. Čiurlionis National Museum of Art (Nacionalinis M. K. Čiurlionio dailės muziejus), digitalized archives and databases of other Lithuanian and foreign museums, for example Lithuanian Integrated Museum Information System (Lietuvos integrali muziejų informacinė sistema (LIMIS)) and Polish National Digital Archive (Narodowe archiwum cyfrowe (NAC)) and different publications and sources of literature.

While collecting the material related to the Soviet period, the approach of G. Rose (2016), that the context in which the image is presented and for whom it is aimed matter strongly\textsuperscript{441} was taken into account. In order to represent this period accurately and to avoid the ideological bias, several groups of sources were targeted:

- The official photography of the Soviet era: the views of urban spaces and activities of the population captured by the professional photographers, journalists, architects, ethnographers and other authors of this period. These images correspond to the ideological requirements of the era and try to depict tendently the positive achievements of the socialist system and Soviet modernization and the desirable activities of the population in the public spaces. The photographs from the archives of the professional photographers A. Dumbliauskas, R. Rakauskas, A. Sutkus, M. Baranauskas, R. Požerskis, E. Katinas, the collection of S. Lukošius now kept in Kaunas City Museum (Kauno miesto muziejus, KMM) correspond to this criterion. The images from the collection of the ethnographer A. Pleskačiauskas now kept in Kaunas County Public Library (Kauno apskrities viešoji biblioteka, KAVB), the collections of the photographers A. Grinčelaitis, E. Šiško, J. Šemeta now in the Lithuanian Central State Archives are a part of this group as well.

- Household photography of the Soviet period: the views of urban spaces and activities of the population captured by non-professionals, private persons, that were not forced to oblige the requirements of the Soviet propaganda for the contents of the images. Such images were collected from the private collections of families (A. Vitkus, L. Jasione and others) and publicly accessible digital databases aimed at documenting historic memories. The example of such database is Open Archives of Kaunas, where images and written memories of the population are displayed and linked to the map of the city.

\textsuperscript{441} Gillian Rose, \textit{Visual methodologies: An introduction to researching with visual materials} (4th ed.). London: Sage, 2016
Informal photographs by professional photographers of the Soviet period: these photographs were taken by the professionals; however, did not correspond to the requirements of the Soviet propaganda, these images were not published or were used for working purposes. The largest part of the accumulated images of this category constitute the photographs from the Institute of Conservation of Monuments (Paminklų konservavimo institutas) now stored in the Vilnius Regional State Archives, as well as the images from the Vilnius Old Town Restoration Directorate (Vilniaus senamiesčio restauravimo direkcija) now stored in Vilnius Regional State Archives (Vilniaus Regioninis Valstybės Archyvas VRVA), archive of Institute of Architecture and Construction (ASI) and the photographs from the personal collection of the photographer R. Požerskis.

For the analysis of the uses of public spaces in Kaunas, Vilnius, and Klaipėda around 2016 the images were collected from the internet portals and the publicly accessible social networks accounts of communities, members of communities, and public organizations of these cities, trying to represent all the possible types of activities in all the distinguished types of public spaces.

Fig. 3.4. The examples of the material collected for the content analysis: a) the digitalized page of the Inter-War era journal “Policija”\(^442\) and b) the photograph with the description in Lithuanian and Russian from the collection of the ethnographer A. Pleskačiauskas now kept in Kaunas County Public Library.

\(^{442}\) Policija, 1936, No. 16, pp. 23. [interactive], retrieved from http://www.epaveldas.lt/recordDescription/LNB/C1B0003778541
**Coding categories.** The idea behind the content analysis in this research was to analyze the phenomena of uses and functioning of public spaces created or modified as a result of modernist urban planning and development of the built environment of the Soviet period. For the development of content categories, the directed approach as identified by H. S. Hsieh and F. E. Shannon (2005)\(^{443}\) and H. Hashemnezhad (2015)\(^{444}\) was selected. According to them, the purpose of the directed approach usually is to validate or develop a conceptual framework or theory. In this case, the aim is to test the developed multi-modal graph model and supplement it with additional information. While researching of the phenomena of functioning and uses of public spaces, the interaction between three sets of categories - typology of public spaces, typology of their users and typology of activities taking place there - is important. Thus these three types of categories were distinguished.

The classification of public spaces was developed based on literature and the peculiarities of Soviet era urbanism and the general overview of contents of accumulated material. The research by B. A. Sandalack and F. G. A. Uribe (2010)\(^{445}\) was used as a basis for distinguishing such public space types as: streets, other linear elements, such as paths, trails, bikeways, urban squares, representative spaces in front to buildings, parks and gardens, natural and semi-natural territories in the city, cemeteries, outdoor sport facilities. Considering the features of modernist urban planning, such spaces as publicly accessible spaces around buildings and publicly accessible yards in modernist residential blocks were distinguished. The nationalization of land of the Soviet period had determined that traditionally closed private spaces, such as inner courtyards of perimetric urban structure, became public and accessible; consequently, these were also included in the classification.

The typology of users was developed based on the general overview of collected historical material and existing classifications\(^{446}\) and included adults, seniors, pre-school age children, schoolchildren, teenagers, youth, parents or childcarers with children, people with disabilities, tourists and visitors and uniformed officers.

For the development of categories of activities in public spaces the existing sociotope methodology was used. The methodology of sociotope map was developed by Swedish urban planners in the context of changing urban planning paradigm and shifting from functionalist and modernist urban planning to compact city, where numerous conflicts of functions, uses, and values occur. Here urban planner

\(^{443}\) Hsiu-Fang Hsieh, Sarah E. Shannon, *Three approaches to qualitative content analysis*, in: *Qualitative Health Research*, Vol. 15(9), 1277-1288 [interactive], 2005.

\(^{444}\) Hossein Hashemnezhad, *Qualitative Content Analysis Research: A Review Article*, in: *Journal of ELT and Applied Linguistics (JELTAL)*, Vol. 1(3), 54-62. [interactive], 2015.

\(^{445}\) Beverly A. Sandalack, Francisco G. Alaniz Uribe, *Open Space Typology as a Framework for Design of the Public Realm*, in: *The Faces of Urbanized Space*, Vol. 5, p. 35 – 75 [interactive], 2010.

\(^{446}\) UrbSpace Project [interactive], 2017, retrieved from http://ln-institute.org/urban-spaces/urban-spaces.php?encyclopedia_id=283
increasingly becomes a facilitator of other people’s needs, values and views and sociotope map is used as a way of understanding and visualizing social values in urban space. Sociotop map has been first of all developed and applied in Stockholm 447, 448, then in Goteborg 449, Kungsbacka 450, Sollentuna 451 and elsewhere. The term “sociotope” derives and is an extension of the term “biotope”, the sociotope is seen as a place of human activities, a distinct environment in its sociocultural context. The main purpose of such map is to collect, through dialogue, enhance and disseminate the knowledge of how open spaces such as parks, squares, piers, beaches, pedestrian zones function as habitats for the people who live and work in the city 452. Different versions of sociotope maps identify slightly different use values of public spaces. For example, the sociotope map of Stockholm has 31 sociotope values, meanwhile Goteborg’s map has 20 values 453. By analyzing and comparing different sociotope map examples and the contents of the collected material, we have distinguished 21 use values based on sociotope methodology and 11 additional uses identified from the analyzed material. The distinguished use values can be seen in table 3.2.

The large number of collected images and other material required using computer program for the content analysis. Literature demonstrates that several programs allowing coding, inserting memos and analysis of text and image content exist. These

447 Alexander Stahle, Sociotope mapping – exploring public open space and its multiple use values in urban and landscape planning practice, in: Nordic Journal of Architectural Research, Vol. 19(4), p. 59 – 71, 2006
448 Karl Samuelsson, Matteo Giusti at al., Impact of environment on people’s everyday experiences in Stockholm, in: Landscape and Urban Planning, Vol. 171, p. 7 – 17 [interactive], 2018.
449 Emelie Ask, To map social values in the outdoor environment of the city. Sociotope mapping as a method in Stockholm and Goteborg, Swedish University of Agricultural sciences, [interactive], 2013
450 Sociotopkarta Kungsbacka stad, [interactive], 2016, retrieved from https://www.kungsbacka.se/globalassets/gator-trafik-och-utemiljo/dokument/sociotopkarta-kungsbacka-stad.pdf
451 Sollentuna sociotopkarta, [interactive], 2014, retrieved from https://www.sollentuna.se/globalassets/trafik--stadsplanering/stadsplanering/urban-gronstruktur/sociotopkarta/sollentuna_sociotopkarta.pdf
452 Sociotopkarta for parker och andra friytor i Stockholms innerstad - om metoden, dialogen och resultatet, [interactive], 2002, retrieved from www.stockholm.se/PageFiles/118863/Sociotop1.pdf
453 Emelie Ask, To map social values in the outdoor environment of the city. Sociotope mapping as a method in Stockholm and Goteborg, Swedish University of Agricultural sciences, [interactive], 2013
are HyperRESEARCH\textsuperscript{454}, winMAX\textsuperscript{455}, Atlas.ti\textsuperscript{456,457}, Alceste\textsuperscript{458}. Atlas.ti was used for coding, grouping and analyzing contents of the images in this research (Fig. 3.5). This program makes it possible to deal with a large number of photographs that generate wide-ranging narratives, as well as the possibility of analyzing the codes either separately or together\textsuperscript{459}. The distinguished categories were identified in the images under analysis as well as the precise location of the depicted space, the season of the year and other additional features.

