Public Spaces of Kaunas from the Inter-War Period to Contemporary: Content Analysis

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Abstract – This research demonstrates the potential of content analysis method in urban research in the context of the study of modernization of Lithuanian cities during the Soviet period and its influence on contemporary urbanism. The content analysis of visual material (photographs, postcards and other images) is integrated as one of the methods of the study, allowing to identify the social phenomena in public spaces and their changes throughout the period from the inter-war era to contemporary. The descriptive analysis presented in this article demonstrates changes in people and activities, in scale and shape of public spaces, mobility and safety.

Keywords – Content analysis, Kaunas, modernization, public spaces.

INTRODUCTION

The content analysis method has originated in the field of communication studies and was introduced to a wider research community in B. Berelson’s book “Content analysis in Communication Research” [1]. Webster’s Dictionary of the English Language has listed this term since 1961 [2]. Although the method was initially introduced as quantitative, it continues to evolve, reflects the ongoing processes in social sciences and can currently be applied for both quantitative and qualitative analysis of various forms of communication, including texts, photographs and maps, audio and video recordings, software, social media contents, etc. The field of application of content analysis has expanded as well, currently including not only classical social sciences, but also psychology, history, education research, political sciences, etc. [2]–[4]. Literature demonstrates the potential of content analysis in urban studies as well. There can be historical, spatial, historical-spatial, social-spatial, theoretical, practical, qualitative, and quantitative approaches in this field and it is evident, that the majority of these studies 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. Currently content analysis is applied for the analysis of planning documents [4], maps, interviews and surveys data [6], [7], photographs [8], etc., and integrated with other methods, including spatial analysis [9] in the context of urban research.

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 research aims to study the modernization of Kaunas using the content analysis method.

In order to reach this aim, the content analysis of visual material was applied to study the changes of form, scale and uses of public spaces in Kaunas city during the period from the inter-war era to contemporary days, which reflect the conditions before Soviet urbanization, modernization and the impact on urban structure and social life both in modernist neighborhoods and in the historic districts affected by modernization.

I. METHODOLOGY

The analysis of modernist Soviet urbanism in Lithuania was started by art historians of senior generation in their works published in various texts. For example, a general overview of the phenomenon was presented by Prof. A. Miskinis [10]. Separate urban and architectural complexes were analyzed by J. Minkevičius [11] and other researchers of this generation.

The above-mentioned studies relied on classical art and architecture history approaches, focusing on issues of architectural urban composition, and included only the most valuable objects from the architectural point of view. The new generation of art historians (for example, M. Drėmaite et al. [12]) is investigating the Soviet-era architecture in a broader cultural context based on the socio-historical and theory of arts approaches, with some focus on urbanism.

The art historians with architectural education had studied both the patterns of individual cities and the development of certain city spaces created in the Soviet time (for example, the research of public spaces by T. Grunskis and M. Mankus [13]). S. Moazurinaite [14] studied the functional mutations in the historical part of Vilnius during the Soviet period, although without using mathematical apparatus. K. Zaleckis and I. Matijosaitiene [15] had analyzed some modernist parts of Lithuanian cities and the Soviet-era mutations in historical urban nuclei.
The study of modernization of Lithuanian cities during the Soviet period and its influence on contemporary urbanism was started in 2017 [16]. The content analysis was intended as one of the methods of the study allowing to identify the social phenomena in public spaces, their links and changes throughout the period under analysis based on the example of Kaunas and using a volume of accumulated historical and contemporary professional and amateur photographs, postcards, images from newspapers, books and other media that constitute the visual evidence of activities, functions, and users in public spaces of different types. Photos were selected randomly to capture the widest variety of types of public spaces and activities in different city areas (at least one case of activity in a certain type of space). Failure to find evidence of activity means that such activities are not considered to be carried out in this type of space. The analysis of literature demonstrates that studies using content analysis usually involve a series of steps [2], [17], for example, formulation of the research question or objectives, selection of communication content and sample, selection of units of analysis, development of coding categories, coding of the material, analyses and interpretation of results.

