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Urban Soundscape as A Medium of Communication
Bir İletişim Aracı Olarak Kentsel Ses Manzarası

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Abstract

The article highlights selected themes related to the urban soundscape as a meaningful system of messages. It serves to introduce the topic of the urban soundscape (audiosphere) and its research, primarily from a social science perspective referring to so-called sensuous urbanism and some classic researchers such as R. Murray Schafer and Kevin Lynch. Than it refers to the pilot study of social aspects of the urban audiosphere of Bialystok (Poland), conducted by researchers from the Institute of Sociology at the University of Bialystok in years 2022-2023. The aforementioned research tested the possibilities of using sound walks as a method. The article elaborates on advantages and disadvantages of such method combined with more or less structured ways of evaluation of soundscape. Finally, the article focuses on significant differences in individual interpretations of the urban soundscape among the participants of the sound walks and elaborates on the role of silence and noise as meaningful categories.

Keywords: Audiosphere, Soundscape, Urban Studies, Sound Walk, Sensuous Urbanism.

Öz

Çalışmada anlamlı bir mesaj sistemi olarak kentsel ses ortamıyla ilgili seçilmiş temalar incelenmektedir. Kentsel ses manzarasına ilişkin (odyosfer) konuların ve araştırmaların amacı, öncelikle, duyusal şehircilik olarak tariflenen ve R. Murray Schafer ve Kevin Lynch gibi bazı klasik araştırmacılara atıfta bulunan bir sosyal bilim perspektifinden izah edilmesi olarak tanımlanabilir. Bialystok Üniversitesi Sosyoloji Enstitüsü'nden araştırmacılar tarafından 2022-2023 yıllarında yürütülen, Bialystok'un (Polonya) kentsel odyosferinin sosyal yönlerine ilişkin öncü çalışmalar akademik çalışmalarda yer almaktadır. Araştırma, ses yürüyüşlerini bir araştırma yöntemi olarak kullanılma olasılıklarını deneyimlemektedir. Makale, ses manzarasının az ya da çok yapılandırılmış yollarıyla birlikte bu tür bir yöntemin avantajlarını ve dezavantajlarını detaylı bir şekilde ele almaktadır. Çalışma, ses yürüyüşlerine katılanlar arasında kentsel ses manzarasının bireysel yorumlarındaki önemli farklılıklara odaklanmakta ve anlamlı kategoriler olarak sessizlik ve gürültünün rolünü incelemektedir.

Anahtar Kelimeler: Audiosfer, Ses Ortamı, Kentsel Çalışmalar, Sesli Yürüyüş, Duyusal Şehircilik.

Introduction

Since the mid-twentieth century, there have been several turns in the humanities that have opened reflection on culture to new themes and further senses. The 1960s and 1970s saw the emergence of the linguistic turn, the 1980s the pictorial turn and memory turn, the next decade the corporeal turn. All these areas of interest significantly changed the idea of human place within the world. On the other hand, hearing and the auditory sphere of human reality remained a relatively niche area, despite the development of multidisciplinary research on the subject since at least 1960s (Radicchi, 2018).

In this article I would like to highlight selected themes related to the urban soundscape as a meaningful system of messages. One of the inspirations for the text is a story commonly known to the residents of Bialystok (Poland), that is, the city where I work. Ludwik Zamenhof, the creator of the artificial language known as Esperanto was born there. The story tells that the idea of creating a new language came to the young Zamenhof's mind when he was spending time in the main square of his hometown. There, in the second half of the 19th century, people could be heard speaking Polish, Yiddish, Russian, German and other languages on a daily basis. From the linguistic cacophony of different ethnic groups, the idea of a common language was born.

I cite this story because at least two important insights can be drawn from it. First, the surrounding soundscape is one of the elements through which we interpret urban space, give it meanings, construct its identity. Specific sounds can define specific places, communicate about its functions, meaning, history. Secondly, soundscapes change not only in space - for example, between areas of the city with different functionality or type of development - but also over time. Contemporary residents of Bialystok will not hear the languages easily recognized by the young Zamenhof. Today, Polish is the dominant language in the city, occasionally interspersed with English spoken by tourists or foreign students, and for some time also with the conversations of refugees from Ukraine who have settled in the city.

Taking this into consideration, in this article I will try to address two issues. First, I will draw attention to the possible nature of social research on urban soundscapes as a significant layer of residents' experience and a medium for communicating meanings. Second, I will refer to my own research experience of a pilot and exploratory nature, conducted in Bialystok primarily using the sound walk method.

Method

In the first part of the text, I will rely primarily on a review of the literature. It serves to introduce the topic of the urban soundscape (audiosphere) and its research, primarily from a social science perspective. I will highlight key concepts and related theories and research perspectives. The second part of the article refers to the pilot study of social aspects of the urban audiosphere of Bialystok, conducted by researchers from the Institute of Sociology at the University of Bialystok in years 2022-2023. In addition to the author of the text, these included researchers Dr. Urszula Abłażewicz-Górnicka and Dr. Katarzyna Niziołek, field recorder Marcin Dymiter and a group of interested individuals, including sociology students. A detailed description of the method will be presented later in the text.