Table 3.2. The types of public spaces, users and activities in public spaces used for coding the images. The pictograms, representing these categories, were used in the analysis of images and visualization of research results

\textsuperscript{454} Terry Ownby, \textit{Critical Visual Methodology: Photographs and Narrative Text as a Visual Autoethnography}, in: \textit{Online Journal of Communication and Media Technologies}, Special Issue – January 2013, [interactive], 2013

\textsuperscript{455} Philipp Mayring, \textit{Qualitative Content Analysis}, in: \textit{Forum: Qualitative Social Research}. Vol. 1, No. 2. [interactive], 2000

\textsuperscript{456} Tom Bielavitz, \textit{A Content Analysis of the Strategic Plans of the Coalition of Urban Serving Universities’ Academic Libraries}, in: \textit{Urban Library Journal}, Vol.17 (1), [interactive], 2011

\textsuperscript{457} Martha de Alba, \textit{A Methodological Approach to the Study of Urban Memory: Narratives about Mexico City}, in: \textit{Forum: Qualitative Social Research} [interactive], Vol. 2(13), Art. 27, 2012.

\textsuperscript{458} Ibid.

\textsuperscript{459} Ibid.
Integration of content analysis with GIS and multi-modal graph. The content analysis allowed both general overview and detailed analysis of collected material, coding the images and tagging the types of users, use values, identifying precise geographical locations represented in photographs and classifying them into standard types of spaces mentioned above. The function “codes-primary documents table” allowed to link the specific use values and types of users identified in the photographs with particular places in the city and the types of public spaces (Fig.3.6). However, the accumulated and generated data requires spatial representation for both the integration with the outcomes of sociotope mapping and the comparison with the developed model of multi-modal graph.
GIS software ArcMap was applied for this research in order to link the findings of the content analysis with spatial data. The axial maps of Kaunas in 1939 and 1990s and in 2016 showing the axes of automobile roads, pedestrian paths and the locations of buildings were created using historical and contemporary reference maps. Public spaces were traced on these maps using polygon function in the layer created for this purpose. The same classification of public spaces applied in the content analysis - streets, other linear elements, urban squares, representative spaces in front to buildings, parks and gardens, natural and semi-natural territories in the city, cemeteries, outdoor sport facilities, publicly accessible spaces around buildings and publicly accessible yards in modernist residential blocks as well as publicly accessible inner courtyards in traditional urban blocks - was used outlining the public spaces on the maps. Attribute tables with the series of attributes were created using the same categories applied in the content analysis – i.e. the typology of users (adults, seniors, pre-school age children, schoolchildren, teenagers, youth, parents or childcarers with children, people with disabilities, tourists and visitors and uniformed officers) and the typology of use values (see Table 2.2). This allowed the presence of specific types of users and activities identified in the images in the content analysis to be linked with the geographical location in the maps (Fig. 3.7) and further development of this research, where GIS serves as a medium for integrating the content analysis and sociotope mapping results and comparing them with the multi-modal graph model (Fig. 3.8).
The content analysis methodology applied in the research describing its integration...

**Fig. 3.7.** The window of ArcMap showing the fragment of the axial map of Kaunas representing the Soviet period with the outlined polygons representing the typology of public spaces and the attribute table showing the presence / absence of specific types of users and activities in the spaces outlined in light blue colour.

**Fig. 3.8.** The scheme demonstrating the integration of content analysis with sociotope methodology and GIS in the wider frame of the study of modernization of Lithuanian cities during the Soviet period and its influence on contemporary urbanism.
In the study of modernization of Lithuanian cities during the Soviet period and its influence on contemporary urbanism the content analysis of historic images was integrated with socio-spatial sociotope methodology at first through the development of coding categories and other classifications relevant for the study and then through spatial data using GIS as a medium for the comparison of the content analysis and sociotope mapping results with the multi-modal graph model developed in the frame of this research. The content analysis of the images proved to be a beneficial complementary tool in the complex analysis.

3.3 The qualitative content analysis methodology and description of qualitative content analysis results

Although qualitative content analysis and its aspects are discussed in numerous research papers, due to the limited scope of the research, more attention has been paid to direct describing of the content of public spaces and digitization of results using it for multimodal model computation. A deeper analysis of the structure and quality of public spaces could be the focus of a new study, extending and supplementing the results of this work. The structure of the qualitative review of public spaces was based on the elements of sociotope methodology and the theory of a prominent Danish urbanist J. Gehl (2010, 2011). The approach to the urban environment as the environment for people was used for the categorization and presentation of qualitative content analysis results. J. Gehl’s (2010) approach is considered as one of the leading in the research of public urban spaces and it is based on the perspective of the user and the subjective perception of spaces, that are relevant to this research. Using this approach, such features as people and activities, scale and shape of public spaces, mobility and safety were distinguished. The classification

460 Bruce L. Berg, *Qualitative research methods for the social science*. California State University: Pearson Publications, 2009.
461 John W. Creswell, *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*, Londres: Sage, 2009.
462 Satu Elo, Helvi Kyngas, *The qualitative content analysis process*, in: *Journal of Advanced Nursing*, Vol. 62(1), 107–115, [interactive], 2008.
463 Hsiu-Fang Hsieh, Sarah E. Shannon, *Three approaches to qualitative content analysis*, in: *Qualitative Health Research*, Vol. 15(9), 1277-1288 [interactive], 2005.
464 Hossein Hashemnezhad, *Qualitative Content Analysis Research: A Review Article*, in: *Journal of ELT and Applied Linguistics (JELTAL)* Vol.1(3): 54-62. [interactive], 2015.
465 Philipp Mayring, *Qualitative Content Analysis*, in: *Forum: Qualitative Social Research*, Vol. 1, No. 2. [interactive], 2000.
466 Margrit Schreier, *Qualitative Content Analysis in Practice*, London: Sage, 2012.
467 Jan Gehl, *Cities for People*, London: Island Press, 2010.
468 Jan Gehl, *Life between Buildings: Using Public Space*, London: Island Press, 2011.
of uses and activities in the urban space into necessary (functional) and optional (recreational) and concepts “city at eye level”, “space as meeting place”, “city for people”, “city of cars”, and “personal and social space scale” by J. Gehl (2010) were applied as they reflect user-experiences of public urban spaces.

**People-oriented approach.** The methodology, which was practically applied in the city of Copenhagen, became very popular and quickly spread around the world. The principles of the methodology have been applied to designing many modern cities in Europe, North America, Asia and Australia. A new approach to urban space planning incorporating not only traditional and contemporary technologies, but also integrating signs and functions important to the people, creating everyday experiences of space use, has become very popular in nowadays urban design. In our study, this author’s methodology provided a structured insight into the characteristics of use of modernistic urban space and its change from the user’s perspective.

**Necessary, Optional, and Social Activity.** This is one of the cornerstones of the methodology, very important for our research, defining the everyday use and social nature of urban spaces. Depending on the type of activity that dominates in the space, it is partly possible to predict and judge its quality. Usually necessary activities take place in space regardless of its physical parameters, as there are more functional factors. Meanwhile, optional/recreational activities are sensitive to the aesthetic, functional characteristics of space. The better the public space is, the more optional activities it creates, thus, the dominant type of activity is like a measure of the success of the space.

According to J. Gehl, ‘social activity is the fruit of the quality and length of the other types of activities, because it occurs spontaneously when people meet in a particular place. Communal spaces in cities and residential areas become meaningful and attractive when all activities of all types occur in combination and feed off each other’ 469. The importance of meetings and their duration in space are emphasized as a significant factor of public space, as such place attracts people even more.

**Life Between Buildings.** In his studies, J. Gehl emphasizes the importance of spaces between buildings for the architectural and urban design process and its success. These spaces are the special key to creating successful public spaces. Unfortunately, in traditional modernist urban solutions, they are usually not fully realized. Although the aim of our study was more focused on capturing users and their activities, the qualitative analysis of modernist spaces built according to methodology of J. Gehl in this study highlighted some interesting physical characteristics and use phenomena of public spaces determined by building layout, size and scale. One of the aims of the content observations made in our study was to confirm the claims of this author.

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469 Jan Gehl, *Project for Public Spaces*, [interactive], 2008, retrieved from https://www.pps.org/article/jgehl
Gradual Transformations. J. Gehl emphasizes the need for time for people to adapt to the changes in the city. Modernist urban solutions radically and rapidly changed the city during the Soviet period and this was reflected in the use of urban spaces. New urban spaces often require a new lifestyle and new daily habits. But sometimes very small things can change the physical structure of a space and the way it is used without causing stress to users. Spatial flexibility and the ability to change is an important part of assessing the quality of public spaces.

Winter Spaces, seasonality of space use. This qualitative spatial parameter is particularly relevant for northern European countries. The study of the seasonality and the typical time of use of the space required a lot of additional research material and was therefore not fully implemented in our study. However, some interesting cases of seasonal use of space were observed.

Qualitative data analysis was carried out in order to reveal and compare the characteristics of different urban spaces, the nature and historical development of their use, and also to identify so-called gray spots, places in Kaunas city where it was not possible to collect sufficient information in the frame of this research. This was necessary for the next step of our research, based on sociological study of public spaces.

The content analysis method is suitable for obtaining both qualitative and quantitative results. The quantitative aspect of the content analysis is presented in the forthcoming chapter dealing with the tests of the developed multi-modal graph. This chapter presents the qualitative description of the content analysis results. The qualitative analysis involves the discussion of how the interaction between the urban spaces, their users and the activities of these users evolved and changed in the periods under analysis. In this qualitative analysis the main attention is devoted to the case of Kaunas, which was selected for testing the multi-modal graph in this research. The material regarding Kaunas was analyzed in the greater detail and the conclusions were complemented with the results from the overview of the images of Vilnius and Klaipėda.

In order to identify the features and changes of the interaction between the urban spaces, their users and the activities of these users, we used:
- General overview of collected material on the uses of public spaces in Kaunas, Vilnius, and Klaipėda;
- The analysis of each image of Kaunas using Atlas.ti software;
- GIS maps of Kaunas, with mapped types of spaces, users, and their activities;
- A ‘serious game’ concept using printed images of Kaunas, which involved grouping the images, clipping them on the maps and developing the matrixes of the interaction of spaces, users and activities by the members of the research team. The examples of matrixes, representing the selected public spaces of Kaunas in all three analyzed periods are presented in the tables below.
The qualitative description of the content analysis results is presented below distinguishing Inter-War, Soviet and contemporary periods and the aspects of users, activities, and spaces. Each described period is illustrated with images. While selecting the images the ethical and copyright aspects were observed, although this has not limited the representation of the phenomena.