Development of coding categories is a very important stage in the process of content analysis. 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. Consequently, the following three types of categories were distinguished:

• The typology of users was formulated after the analysis of literature [18] and general overview of accumulated material and includes adults, seniors, pre-school age children, schoolchildren, teenagers, youth, parents or child-carers with children, people with disabilities, tourists and uniformed officers.

• Typology of public spaces according to their form and function includes streets, other linear elements, urban squares, representative spaces in front of buildings, parks and gardens, natural and semi-natural territories in the city, cemeteries, outdoor sport facilities [19], publicly accessible spaces around buildings and publicly accessible yards in modernist residential blocks, as well as accessible inner courtyards of perimetric urban structure.

• 21 types of activities in public spaces based on the socio-topo methodology – bathing, swimming, observing flowers, ball games, shipping, events, fishing, relaxation in the greenery, folklore, games and sports, exercise, meetings, relaxation in natural environment, picnic, walking, children’s games or playing, observing the panorama, recreation near the water, resting or sitting, shopping, gardening, other cultural activities) [20], and 11 additional uses – riding a horse, people doing different jobs, smoking, waiting for transport at public transport stops, taking a photo or posing for a photographer, riding a bike, sitting in a café, walking the dog, observing the shop windows, bird feeding, talking on a payphone (and waiting in the queue at the payphone), were identified from the general overview of accumulated material.

234 images representing Kaunas during the Inter-War era around 1939 (collected from the newspapers of that period, archives and private collections), 909 photographs representing the modernized city of the Soviet period around the 1980s and 1990s (collected from books, newspapers and other media sources of that period and private collections), and 713 images (collected from various contemporary media sources and social networks) representing the city around 2016, are currently accumulated in an online database. Distinguishing categories were identified in the images under analysis as well as their precise location, season of the year and other additional features. During the period under analysis the names of some streets and squares had changed several times, thus in the description of the results the contemporary names are used.

The approach to urban environment as the environment for people by J. Gehl [21] was used for the categorization and presentation of content analysis results. J. Gehl’s [21] 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 of uses and activities in 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 [21] were applied as they reflect user-experiences of public urban spaces.

The images that are used as illustrations do not reflect the entire spectrum of the images analyzed in the process of research, some of the analyzed images could not be published due to the copyright issues. Images used in the third subsection were made by one of the authors for the illustration of the phenomena, although the conclusions were drawn from the analysis of images, presented in media and other sources.

II. RESULTS

A. Inter-War Period

People and activities. The users of very different age groups can be observed in the analyzed photographs of inter-war era; however, the middle-aged and elderly people are seen as dominant, with relatively few young people and children visible in public spaces. The city’s central part is used much more intensively compared with peripheral urban areas. The variety of activities is relatively small. The necessary or functional activities are predominant in the images of inter-war period. People in the photographs are walking, sitting, using transport or waiting for transport, shopping. Military and worker’s parades, public ceremonies are reflected in the photographs (Fig. 2). Among the more interesting activities captured in the images of this era, ice cream selling and water sports activities near Nemunas river island can be mentioned (Fig. 1). Several pictures show that during Inter-War peri-

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Fig. 1. The users and activities in public spaces in inter-war era: festive procession in the central streets of Kaunas in 1937 [22].

Fig. 2. A view from the yacht club water sports event on Nemunas island in 1938 [23].

Fig. 3. Typical street space of the inter-war Kaunas: Laisves Avenue around 1935 [24].

Fig. 4. New modern public transport and other transport facilities: Kaunas bus station in 1937 [26].

Fig. 5. Aleksotas cable car in 1937 [27]; Fig. 6. Kauko city stairs [28];

Fig. 7. View from Kaunas pier. The steamboat goes to Kulautuva [29].

Fig. 8. View of the current Vienybės Square was a very popular place for young parents to walk with strollers. The main areas of concentration of users were Laisves Avenue and other streets (K. Donelaičio, Vytauto) of central city. The Old Town appears in the photos less frequently (except the Town Hall Square). There is a general tendency for users to be distributed rather evenly throughout the city, with a very clearly defined concentration points.