3.3.1 Inter-War period

The analysis of the images of all the three cities in the Inter-War period had demonstrated that the traditional typology of urban spaces was predominant including the streets, the squares and the representative spaces in front of buildings. The signs of modernism in the Inter-War Kaunas are seen more in the form of new architecture, meanwhile the urban structure of the city has remained quite traditional. The “city at eye level”\textsuperscript{470} image was present in the analyzed images of public spaces of Kaunas, Klaipėda and Vilnius before modernization. Public life was concentrated in the streets and squares, the scale of the buildings was rather small, 2 – 4 floors high. On the first floors of the buildings, there were seen many small shops available directly from the street. There are quite a lot of natural greenery fragments in the urban spaces, although the clear separation of urban built-up fabric and the areas of natural character is evident. Human spatial scale helps to ensure “the eyes on the street”\textsuperscript{471} effect and the social control of spaces. The traditional perimetric urban structure, small scale and the clear separation (but no high walls and fences) of public and private spaces are favourable for safety ensured by the social control. The analyzed photographs of all the cities provide the image of safety. The flood in the city center of Kaunas is seen in several photographs, here the flooded streets appear as vulnerable territory (Fig. 3.9).

\textsuperscript{470} Jan Gehl, \textit{Cities for People}, London: Island Press, 2010.

\textsuperscript{471} Ibid.
Fig. 3.9a. Extreme situations in the center of Kaunas of the interwar period: Nemunas floods in the center of Kaunas city 1931 (personal collection of A. Burkus).

Fig. 3.9b. Extreme situations in the center of Kaunas of the interwar period: Car accident in the street of Kaunas 1936.  

472 Policija, 1936, No. 16, pp. 23. [interactive], retrieved from http://www.epaveldas.lt/recordDescription/LNB/C1B0003778541
The streets of this period, as represented in the analyzed material, can be viewed as shared spaces. Various modes of mobility from horses to bicycles, pedestrians and automobiles shared the same spaces. The pedestrian mobility is predominant in this period. The number of individual automobiles was very low. For example, 705 cars including taxis for 108196 inhabitants were present in Kaunas in 1937\textsuperscript{473}. Although the automobiles appear in numerous photographs, the horse traffic is dominant. In the analyzed images of Kaunas and Klaipėda numerous people riding bicycles were identified; meanwhile the collected images of Vilnius show the rare presence of bicycles. The development of public transport was taking the first steps, however the effect of public transport on the activities of users in public spaces is visible in the photographs (Fig. 3.10).

\textbf{Fig. 3.10a.} Growing significance of automobile and signs of modernization: Police training. The corner of K. Donelaitis and Maironis streets in 1930s (Author of the photograph unknown) LCSA;

\textsuperscript{473} Kauno miesto statistikos metraštis:1938, Kaunas: Kauno miesto statistikos biuras, 1939.
Fig. 3.10b. Growing significance of automobile and signs of modernization: Modern architecture in contrast with archaic mode of transportation. Corner of Gedimino and Kęstučio streets in Kaunas (personal collection of A. Burkus);

Fig. 3.10c. Growing significance of automobile and signs of modernization: Public transportation in Laisvės Avenue in Kaunas 1930-40 (personal collection of J. Palys).
The new modern urban solution, improving communication between city districts in Kaunas, was the construction of the stairs on the slopes of the Nemunas river valley and development of two cable cars. The images reveal the investment in the urban stairs as the type of communication space and a successful public space of the city (Fig. 3.11). The fountains and flower beds are seen in the images of urban stairs similarly as in the urban squares. These stairs in Kaunas were the peculiar exception in the context of separation of urban built-up and natural environment in the city.

Fig. 3.10d. Growing significance of automobile and signs of modernization: Klaipeda train customs officers on the station platform in 1937 (Author of photograph unknown. The History Museum of Lithuania Minor).

Fig. 3.11. Urban stairs and their surroundings in Kaunas: a. Intense use of stairs in the Inter-War period (personal collection of J. Palys); b. A pool of Kaukas stairs in Kaunas (personal collection of J. Palys).
The users of very different age can be observed in the analyzed photographs of the Inter-War era; however, the adult middle-aged and elderly people are seen as dominant, with fewer young people, teenagers and children visible in the public spaces. Almost no people with visible movement disabilities were identified in the analyzed Inter-War images. Some disabled people are seen in the Inter-War period images of Vilnius, although as beggars.

The analysis of the activities captured in the images of Kaunas had demonstrated that the city’s central part was used much more intensively compared with peripheral urban areas. The variety of activities recorded in the images is relatively small. The necessary or functional activities are predominant in the images of the inter-war period. Most people in the photographs appear walking, sitting, using transport or waiting for transport, shopping. It is necessary to note that the meanings of functions changed over time and in the course of modernization: for example, horse-riding, riding horse carriage were necessary activities, a mode of transportation in the Inter-War era. Such activities became optional or recreational during the Soviet period and in contemporary era. It is interesting, that military and worker’s parades, public ceremonies are quite often visible in the photographs. Religious processions were recorded in the photographs in Kaunas (Šančiai, in Nepriklausomybė Square and Lasvės Avenue) as well as in the images of Vilnius and Klaipėda. It is interesting that although few children are seen in the images of these outdoor religious events. In the images of Vilnius numerous people are recorded praying in public spaces. Numerous events of different type are represented in the images of Klaipėda: official events, parades and processions, song festival, charity organization events, students’ events. The political events of this period are represented in the images as well (Fig. 3.12). Large scale events, such as military parades or song festival are organized in natural environment, seemingly outside the city in Klaipėda. Among the more interesting activities captured in the Kaunas images of this era the ice cream selling and water sports activities near Nemunas River Island can be mentioned.

It is peculiar that numerous analyzed images show people posing to the photographer in various occasions and settings in public spaces: people were posing with their dogs, bicycles, musical instruments, sports clothing etc. Although it is necessary to mention, that almost no people walking with their dogs were identified in the images. Some dogs are seen in the images, although they seem to be ownerless.

474 Jan Gehl, Cities for People, London: Island Press, 2010.
Fig. 3.12a. Non-typical use of streets: a. Mass march in Parodos Street in Kaunas. The members of Neo-Lithuania Corporation march in Parodos Street in 1920s-1930s (Author of the photograph unknown, M. K. Čiurlionis National Museum of Art).

Fig. 3.12b. Non-typical use of streets: Relaxing and looking at the panorama. Building of Saulės gymnasium in Savanorių Street in Kaunas around 1930 (personal collection of A. Burkus).
The analysis of the images of Kaunas has demonstrated that there is a general tendency for users to be distributed rather evenly throughout the city, with a very clearly defined concentration points. The main concentration areas of users in Kaunas were Laisvės Avenue and other streets (K. Donelaičio, Vytauto) of central city (Table 3.3). The activities and users are more evenly distributed in the public spaces of Inter-War Klaipėda and Vilnius compared to Kaunas, where the main point of concentration is Laisvės Avenue. Although it is necessary to note that the main street of Kaunas city can be characterized by a functional and transit character of activities and predominant category of adult users. Similar conclusions can be drawn analyzing the images of the streets stretching in the proximity of Laisvės Avenue. However, some points with recreational uses and higher diversity of users were identified in the photographs including the recreational areas of so-called City Garden were people in the images appear sitting in the café, mothers are walking with children, people appear resting on the benches. Recreational activities were identified in the segment of Laisvės Avenue behind Vytautas street as well; this part of the avenue had more recreational character with the abundant greenery. The passage of the Jewish Bank is also represented as vibrant commercial space in the analyzed images (Fig 3.13).

The Kaunas Old Town appears in the photos less frequently (except the Rotušė Square). Street vendors are depicted in the images of the Kaunas Old Town (Fig. 3.14). The analyzed images of Klaipėda of the Inter-War era represent street vendors, market, fish market – the street trade culture and the restaurants and cafés are seen in several images of Inter-War Klaipėda as well.

In terms of activities at the squares, Vienybė Square is distinctive in the context of other urban squares in Kaunas with its representative character, decorativeness, diversity of users and recreational activities if compared to Rotušė and Nepriklausomybės squares (Fig. 3.15).

![Image](image_url)
Fig. 3.14a. Old town of Kaunas of the Inter-War period: Walking and posing to the photographer (Author of photograph unknown, M. K. Ėiurlionis National Museum of Art);

Fig. 3.14b. Old town of Kaunas of the Inter-War period: A. Valančius Street in Kaunas in 1920s-1930s (photograph by A. Presas, M. K. Ėiurlionis National Museum of Art);

Fig. 3.14c. Old town of Kaunas of the Inter-War period: Market place surroundings in Kaunas city center, intersection of Gimnazijos and Gertrūdos streets in 1920s-1930s (Author of the photograph unknown, M. K. Ėiurlionis National Museum of Art).
**Fig. 3.15a.** The main squares of Kaunas of the interwar period: Nepriklausomybe Square around 1940 (personal collection of J. Palys).

**Fig. 3.15b.** The main squares of Kaunas of the interwar period: Townhall Square around 1940 (personal collection of J. Palys).
Fig. 3.15c. The main squares of Kaunas of the interwar period: c. Vienybės Square in 1930s (Author of photograph unknown, LCSA).