Scale and shape. The signs of modernism of the inter-war Kaunas are more visible in the form of new architecture, meanwhile the urban structure of the city has remained quite traditional (Fig. 3); the “city at eye level” was fully present in public spaces of Kaunas before modernization. Public life is concentrated in the streets and squares; the scale of buildings is rather small, 2–4 floors high. On the ground floors of the buildings, there can be seen many small shops available directly from the street. The typology of public spaces is characteristic to traditional urban planning. There are quite a lot of natural greenery fragments in the city’s spaces.

Mobility. The streets of this period can be viewed as shared spaces. Various modes of mobility from horses to pedestrians and automobiles share the same spaces (Fig. 3). The pedestrian mobility is predominant in this period. The number of individual automobiles was very low: 705 cars including taxis for 108196 inhabitants were present in Kaunas in 1937 [25]. Although the automobiles appear in numerous photographs, the horse traffic is dominant. 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 (Figs. 4–7).

The new modern urban solution, improving communication between city districts, was the construction of city stairs on the slopes of the Nemunas river valley (Fig. 7) and the development of two cable cars (Fig. 5). As seen from the photographs, these stairs were quite intensively used.
Safety. Human spatial scale helps ensuring “the eyes on the street” 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 is favorable for safety ensured by social control.

Although the permanent flooding of the Nemunas river in the central part of the city was a threat to safety (Figs. 8, 9), the overall picture of urban spaces gives the impression of security. Such elements of public space security enhancement as street lighting, traffic controllers, etc. are noted.

B. Soviet Period

People and activities. Analyzing the photographs, significantly higher number of users can be identified in the streets and public spaces, especially during the late Soviet period. The age of the users is also very diverse (Figs. 10, 11). More young people and children in public spaces are seen. Although the concentration of visitors is considerably higher in the central part of the city (the spaces of peripheral urban areas are relatively empty), users of different age categories in public spaces are quite evenly distributed (people of different ages are equally frequent in both central and peripheral parts of the city).

The proportion of optional or recreational activities 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 (Figs. 12, 13). Massive partially compulsory recreational activities – parades, processions and mass events in public spaces – are observed in the photographs as well.

Analyzing the material of this period, almost all the activities distinguished in the methodology were identified. The most commonly recorded activities are walks, meetings, shopping and sitting on benches. Based on these most popular activities, several centers of users’ concentration can be distinguished, such as Laisves Avenue, Vilniaus Street after the reconstruction, the area of the Kaunas castle, the bus and rail station district, all centers of city’s modernist districts, market places. Fountains in the city
center and modernist districts centers become the clear point of attraction of the area, with the most frequent gathering of users. Another phenomenon observed in the images of this period — informal gatherings of people at the entrances to the public and multi-apartment residential buildings, which became a kind of informal public spaces (Figs. 14, 15). This phenomenon illustrates the social need for “space as a meeting place”, which corresponds to the personal and social space scale.

In addition to the usual recreational activities in the public areas of the city, some of the most interesting additional activities were recorded, such as 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 Town Hall Square appear very frequently in the photographs.

Scale and shape. 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 Soviet period and they became more coherent and monotonous (Figs. 16, 17).

This is especially visible in the newly developed modernist residential areas with the new typology of public spaces including 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 appear scarcely used, sometimes empty and were used by people only on 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 development of large scale, lengthy and monotonous pedestrian routes is reflected in the analyzed images as well (Fig. 18). “The city at eye level” was totally ignored in the modernist urban design of the Soviet period; however, the professional artworks, mainly sculptures, appear in the selected public spaces (Figs. 19, 20). “The city at eye level” effect has even been diminished in the traditional pedestrian spaces, such as Laisves Avenue, where signboards of the shops were set above the eye level and the shop windows were quite empty.
**Mobility.** The analyzed images demonstrate the increasing importance of public transport both in modernized and modernist urban areas. Due to the rarely used private vehicles (quite few of them are seen on the streets in the analyzed images) and very popular public transport, which was very important for communication in a territorially expanding city, the analyzed photos show a significant accumulation of users at public transport stops. 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 neighborhoods (Figs. 21, 22). 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.

The modernist urban planning devoted a lot of attention to the automobile and the separation of cars and pedestrians, and the “city of cars” had replaced the “city for people”; this is well reflected in the analyzed material. The photographs show large open spaces for parking of individual automobiles; however, in photographs these spaces often appear semi or almost empty (Figs. 23, 24). During the Soviet period, the use of linear elements of public spaces (pedestrian walkways, city stairs, bridges, etc.) is noticeably increasing. They are often captured in photos.