Fig. 3.15d. The main squares of Kaunas of the interwar period: Kaunas Central Power Plant at Vienybės Square in 1932 (photograph by V. Uždavinys, Šiauliai “Aušros” Museum).
Several pictures show that Vienybės Square in Kaunas in the Inter-War period was a very popular place for young parents to walk with strollers. Meanwhile, Rotušė and Nepriklausomybė squares can be characterized by a low diversity of users and predominant functional activities (Table 3.4). The predominant groups of users recorded in the photographs of these spaces are adults and seniors. The railway station district in Kaunas can be characterized by the diversity of users, intensive activities, although the activities are mainly functional. This part of the city is peculiar for the coexistence of mundane and representative character in the analyzed images. Nowadays important Savanoriai street in Kaunas appears as the fringe of the city in the accumulated images of the Inter-War era. The character of accumulated images is very diverse and does not reveal the coherent identity of this street. The representative school building - Saulė gymnasium – is seen in the majority of these images. Diversity of recreational activities in urban stairs in Kaunas can be mentioned: people appear posing to the photographer on the new urban stairs; young people are predominant in the photographs of the urban stairs (Table 3.3).

Different relationship with the rivers in the analyzed cities can be distinguished based on the analysis of the photographs. The Nemunas River in Kaunas functioned as the attraction point, although the river does not appear integrated into the urban fabric. The diversity of functions and users was identified in the images of Nemunas riverside (Fig. 3.16). There were no signs of investment into recreational infrastructure, with the exception of the swimming pool in the Nemunas Island, in the embankment; however, people in the images appear using it for recreation. Nemunas riverside depicted as the place of coexistence of recreational and intensive industrial shipping and port activities in the images of the era (Table 3.3).

Fig. 3.16a. The uses of riversides in Kaunas: Karmelitai beach in Kaunas center (personal collection of J. Palys).
Fig. 3.16b. The uses of riversides in Kaunas: Children playing near to port area in Kaunas city center in 1930s (photograph by G. Bagdonavičius, Šiauliai “Aušros” Museum).

Fig. 3.16c. The uses of riversides in Kaunas: The Kaunas yacht club (personal collection of G. Vitulskis).

Danė river is seen in the urban scale as the integral part of the city in the images of Klaipėda; people in the images appear spending time near the river; shipping activities take place in the city scale as well. The recreational function of water was not identified in the images of Inter-War Vilnius. No swimming and bathing in the public spaces of Inter-War Vilnius are seen in the images except in the photographs of Jewish sports club Makabi.
Summarizing the results of the Inter-War period, it can be stated that public spaces could be characterized as partially orientated to the people. The structure of urban spaces had an acceptable human scale and much information was provided at “the eye level”. However, there is a lack of optional activities and recreational infrastructure observed (there are few benches in urban spaces and lack of more
closed passive recreation areas). Necessary activities dominated in the public spaces, while social activity has only a local nature. Concentration of activities and variety of optional activities were observed only in local areas of the city, which were usually located nearby the main streets, but not in them. The phenomenon of living between buildings is very poorly captured in interwar photographs. The analysis of the images suggest that the most of the action took place in the transit spaces, squares, streets and their accesses. In this context, the pictures of the courtyards of Vilnius Old Town, where everyday life boils, are very specific. Shopping arcades are characterized by concentration of activities in Kaunas city as well. The lack of seasonal photos makes it difficult to judge the use of public spaces during the winter. Although the photos capture seasonal trade events (fairs) and mass parades in the city. The structure and functioning of urban public spaces of this period are based on the gradual succession of historical structures.

### 3.3.2 Soviet period

Due to the universal principles of modernism and accepted design norms, the structure and shape of the urban form became strict and purified. The scale of spaces has substantially increased in the later Soviet period and they became more coherent and monotonous. This is clearly reflected in the analyzed images of Kaunas, Vilnius, and Klaipėda of the Soviet period. Exceptionally large, almost empty spaces in modernist residential districts can be seen in the analyzed images of Klaipėda. Here the large open spaces were developed in front and around public buildings and between multi-flat residential buildings. Such large scale planning was probably determined by the flat terrain of the territory. The construction of modernist residential districts is frequently depicted in the photographs of the analyzed cities of the Soviet period. In the newly developed modernist residential areas the new typology of public spaces had emerged and was represented in the photographs: the yards and spaces around buildings with no clear boundaries between public and privately used spaces. In fact, all the spaces surrounding buildings became public. In the photographs these modernist public spaces often appear scarcely populated, sometimes empty and were filled with people only in special occasions or in case of transit. The representative spaces in front of public buildings in the modernist neighborhoods appear the most used public spaces. The lack of benches, the places for sitting and socializing can be seen in the analyzed images of representative spaces in front of modernist buildings in Klaipėda and Vilnius, as people appear to sit on the fountains, edgings, windowsills, trash bins and other objects, that are not intended for sitting.

The development of large scale, lengthy and monotonous pedestrian routes as a result of modernization of the cities under analysis are reflected in the images as well. The linear elements are predominant in the public spaces of large scale in the modernist districts in Klaipėda. The images of Kaunas reveal the increase in hard
surfaces in the riverside of Nemunas with concrete embankments, which in numerous instances seem empty or with just few users. The analysis of Vilnius images shows less activities in the streets and linear elements in the modernist districts of the Soviet period. “The city at eye level”\textsuperscript{475} was mainly ignored in the modernist urban design of the Soviet period; however, the professional artworks - sculptures and fountains - appear in the selected public spaces (Fig. 3.17).

For example, the representative spaces with fountains in the modernist districts appear popular spaces for recreation, walking, sitting, playing of children in the photographs of Vilnius. Monumental modernist artworks and fountains are reflected in the images of Kaunas and Klaipėda as well. “The city at eye level”\textsuperscript{476} effect has even been diminished in the traditional pedestrian spaces, such as Laisvės Avenue in Kaunas, where signboards of the shops were set above the eye level and the shop windows were quite empty (Fig. 3.18).

\textbf{Fig. 3.17a.} Large scale monuments in public spaces: Monument in Vilijampolė in Kaunas (photograph by A. Pleskačiauskas).

\textsuperscript{475} Jan Gehl, \textit{Cities for People}, London: Island Press, 2010.
\textsuperscript{476} Jan Gehl, \textit{Cities for People}, London: Island Press, 2010.
Fig. 3.17b. Large scale monuments in public spaces: Opening of Lenin monument in Klaipeda in 1976 (photograph by B. Aleknavičius, Klaipėda County Public Ieva Simonaitytė Library).
Fig. 3.17c. Large scale monuments in public spaces: Sculptural composition and the fountain in front of „Girstutis“ cultural center in Kaunas (photographs by A. Vitkus).

Fig. 3.17d. Large scale monuments in public spaces: Park „Draugystė“ in Kaunas district Dainava (photograph by T. Žebrauskas LCSA).
Fig. 3.18a. Different levels of social space control: Close distance. Observing of the shop windows in Laisvės Avenue in Kaunas (photograph by A. Pleskačiauskas).

Fig. 3.18b. Different levels of social space control: Low level of social space control gives a feeling of insecurity. Underground pedestrian crossing in Savanorių Avenue in Kaunas (photograph by A. Pleskačiauskas).
Fig. 3.18c. Different levels of social space control: Relaxation in greenery in Dainava modernist district (photograph by A. Pleskačiauskas).

Fig. 3.18d. Different levels of social space control: Large and open park space in Dainava modernist district (photograph by A. Pleskačiauskas).
The analyzed images demonstrate the increased importance of public transport both in modernized and modernist urban areas. Due to the rarely used private vehicles (quite a few of them are seen on the streets in the analyzed images) and very popular public transport, which was very important for communication in the territorially expanding cities, the analyzed photos show a significant accumulation of users at public transport stops (Fig. 3.19). The availability of public transport networks had influenced both the users and activities and development of public spaces. People waiting for public transport can be seen in the images both in the modernized and modernist neighbourhoods. Development of public transport and mobility network of the Soviet period had created new public nods with transit character visible in the analyzed photographs, these nods had not existed before and some of them disappeared afterwards.
Fig. 3.19a. New public nods with transit character: a. Savanoriai street in Kaunas (photographs by A. Pleskačauskas).

Fig. 3.19b. New public nods with transit character: b. Bus stop near Kaunas Castle, (photograph by A. Pleskačauskas).
For example, such space in Kaunas Old town was a large public transport stop near the territory of the Kaunas Castle. In the analyzed images, it is seen as the public space of the transit character, where people mainly appear walking, sitting and waiting for the bus.

The modernist urban planning devoted a lot of attention to the automobile and the separation of the cars and pedestrians and the “city of cars” had replaced the “city for people” 477 this is well reflected in the analyzed material. The photographs show large open spaces for parking the individual automobiles in the analyzed cities; however, in photographs, these spaces often appear semi or almost empty (Fig. 3.20).

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477 Jan Gehl, *Cities for People*, London: Island Press, 2010.
Fig. 3.20a. A lot of attention to the automobile in the urban spaces: The transport nod near to the Kaunas (KTU Institute of Architecture and Construction);.

Fig. 3.20b. A lot of attention to the automobile in the urban spaces: The semi empty car parking next to the entrance of public building in Viršuliškės district in Vilnius (photograph by M. Sakalauskas, KTU Institute of Architecture and Construction);.
Fig. 3.20c. A lot of attention to the automobile in the urban spaces: Clearly separated zones for automobiles and pedestrians (photograph by A. Vitkus).

Fig. 3.20d. A lot of attention to the automobile in the urban spaces: Large scale and separation of transport flows seen in the panorama of Klaipėda city in 1983 (photograph by A. Ulozevičius, Klaipėda County Public Ieva Simonaitė Library).
The clear separation of public and private spaces was eliminated during the Soviet era: the inner courtyards of perimetric urban blocks became public and the modernist free plan of new neighbourhoods was contradictory to these traditional subdivisions. “The eyes on the street”\textsuperscript{478} concept was not working so well both because of the free plan and the larger scale of spaces and the increased height of modernist multi-flat buildings (Fig. 3.21). Nevertheless, large open modernist public spaces and spaces around buildings in modernist residential areas without limiting barriers in the images of the Soviet era provide the image of accessibility and safety.

Analyzing the photographs, significantly higher number of users can be identified in the streets and public spaces of Kaunas, Vilnius and Klaipėda, especially during the late Soviet period (Fig. 3.22). The age of the users is also very diverse. More young people and children in public spaces are seen.

\textbf{Fig. 3.21a.} New scale of modern spaces of Soviet period Kaunas: Murava residential district (photograph by A. Pleskačiauskas);.

\textsuperscript{478} Jan Gehl, \textit{Cities for People}, London: Island Press, 2010.
Fig. 3.21b. New scale of modern spaces of Soviet period Kaunas: natural areas and large scale open space near the new modernistic district in Kaunas (photograph by A. Vitkus).

Fig. 3.21c. New scale of modern spaces of Soviet period Kaunas: large scale pedestrian path inside of the modernistic quarter (KTU Institute of Architecture and Construction).
Fig. 3.21d. New scale of modern spaces of Soviet period Kaunas: Use of spontaneous natural path dividing the large scale area between buildings (photographs from family archive of L. Jasionė).

Fig. 3.21e. New scale of modern spaces of Soviet period Kaunas: Large scale public space at the premises of Ažuolynas park (photograph by A. Pleskačiauskas).
Fig. 3.22a. The users of all ages in the public spaces of the Soviet period in Kaunas: Walking and relaxing people at the public space in the premises of Ąžuolynas park (photograph by A. Pleskačiauskas);.

Fig. 3.22b. The users of all ages in the public spaces of the Soviet period in Kaunas: The diversity of users, observing the view from Kaunas Castle (photograph by A. Pleskačiauskas);.
Fig. 3.22c. The users of all ages in the public spaces of the Soviet period in Kaunas: Relaxation and meeting point near the fountain in Laisvės Avenue 1980, (photograph by A. Pleskačiauskas).

Fig. 3.22d. The users of all ages in the public spaces of the Soviet period in Kaunas: Elderly woman with limited mobility in Kaunas Old Town (photograph by A. Pleskačiauskas).
For example, the analyzed images show that the number of children in public spaces had strongly increased compared to Inter-War era in Vilnius. Children appear both in yards and on linear elements. Mothers with children in strollers are often depicted in the public spaces in Vilnius. Tourists appear in the city center: in the images of Kaunas tourists are seen in Rotušė Square and Laisvės Avenue, in the territory surrounding Kaunas Castle (Fig. 3.23).

**Fig. 3.23a.** The use of main urban squares in Soviet Kaunas: Bus stop in Nepriklausomybė Square (photograph by A. Pleskačiauskas).

**Fig. 3.23b.** The use of main urban squares in Soviet Kaunas: People resting and walking in Vienybė Square in 1970-1973 (photograph by L. Čerškus).
No disabled people, for example, people using wheelchair, were identified in public spaces in the analyzed images of the Soviet period. It is worth noting that in the Soviet-era photographs the presence of uniformed officers in public spaces is quite high. Although the concentration of visitors is considerably higher in the central parts of cities, users in public spaces are quite evenly distributed in the territory of the cities. Several users’ concentration centers can be distinguished in Kaunas: Laisvės Avenue, Vilniaus Street after the reconstruction, the area of the Kaunas Castle, the bus and railway station district, all the centers of city’s modernist districts, the market places (Fig. 3.24). The fountains in the city center and modernist districts centers become the clear point of attraction, with the most frequent gathering of users, in the analyzed cities (Fig. 3.25).
Fig. 3.24a. The representative spaces in front of public buildings: The space in front of „Girstutis“ cultural center in Kaunas in 1975, (photograph by A. Pleskačiauskas).

Fig. 3.24b. The representative spaces in front of public buildings: The space in front of „Šeškinė“ shopping center in Vilnius (Author of the photograph unknown, 1985, LCSA).
Fig. 3.24c. The representative spaces in front of public buildings: Fountain in front of the shopping center of the Kaunas modernist district Dainava (Author of the photograph unknown, 1985, LCSA).

Fig. 3.25a. Equipment of the public spaces in modernistic districts: Accessible water and fountain at the Čečenija Square in Kaunas (photograph by K. Jurelė, 1985, LCVA); .
Fig. 3.25b. Equipment of the public spaces in modernistic districts: Typical children playground equipment in the modernistic courtyard (KTU Institute of Architecture and Construction).

Fig. 3.25c. Equipment of the public spaces in modernistic districts: Original design of children playground equipment in Justiniškės district in Vilnius (KTU Institute of Architecture and Construction).
Fig. 3.25d. Equipment of the public spaces in modernistic districts: Simple and typical children playground equipment in the area of kindergarten in Kaunas, Vilijampolė (photograph by S. Lukošius, 1971, Kaunas City Museum).

Fig. 3.25e. Equipment of the public spaces in modernistic districts: Carbonated water machines attracted many users in summer (Gedimino Avenue in Vilnius) (personal collection of B. Tranavičiūtė).

Another phenomenon observed in the images of this period - the informal gatherings of people at the entrances to the public and multi-apartment residential buildings, which became a kind of informal public spaces (Fig. 3.26).
Fig. 3.26a. New meeting points in modernistic districts of Kaunas city: People gathering at the entrance of the shop buildings (photograph from family archive of L. Jasionė).

Fig. 3.26b. New meeting points in modernistic districts of Kaunas city: People gathering and sitting on the benches at the premises of the public buildings (KTU Institute of Architecture and Construction).
This phenomenon illustrates the social need of “the space as a meeting place”\textsuperscript{479}, which would correspond to the personal and social space scale. Meeting culture at the public space in the Soviet period is noticeably more active than in the interwar period.

The proportion of optional or recreational activities\textsuperscript{480} has significantly increased in the Soviet period. People in the images appear not only walking, working, or waiting for transport, but also sitting in cafés, participating in various public events, concerts, resting on benches or in nature. Analyzing the material of this period, almost all the activities distinguished in the methodology were identified (Fig. 3.27).

\textsuperscript{479} Jan Gehl, \textit{Cities for People}, London: Island Press, 2010.
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Fig. 3.27a. Optional activities in the Kaunas city: Winter sports in Ąžuolynas park (photograph by A. Pleskačiauskas).

Fig. 3.27b. Optional activities in the Kaunas city: Sports event in Kaunas central stadium in 1981 (photograph by A. Pleskačiauskas).
Fig. 3.27c. Optional activities in the Kaunas city: Posing to the photographer in Steigiamasis Seimas Square (photograph by A. Pleskačiauskas).

Fig. 3.27d. Optional activities in the Kaunas city: Café in Old Town (photograph by A. Pleskačiauskas).
The most commonly recorded activities are: walks, meetings, shopping and sitting on benches. It is peculiar to mention that still almost no people walking the dog were seen in the images. The only exception was the image from the courtyard in the Old Town of Kaunas and in Panemunė, the historic district of Kaunas, in the territory of natural character. Winter sports were very popular in Soviet era. This is evidenced in the images of Vilnius as well: skating, skiing, ice hockey seem even more popular than summer sports. The images of Kaunas represent winter sports, especially skiing, as well. New types of leisure, recreational activities were identified in the images of Vilnius of the Soviet period: weighting machines (scales), carbonated water dispensers are seen in public spaces, people read and sunbath in public spaces. In addition to the usual activities in the public areas of the city, some of the most interesting additional activities were recorded: taking photographs, feeding the birds, horse riding in the city, and even participation in the funeral procession; during the late Soviet period, the wedding ceremonies in the Rotušė Square in Kaunas appear very frequently in the photographs. Massive partially compulsory activities - parades, processions and mass events in public spaces - are observed in the photographs as well (Fig. 3.28). For example, the analysis of Klaipėda images demonstrates that the official events with political-ideological character and public leisure, amusement events such as fair, Sea Festival, Fishermen Day take place in the city center. The Lenin's monuments are represented in numerous analyzed images as a background for political-ideological events of the Soviet era.

Fig. 3.28a. Semi-optional activities, mass events in public spaces in Kaunas: Fair in Laisvės Avenue and Nepriklausomybė Square (photograph by A. Pleskačiauskas).
Fig. 3.28b. Semioptional activities, mass events in public spaces in Kaunas: Participation in the parade (photograph by A. Vitkus).

Fig. 3.28c. Semioptional activities, mass events in public spaces in Kaunas: Dancers performing in the premises of Ėžuolynas park (photograph by A. Pleskačiauskas).
Fig. 3.28d. Semi-optional activities, mass events in public spaces in Kaunas: Mass gathering in Dainos valley in the premises of Ažuolynas park (photograph by A. Pleskačiauskas).

Fig. 3.28e. Semi-optional activities, mass events in public spaces in Kaunas: Funeral procession in the center of Kaunas (photograph by A. Vitkus).
As the city of Kaunas was selected as the main object for the content analysis study, some conclusions can be drawn on the uses of public spaces in different parts of the city illustrating the above distinguished phenomena.

**City center (Table 3.5).** More recreational character can be seen in the images of Laisvės Avenue of the Soviet period. Wider array of users and activities compared to the Inter-War era were identified in the images. Laisvės Avenue seems extremely populated during the events, such as fairs. Narrow array of users and activities was identified in the images of public spaces of the Old Town of Kaunas, except the Vilniaus Street and Rotušė Square. Bad physical state of non-representational and non-tourist spaces in the Old Town of Kaunas is reflected in the analyzed photographs. The main Vilnius Street in the Old Town can be characterized by the typical functional street uses, although the local residents can be clearly distinguished from the visitors and transit population in the images. The public large scale event – fair – is seen in the images of Vilnius Street. The area around Kaunas Castle gained much more importance compared to the Inter-War period. The tourist character of this area is seen in the images, the people appear taking pictures and posing for the photographer; however, the array of activities around the Kaunas Castle is quite narrow. The analysis of images revealed the difference in the uses and users of newly reconstructed and non-reconstructed inner courtyards in the Old-Town. Newly reconstructed inner courtyards appear well equipped although empty both in official and non-official photographs (Fig. 3.29). Meanwhile the non-reconstructed courtyards were of bad physical state, although actively used by the local inhabitants for daily life activities. The analysis of the images reveals, how Steigiamasis Seimas Square at the premises of the Old Town was converted from the market square with its’ typical activities to recreational square with flower beds and fountains. The territory surrounding the railway and bus stations had retained transit, transport function, mainly necessary activities are seen in the images of this area and less street life compared to Inter-Ware era.