**Safety.** The clear separation of public and private spaces was eliminated during the Soviet era. Inner courtyards of perimetric urban blocks became public and the modernist free plan of new neighborhoods was contradictory to these traditional subdivisions. “The eyes on the street” 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.

Nevertheless, largely open modernist public spaces and spaces around buildings in modernist residential areas without limi-
iting barriers in the images of the Soviet era provide an image of accessibility and safety (Figs. 25, 26). It is interesting that in the Soviet-era photographs the presence of uniformed officers in public spaces is higher. They appear much more often in the analyzed photographs of the Soviet era than in other periods.

C. Post-Soviet Period

People and activities. The evident increase in optional or recreational activities can be seen in contemporary photographs. 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) and water entertainment (kayaking, diving) is noticeable (Figs. 27, 28). The improvement of the active recreation infrastructure and its use are evident as well. The media sources present quite a lot of images of mass events of active recreation and sports taking place in the city’s public spaces.

Optional activities can be seen both in the modernized inner urban areas and in modernistic neighborhoods. However, the highest concentration of optional activities (street art, performances, photo sessions, etc.) is visible in historic urban areas; however, some signs of similar activities are also visible in the modernist districts as well. Very often recorded activity in modern residential neighborhoods, which was almost impossible to identify in previous pictures of the inter-war period and Soviet times, is walking the dog. May be that is the result of a change in the culture of pet care.

Scale and shape. The diversification of scales and visual fragmentation is evident in the photographs of 2016. The “city at eye level” is visible again although in a more visually heterogeneous way. The emerging visual advertisement is evident. Even though professional public art was promoted in the Soviet period, contemporary images demonstrate the evident lack of visual accents at eye level in the modernist residential neighborhoods. This lack
is compensated by the attempts of the residents themselves to embellish their living environment and by the emerging street art culture in Kaunas, both legal and illegal, well reflected in the media images (Figs. 29, 30). The new feature in the public spaces of modernistic neighborhoods appearing as a result of optional activities are both designated and illegal homeless cat feeding areas (Figs. 31, 32).

**Mobility.** Although the city’s public transport infrastructure is very intensively used, the increase in the use of individual automobile is evident in the analyzed images (Figs. 33, 34). 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 and living environment or shopping areas, but also at the access to recreational territories or objects. Overcrowded parking becomes a sign of intensive use of public services.

**Safety.** The analysis of visual features of public spaces does not reveal any changes of the overall level of security. Physical protection against crime (metal grating, physical enclosures) is relatively rare in the contemporary city judging from the explored photographs. However, the observation cameras are located throughout the city; a new tendency to separate the private spaces not only of individual dwelling houses but also of apartment buildings with physical barriers (fences) is seen in the modernist districts. The increase in the number of individual automobiles diminishes the safety of pedestrians in the streets and yards and the spaces between buildings in the modernist neighborhoods as well.

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.

**Conclusion**

The content analysis of the images proved to be a beneficial complementary tool in the complex analysis of modernization of Lithuanian cities during the Soviet period and social and spatial phenomena related to it. The general overview and more detailed analysis of accumulated images of the second largest Lithuanian city Kaunas of the inter-war period, the Soviet period, and contemporary images has revealed specific trends related to people and activities in the city’s public spaces, scale and shape of urban spaces, mobility, and safety.
The analysis of people and activities based on the principles of J. Gehl’s [21] theory of cities for people in the public spaces of Kaunas, as reflected in the accumulated visual material, shows an 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 a 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 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.

The analysis of changes of the urban scale and shape in the images of the analyzed periods reveals a sudden transformation of traditional perimetric urban structure and emergence of modernist free plan with a new typology of public spaces, including even yards and courtyards in residential areas. Return to private ownership after regaining the independence results in visual and physical fragmentation of spaces reflected in the contemporary images.

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 individual automobiles and related congestion problems in 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 private and public spaces related to modernization. Fully present in 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 creates safety issues reflected in the analyzed contemporary media images.

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