The social significance of the urban stairs was maintained during the Soviet period. Different types of users: adults, seniors, youth, teenagers, school and pre-school age children are pictured using the urban stairs (Fig. 3.30). Such activities as observing the flowers, relaxation in greenery, meetings, resting, sitting, observing panoramas and water, taking photographs were identified in the images of the urban stairs.

The diversity of users and activities had increased in Nepriklausomybė Square, although it had maintained the character of transit and transport space. People appear waiting for the public transport in the stop in the square in the analyzed images. Vienybė Square had maintained the representational character, which was complemented by the Soviet symbols in this period. The activities characteristic to this type of space like relaxation on the benches, observing the flowers, meeting, walking with children, taking photographs in front of monuments are recorded in the images. Various events of official representative character were held in this space as
well. Rotušė Square in the Old Town can be characterized by a more narrow array of activities, the images represent passersby, tourists, and weddings, which took place in the Town Hall. Numerous tourist buses are seen in the images of this square, people appear taking photographs and posing for the photographer.

Fig. 3.29a. Old town courtyards in the Soviet period: Daily use of a courtyard in Kaunas Old town (photograph by A. Pleskačiauskas);
Fig. 3.29b. Old town courtyards in the Soviet period: The newly built and renovated courtyards were used less intensively during the Soviet period and mostly only for special occasions or events (photograph by A. Pleskačiauskas).

Fig. 3.30a. Urban stairs in Kaunas around 1970-80: Still as a photo opportunity (photograph from family archive of L. Jasioné).
Recreational territories, green areas (Table 3.6). The increasing social importance of Ąžuolynas park in Kaunas in the Soviet period is reflected in the photographs. Ąžuolynas park and Dainos valley are important examples of integration of infrastructure and natural environment in Kaunas of the Soviet period. The organized events are seen in the images of these territories. The premises of Ąžuolynas park seem more important than the park itself in terms of users and activities. Riversides of Kaunas of the Soviet period are used for recreation even without appropriate recreational infrastructure. Natural riversides with lush vegetation are seen in the images reflecting the presence of nature in the city (Fig. 3.31).
Fig. 3.31a. Use of riversides in Kaunas in the Soviet period: Nemunas riversides with pedestrian paths (photograph by A. Pleskačiauskas).

Fig. 3.31b. Use of riversides in Kaunas in the Soviet period: Fishing (photograph by A. Pleskačiauskas).
Fig. 3.31c. Use of riversides in Kaunas in the Soviet period: Bird feeding (photograph by A. Pleskačiauskas).

Fig. 3.31d. Use of riversides in Kaunas in the Soviet period: Port of recreational ships in the center of Kaunas in the Soviet period (photograph by S. Lukošius, Kaunas City Museum).
Fig. 3.31e. Use of riversides in Kaunas in the Soviet period: Recreational shipping in Nemunas, (photograph by A. Vitkus).
The cemetery as a public space is rarely represented in the collected images of the Soviet era. The exceptions are the official events in the cemeteries and some images of cemetery, although no users are depicted there.

**Historic districts** (Table 3.7). The increased significance of some historic districts of Kaunas - Petrašiūnai, Vilijampolė, Aleksotas, Panemunė – is reflected in the photographs. Petrašiūnai district is characterized by such recreational activities like shipping and sailing. The most popular, crowded urban beaches are seen in the images of this area. The diversity of users and activities, with predominant water recreation related uses is recorded in the images of this district. However, water recreation areas became more separated from other urban functions and this can be seen as the feature of modernity. It is peculiar to note, that Petrašiūnai is not represented in the collected images as the industrial area. The industrial character of the cityscape is not strongly represented in the collected and analyzed images despite the relevance of industrialization of the Soviet period. Panemunė district in Kaunas is characterized by the natural environment and the images of the winter sports events. People having picnic in the natural area are seen in one image of Panemunė as well. Much more images of Šančiai district from the Soviet period
were collected compared to the Inter-War era. Numerous photographs from private archives, family albums were analyzed. The diversity of users, and the emerging recreational activities are seen in the photographs of Šančiai. It is evident that these recreational activities emerge as bottom-up initiatives of the local people without any special infrastructure. Mass events and gatherings related to the secondary school life are seen in the images from Šančiai district as well. The images of historic Aleksotas district represent transport infrastructure and features and life of large Aleksotas market. The recreational significance of Botanical garden located in Aleksotas is seen in the images. It is necessary to mention that the historic Žaliakalnis district was not well represented in the accumulated images. The lack of infrastructure is visible in the images of Žaliakalnis. Only new public buildings constructed during the Soviet period in this district are represented in the official photographs. The importance and representation in the images of historic Vilijampolė district increases in the Soviet period. The construction of new multi-flat residential buildings is represented in the images as the sign of modernization of Vilijampolė. The emergence of modernistic residential neighbourhoods had brought the array of activities characteristic to these neighbourhoods to Vilijampolė. Numerous functional activities are present here, although recreational activities, especially in the natural areas of the district also emerge, including the wither sports. The monumental character of the park in Vilijampolė is depicted in the images as well.

**Modernist districts** (Table 3.8). The newly developed modernist districts of Kaunas, such as Kalniečiai, Dainava, Eiguliai, Šilainiai, are the result of the intensive process of modernization of the city. The analyzed images demonstrate the significance of Kalniečiai district. Although numerous images depict the district from the main streets and show the spaces in front of the public buildings, there is a lack of images showing the life in the spaces between the apartment buildings. The diversity of users and activities is quite high in Kalniečiai district. Čečėnijos Square with a large fountain in Kalniečiai seems important attraction point with high diversity of users and activities. People appear sitting on the edges of the fountain, children playing around the fountain and in the water. The analysis of the images demonstrates that Savanoriai street gained the transport character. People in the images appear waiting for the public transport in the stops, talking to a pay-phone. The street crossing near Kalniečiai district often appears in the images as the important and representative junction, although the recorded activities are of transit character. Dainava district can be characterized by the large open spaces and large parking spaces near the public buildings. The spaces between buildings in Dainava district in the images appear quite empty as well. Šilainiai district was built at the end of the Soviet period. The collected images from newspapers show scarcely populated newly developed large spaces between buildings. The construction of new districts and newly constructed buildings are mainly represented in the collected images.
Table 3.5. The patterns of distribution of users and activities in the main public spaces of Kaunas city center in the Soviet period

Table 3.6. The patterns of distribution of users and activities in the selected public spaces of recreational character of Kaunas city in the Soviet period
Table 3.7. The patterns of distribution of users and activities in the public spaces of Kaunas historic districts in the Soviet period

Summarizing the results of the analysis of Soviet public spaces, it can be stated that although the structure and scale of the spaces have become much less humane, not only the amount and distribution of public spaces in the city was gradually increasing, but they became much more diverse. There was a clear increase in optional activities in public spaces, and new phenomena of social activity were captured (for example gathering of young people in particular points of public spaces). In general, captured social activity in public urban spaces (especially in central and recreational areas of the city) is significantly higher. The photos of this period capture the seasonality of the activities, but they are quite limited (dominated by winter sports and passive recreation). During the late Soviet period, certain patterns of life between buildings can be observed. Although quite interesting social activities were recorded in the inner courtyards of the old towns not only in Vilnius but also in other investigated cities, it is noticeable that the use of the space between the buildings in the new modernist districts is very low. In new built modernistic areas residents are using only the central part of the inner courtyard of the apartment buildings, which is usually equipped with the playground. Other spaces between freestanding buildings usually are empty or have transit character. During this
period, the urban public space system has undergone tremendous structural changes which, due to their scale, have not been fully implemented. While public spaces of city centers have gradually been improved, the lack of human-scale, local greenery and recreational infrastructure have reduced the potential use of local public spaces (especially in so-called ‘sleeping districts’). The process of gradual transformation and development of the city was severely damaged during this period.

Table 3.8. The patterns of distribution of users and activities in the public spaces of Kaunas modernist districts in the Soviet period

3.3.3 Contemporary situation

Although, after the collapse of the Soviet Union, the urban structure of the studied cities remained essentially unchanged, or changed relatively little (the urban sprawl of these cities could be the subject of a new study), some changes in the structure of historically
established public spaces can be observed. The diversification of scales and visual fragmentation of the space is evident in the contemporary photographs of the analyzed cities compared to the Soviet period. The “city at eye level” is visible again although in a more visually heterogeneous way. The emerging visual advertisement is evident. Even if professional public art was promoted in the Soviet period; however, the contemporary images demonstrate the evident lack of visual accents at the eye level in the modernist residential neighborhoods. Some fountains built during the Soviet period seem non-functioning in the images of Klaipėda. This lack is compensated by the attempts of the residents themselves to embellish their living environment. People decorate their living environment with flowers, artistic installation in the yards of modernist residential areas. Such attempts to decorate were recorded in the images of Kaunas and Klaipėda. The emerging street art culture in Kaunas including the graffiti art, both legal and illegal, is well reflected in the media images. Smaller scale, more democratic and accessible public art objects, for example, the mouse sculpture in Klaipėda, emerge in the public spaces as well. The new feature in the public spaces of modernistic neighbourhoods appearing as a result of optional activities is both designated and illegal homeless cat and bird feeding areas. The equipment for outdoor training is installed in the modernist residential districts. However, the existing sports equipment, such as stadiums, in the images of Vilnius seem populated and used in cases of events, although in numerous images they appear empty. The social significance of representative spaces in front of public buildings has decreased compared to the Soviet period as it is seen in analyzed images of Vilnius and Kaunas. However, the entrances of the shopping centers of retail chains instituted after regaining the independence function as the meeting places as seen in the images of Eiguliai district in Kaunas and Justiniškės district in Vilnius. Generally, the public spaces of modernist residential areas appear empty, few actual users are seen in the images, these territories are not represented in the contemporary photographs. The users in the modernist neighbourhoods seem dispersed in a variety of public spaces.

Although the public transport infrastructure of the cities is very intensively used, the increase in the use of individual automobile is evident in the analyzed images. Less people waiting in the stops for public transport compared to the images of the Soviet period were identified; this can be seen as the sign of increasing importance of individual automobile. The public spaces are much more occupied by the individual automobiles both in modernized and modernistic neighborhoods if compared to the images of the previous periods. The accumulations of individual automobiles are seen not only in working, living environment or shopping areas, but also at the access to recreational territories or objects. The overcrowded parking becomes a sign of intensive use of public services.

481 Jan Gehl, Cities for People, London: Island Press, 2010.
The analysis of visual features of the public spaces in the collected photographs do not reveal any changes in the overall level of security. Physical protection against crime (metal grating, physical enclosures) is relatively rare in the contemporary urban environment judging from the explored photographs. However, the observation cameras are widely distributed; a new tendency to separate the private spaces not only of individual houses but also of apartment buildings with physical barriers (fences) is seen in the modernist districts. The photographs showing the results of criminal activities and traffic accidents available in the media sources can be the evidence of contemporary safety issues as well. However, it can be noted that the photographs of criminal activities and accidents in public spaces were not publicly available during the Soviet period and taking of such photographs by amateur photographers was discouraged, thus such images had not appeared in the sample under analysis.

The analyzed images demonstrate a wide diversity of users in the analyzed contemporary images. However, it can be concluded that less children, especially of pre-school age are seen in public spaces. For example, less children are seen in the images of Vilnius compared to the Soviet period both in the inner urban areas and in the natural areas at the fringes of the city. Uniformed officials appear much less often in the images of the public spaces compared to earlier periods as well. People with disabilities are identified in contemporary images much more often. People with disabilities are seen in the contemporary images of Vilnius much more often compared to the previous periods, although not in the city center; no people with disabilities were identified in the yards of modernist neighborhoods. In Kaunas and Klaipėda disabled people are seen in the images more frequently compared with earlier analyzed eras; however, their appearance in the photographs is quite rare.

The evident increase in the diversity of optional or recreational activities can be seen in the contemporary photographs of Kaunas, Vilnius, and Klaipėda. A variety of active recreation and sports activities are recorded. Although the winter sports occurrences in the images have decreased considerably, more active and diverse use of summer sports (cycling, running, skateboarding, street basketball etc.) and water entertainment (kayaking, diving) is noticeable. It is peculiar to note, that the occurrences of sports and other dynamic activities in the public spaces in the contemporary images are much less related with the type of the space: for example, running events, basketball games, and even dances are more often recorded in the street and squares of the city center than in the outdoor sports facilities. For example, water sports are seen in the city center in the images of Klaipėda due to the presence of the Danė River. The improvement of the active recreation infrastructure and its use are evident as well. The media sources present quite a lot of images of events taking place in the city’s public spaces. The peculiar character of events recorded in contemporary images of the analyzed cities is their bottom-up character of community and wider scale compared to the Soviet period, when the events were either official, large scale top-down or family scale. Some examples of bottom-up activities identified in the images of Danė riversides in Klaipėda: automobile parade, public works event, where city inhabitants voluntarily help cleaning public spaces,
sports event for people with disabilities. The community events recorded in the images of Kaunas historic district Šančiai can be mentioned in this context as well.

The optional activities\textsuperscript{482} can be seen both in the modernized inner urban areas, such as city center and historic districts, and in the modernistic neighborhoods. However, the highest concentration of such activities (street art, performances, photo sessions etc.) is visible in the centers of analyzed cities and historic urban areas, such as Laisvės Avenue and Vilniaus Street in Kaunas. For example, the social significance of the Katedra Square in Vilnius is revealed by the analysis of images: events, folklore, meetings, even teenager street sports take place there. The analysis of images demonstrates that the street life is mainly concentrated in the central part of Vilnius. In the case of Klaipėda, the public spaces of the city center appear lively and crowded in the occasions of public events, such as Sea Festival, although in ordinary days they seem quite empty. The diversity of public events in different spaces of the city center were identified in the images of Klaipėda; here the activities are more widely distributed if compared with Kaunas. The diversity of spaces, such as Klaipėda Castle site, Ship terminal are used for events. The temporary space formation elements in the public spaces for specific events were identified in the Klaipėda images. Such elements, like wooden terraces, pallets, sitting bags, temporarily transform the space for the needs of the event and adapt it to human scale and activities. Thus the activities become much less dependent on the type of space. For example, picnics are seen in the analyzed images of Vilnius city center: people have picnics in the squares, on the street, in cases of events and spontaneously. Peculiar and often recorded activity in modernist residential neighborhoods, which was almost impossible to identify in previous pictures of the Inter-War and Soviet times, is walking with the dog. For example, much more people walking with dogs are seen in various types of public spaces of Kaunas and Klaipėda. It may be that this is the result of the change in the culture of pet care.

The uses and activities in different part of Kaunas city are reviewed separately illustrating above distinguished trends.

City center (Table 3.9). Laisvės Avenue can be characterized by the vast diversity of activities and users. A wide array of activities including sports and diversity of users are recorded in the images of this pedestrian street. Sports activities were recorded in Vienybė and Rotušė Squares in Kaunas city center. A lot of people taking photographs and posing to the photographers are seen in the images of Rotušė Square as well. In the Old Town the main Vilnius street appears very actively used although other spaces appear empty. Recorded activities in Vilnius street include: street dances, concerts, folklore, cafes, fairs; a lot of young people are seen participating in these events. The Putvinskio Street in the proximity of Laisvės Avenue is intensively used by youth. This street is calm compared to other streets in the vicinity of Laisvės Avenue and provides places to sit and rest in the green areas of the slopes. Karaliaus Mindaugo Avenue

\textsuperscript{482} Jan Gehl, \textit{Cities for People}, London: Island Press, 2010.
stretching alongside Nemunas River lacks the diversity of users and activities, a lot of automobiles, accidents with automobiles and policemen are seen in collected images. The premises of railway station look quite empty in the analyzed images; meanwhile the premises of bus station are more intensively used. The territory around railway and bus stations is scarcely represented in the photographs.

Table 3.9. The patterns of contemporary (around 2016) distribution of users and activities in the main public spaces of Kaunas city center
Recreational territories, green areas (Table 3.10). Nemunas Island appears intensively used in the analyzed images. A lot of bicycles, people walking with dogs are recorded in the photographs of the island. Almost no direct link with the water of Nemunas River are recorded in the photographs of this area. The significance of Ąžuolynas park was maintained after regaining the independence. Ąžuolynas park appears in the photographs as very intensively used area. Sports activities are predominant here.

Table 3.10. The patterns of contemporary (around 2016) distribution of users and activities in the selected recreational territories in Kaunas

Historic districts (Table 3.11). The analysis of contemporary images revealed that some historic districts of Kaunas had maintained and developed their specific character. For example, the images of Šančiai reveal the diversity of users and the bottom-up activities for actualization of spaces. Derelict spaces, that are not adapted to the needs of community, are used in these bottom-up activities. A lot of people, including children and teenagers, are seen riding bicycles in the images of Šančiai. Aleksotas historic district is characterized by the diversity of events in the Botanical garden including mass picnic, folklore, battle re-enactment, children festival. Natural territories in the city, Kaunas historic cable-car, Kaunas historic aerodrome are represented in the contemporary images of Aleksotas. Narrow range of activities and users are seen in the accumulated contemporary images of Vilijampolė. Bad physical state of buildings and infrastructure are seen in the photographs. It can be noted that historic Vilijampolė district, especially modernist residential quarters built here in the Soviet period, are scarcely represented in the media images. Petrašiūnai district is characterized by the recreational activities in the beaches in the accumulated images. Photo sessions, bachelorette parties near the Kaunas Sea and official events in Petrašiūnai cemetery are recorded in photographs. The yards of apartment block in Petrašiūnai maintained and decorated by the residents with flowers and decorative installations, are represented in the media images as a bottom-up initiative from local community to embellish their living environment.
Table 3.11. The patterns of contemporary (around 2016) distribution of users and activities in the public spaces of Kaunas historic districts

Modernist districts (Table 3.12). The analysis of contemporary images had revealed that the modernist residential districts are much less represented in the images compared to the Soviet period. The array of activities varies from one district to another, although the public spaces in these districts appear quite empty. For example, in Dainava district narrow array of users and activities is represented in the images. Passersby are mainly seen in the images of modernistic neighbourhoods not the activities concentrated in the precise locations. However new types of activities emerge in these territories: people in the images are seen exercising, walking with the dog. Cat feeding areas were depicted in the images of Kalniečiai. Many publicly accessible spaces are crowded with automobiles in modernist neighbourhoods of Kaunas. The bad condition of the infrastructure in the courtyards is reflected in the images as well. The concentration of activities can be seen in Čečenija Square in Kalniečiai. Meanwhile narrow array of activities and low diversity of users were identified in Savanorių Street, activities of transit character are mainly recorded. In Šilainiai modernist district people are seen gathering near the entrance of the shopping center. The public events held in the territory of the school, in the stadium are recorded in photographs. This demonstrates that school territory is used for community needs. Some peculiar aspects identified in the contemporary images of Šilainiai can be mentioned: the event in the heritage territory of fortifications in Šilainiai, the art performances, the contemporary public art, the roller and skateboard sports. The contrast between the built-up and natural areas is seen in the images of Šilainiai due to location of this district at the fringe of the city.
Summarizing the results of the review of the images of this period, it can be stated that despite in some cases the lower aesthetic quality of public spaces, a human oriented approach in urban planning is gradually becoming established. The results of the study showed that the number and variety of optional activities in cities increased dramatically during this period (especially in the last few years). The seasonality of activities in the city is still strong (there are fewer winter activities than in summer), although the variety of seasonal activities is significantly higher. Life between buildings takes on new forms during this period. These include not only traditional games or leisure activities, but also social events, promotions, local art installations and so on. However, the current modernist city also has a relatively low level of social activity in the yards of modernist apartment buildings. Probably due to lack of infrastructure, in some cases it is even more lacking than in the Soviet period. People prefer to spend their time in well-equipped urban public spaces and urban green spaces. However, despite the slow evolution of contemporary public spaces in Lithuanian cities, it can be stated that in recent decades it has been going on quite consistently and modernist urban structures have been transformed gradually. This is demonstrated by some newly emerging, localized, small-scale structures and objects in public spaces infrastructure, which complement and correct the shortcomings of previously created urban infrastructure. This is a good sign of the sustainable development and self-healing of the urban fabric.
Fig. 3.32a. The change of use of public spaces: Laisvės Avenue in Kaunas (photograph of the Soviet period by A. Pleskačauskas, contemporary photograph by Huriye Armağan Doğan).
Fig. 3.32b. The change of use of public spaces: a. Laisvės Avenue in Kaunas; b. Vienybė Square in Kaunas (photograph of the Soviet period by A. Pleskačiauskas, contemporary photograph by Huriye Armağan Doğan).
The qualitative content analysis methodology and description of qualitative content analysis results

Fig. 3.33a. Slow change of contemporary urban structure in Savanorių Avenue in Kaunas (photograph of the Soviet period by A. Pleskačiauskas, contemporary photograph by Huriye Armağan Doğan).
Fig. 3.33b. Slow change of contemporary urban structure in Savanorių Avenue in Kaunas (photograph of the Soviet period by A. Pleskačiauskas, contemporary photograph by Huriye Armağan Doğan).
Fig. 3.34a. The increasing accumulation of individual automobiles and visual advertisement in public spaces (photograph of the Soviet period by A. Pleskačiauskas, contemporary photograph by Huriye Armağan Doğan).
Fig. 3.34b. The increasing accumulation of individual automobiles and visual advertisement in public spaces (photograph of the Soviet period by A. Pleskačiauskas, contemporary photograph by Huriye Armağan Doğan).
Generalization and identification of “grey spots”

The content analysis method is constantly evolving sociological research method. It has started as a method quantifying qualitative contents in communication studies and had evolved into one of the most important techniques in social sciences. It can deal with a broad spectrum of data from texts and recordings to software and landscapes and can be successfully integrated with other methods in quantitative, qualitative and mixed research. The complex field of urban studies is a potential field for content analysis studies and its' integration with other methods.

The analysis of application cases of content analysis in urban studies has revealed that despite the potential of this method it is still rarely used in this field and its full potential is not employed yet. In the majority of analyzed examples, the content analysis was applied to texts and planning documents. However, the flexibility of the method and its potential of integration with other research techniques revealed by the analysis of literature allows suggesting its’ wider and more creative use in urban studies for both the deeper understanding of the social dimension in urban research and its integration with spatial data.

Despite the fact that the results of public space content analysis were mainly used as basic data for the calculation of a common multimodal model, some insights formulated during the research may reveal qualitative development of modernist public spaces in Lithuanian cities.

The analysis of people and activities based on the principles of J. Gehl’s (2010) theory of cities for people in the public spaces of Kaunas as reflected in the accumulated visual material shows the increasing diversity of both activities and users. From the basic functional activities, like walking, shopping, waiting for transport and mainly the adult users in the inter-war era to the growing array of optional recreational activities in the Soviet period (sitting in cafés, participating in various public events, concerts, resting on benches or in nature) and diversification of users to even larger pluralism of activities and diversity of users today. The growing popularity of optional activities shows the changes in the society and its way of life, which modernist public space has tried to adapt to, focusing on mass gatherings of people, representative spaces of buildings, recreational equipment of public spaces and so on. The analysis of contemporary images demonstrates that the optional recreational activities tend to be concentrated in the central part of the city with modernized traditional urban structure; probably due to human scale of spaces, visual and functional diversity, and more explicit social control. Variety of functions, highlighting of optional activities is characteristic for the modernistic public space. Modernization and technical progress

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483 Marichela Sepe, Planning and Place Identity in the City: Mapping Place Identity, London: Routledge, 2013.
484 Jan Gehl, Cities for People, London: Island Press, 2010.
and changing lifestyle lead to more leisure time spent in public spaces. The progress of this phenomenon is observed in a rather consistent and clear manner in the study of historical material. In modern society, massive (often quite spontaneous) events and various social initiatives are becoming more and more popular. The location of events has expanded considerably, often in very unexpected places. The purpose of the events and the level of involvement of the participants are changing. If events in previous periods often have demonstrative character, in the current public space, more emphasis is placed on the involvement of space users, and initiatives stemming from the society and participants of the event.

The analysis of changes of the urban space and shape in the images of the analyzed periods reveal the sudden transformation of traditional perimetric urban structure and emergence of the modernist free plan with the new typology of public spaces including even yards and courtyards in the residential areas. In Soviet times (especially in the second half of the 20th century), the shape of the city is changing very rapidly, new spatial scales and connections (not always very successful) are formed according theoretical models. The fact that much more spaces and places have been planned for different activities has influenced the expansion of the public space network in the city. Not only was the area of the city growing, but the purpose of its territories also changed. In addition, during the Soviet period, a very clear separation of places assigned to various activities is characteristic. Return to the private ownership after regaining the independence results in the visual and physical fragmentation of spaces reflected in the contemporary images. This may be explained by the desire to bring space back to human scale and privacy, but, on the other hand, leads to the visual and functional fragmentation of the city.

The development of mobility with the emerging infrastructure can be traced in the analyzed images: from the diverse new modes of transportation and the beginning of individual automobile culture in the inter-war era, to the automobile oriented urban design and massive development of public transport and related infrastructure in the Soviet period and the contemporary predominance of the individual automobiles and related congestion problems in the public spaces.

The signs in the analyzed visual material of selected periods regarding safety in public spaces reveal the changes of social control known as “the eyes on the street” and the separation of the private and public spaces related with modernization. The fully present in the urban spaces before modernization, these safety features were abandoned in modernist districts of the Soviet era; however, the analyzed Soviet era images do not reveal the signs of declined safety and the absence of massive barriers and opaque fences in the modernist residential neighborhoods create the image of safety. Contemporary images reveal the emergence of barriers and fences in the privatized previously public yards and courtyards, reflecting the returning separation of private and public spaces both in the modernist neighborhoods and the city center. The intensification of traffic and individual automobile use also create safety issues reflected in the analyzed contemporary media images.
Summarizing the study, it can be said that the impact of modernization on urban areas was gradual. In the Inter-War period, modernization was more evident in the new activities that took place in the traditional urban space. This has led to the phenomenon of modern everyday life such as intense city automobilisation or even beaches in the city center. Although necessary functions are prevalent in public spaces, recreational, optional or other, previously unconventional activities, are increasingly seen in photographs.

During the Soviet period, the diversity of activities and their massiveness has been increasing, especially in recreational areas or in their access. Territorial differentiation of functions inherent in modernism determines that different activities in the city are distributed unevenly. City centers and parks, access to water bodies, quays, public neighbourhood centers and their squares, where the greatest variety of optional activities and space users are concentrated, are distinguished by recreational potential. Meanwhile, in the so-called ‘sleeping districts’, the variety of activities is much poorer, with more or less compulsory or casual character of activities. In these urban areas, there are practically no mass gatherings of people or events, or they are local, limited to the purpose of the space. Residential neighbourhoods of modernistic districts are also less frequently reflected in the studied material. Publicly available sources have rarely captured images of residential and public spaces and users of internal courtyards. Some more information is provided by photographs taken by private persons. However, it seems that due to the limited technical possibilities of the time, as well as the scope of the investigation, the situation reflected in them had to be adjusted by other research methods. For this purpose, sociological studies were selected, which were carried out in Kaunas city territories selected in order to supplement the collected historical visual (photographic) material.

Grey spots. The sociotope methodology is simultaneously applied to study the contemporary functioning and uses of public spaces in Kaunas in the frame of this project and is mutually integrated with the content analysis. For example, the sociotope methodology provides the list of activities or use values of public spaces that are used in content analysis; meanwhile the typologies of public spaces and users are used in developing and adapting to Kaunas context the sociotope methodology tools, such as questionaries and checklists. Moreover, the content analysis of historical images contributes to the selection of the most characteristic urban areas for sociotope mapping, such as a segment of city center, which was strongly 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. This shows that both methodologies – sociological and socio-spatial - can be well integrated in urban research.

For further research, in order to supplement the map of sociotopes and the GIS database, territories in Kaunas city were selected that represent the urban areas most affected by modernization processes in the middle of the 20th century. It is important that they are little changed to this day, and that they are also characterized by the lack
of artifacts (lack of historical photographs and other information needed for the study). The study was based on the assumption that, given the existing infrastructure, these spaces could have been used similarly in the Soviet era. For the further research based on the sociotope methodology the following spaces of Kaunas city were selected:
- inner courtyards of perimeter building blocks in the central part of Kaunas;
- the yards of free plan residential blocks of flats in Kalniečiai modernist district;
- the yards of free plan and other public spaces in Šilainiai modernist district.

It can be concluded that the content analysis method is a flexible tool that can be integrated both with socio-spatial and spatial, quantitative and qualitative research methods and reinforce the significant social dimension in spatial analysis of cities and in urban studies in general.