Results

Production of sounds is one of the pillars of human social and cultural activity. After all, daily interactions through verbal language are the basis of how most people function. In this text, however, I am more interested in the sounds that surround people in the places where they live, and especially in cities. Cities are the living environments that generate the most sounds, both in terms of their intensity (urban noise) and the range of sources and meanings they produce.

Canadian composer, theorist and sound environmentalist R. Murray Schafer wrote about culturally significant sounds that form so-called acoustic communities (Schafer 1977). Examples of these include the sounds of church bells, in former times often regulating the daily rhythm of the people who were able to hear them. A similar role in Islamic culture was and is played, for example, by the muezzin's calls to prayer, repeated at fixed times. In modern cities, there are a number of sounds that are intended to carry specific meanings for residents which are based on socially produced conventions. These are, for instance, the sounds of traffic lights, or the sound signals of emergency vehicles, such as ambulances or fire trucks. Most often, however, one can hear sounds that are simply a side effect of human activity. Car traffic can be placed in this category, as well as the sounds of industrial plants, the bustle of people, and the typical sounds of nature in the city, such as the sound of the wind in the trees or the sounds made by birds.

On the other hand, it is equally clear that hearing is not the only sense for perceiving and interpreting urban space, and in most cases not the most important either. In social studies of urban space, attention is more often paid to visual aspects (the city's iconosphere). After all, when hearing sounds, we tend to locate or imagine their source, so it is impossible to completely ignore that aspect in this article. Hence, it can be assumed that the most interesting and comprehensive approach to research in the urban environment is the so-called sensuous urbanism, understood as a set of reflections and practices referring to the multisensory experience of the city (Radicchi, 2018).

It is worth noting that references to other senses can be found even in the most basic terms used in social studies of the audiosphere, relevant also from the perspective of research described below. The first and most important term is soundscape, popularized by R. Murray Shafer (1977), which can be understood as all sounds in a given acoustic environment subjected to interpretation by people present in that environment. The term soundscape brings associations with its visual counterpart, which is landscape. It is worth noting that landscape is most often associated with the category of space shaped by man or considered by a human observer in aesthetic terms (Anthrop, 2018), and thus, like soundscape, is a manifestation of human culture that carries a specific messages, a potential load of meanings.

In addition, at least two terms with distinct spatial connotations were important in the research described below. The first is the sound enclave, which I understood as a limited space characterized by a relatively permanent soundscape that is different from its surroundings and potentially significant. In other words, it could be understand as a spatial dimension of acoustic community. Due to the fact that in many cases, it is difficult to clearly and precisely delineate the boundaries of enclaves in urban space, another useful concept drawn from spatial imagination was sound borderland. That can be understood - analogous to the understanding of the concept of borderlands in the social

sciences (Sadowski, 2009) - as space of contact (audibility) of sounds with significantly different sources, nature and meanings attributed to them by listeners.

Acknowledging that the study of the urban soundscape can be embedded in the broader trend of sensuous urbanism, it is worth noting its relevant inspirations and themes, which are also important for the research discussed in this text. To this end, it is worth turning to the classic research of Kevin Lynch. He is primarily linked to reflections on the visual layer of being in the city, but his research can be applied more broadly. In his classic work *The image of the city* (Lynch, 1960), he paid attention to the process by which residents interpret and understand city space. As he argued, people tend to understand space through mental maps they create using repetitive, universal elements (paths, edges, districts, nodes, landmarks). Thus, the legibility of a city is linked to certain standard, intersubjective reference points. It can be assumed that the clarity of the urban soundscape is based on analogous elements, i.e., on the sound signals that can be received and interpreted, which allow listeners to orient themselves in the space and respond to it. In this context, the audiosphere can indicate paths (e.g., traffic), edges (echoes bouncing off buildings), neighborhoods (characteristic sounds of households, factories, entertainment venues), nodes (signaling at intersections) or landmarks (e.g., the sound of a bugle call from a city hall tower, church bells). Of course, creating sound-based mental maps is more difficult, both because most people are less prepared to consciously perceive their surroundings through sounds, and because of the nature of urban soundscapes, from which it is often difficult to pick out specific sounds and their sources. In urban soundscapes rather a uniform noise (the so-called drone) tends to dominate.

This observation refers us to the lo-fi and hi-fi soundscape categories created by R. Murray Schafer (2004). In simple terms, in the latter environment it is possible to capture and identify individual sounds and their sources, while in the former it is dominated by the generalized noise, ambience that fills a given environment. From this point of view, hi-fi soundscapes would be conducive to the sonic communication of a city and its inhabitants, but in practice the sounds of a city are very often lo-fi, dominated by road transportation noise. The concepts of lo-fi and hi-fi soundscapes are also important because of their relationship to the city space (Radicchi, 2018). While in a hi-fi environment the audibility and recognition of sound sources helps to place them in space and mark the distances between them, in a lo-fi environment the listener is unable to do this. He only encounters the pervasive presence of ambience sound, which closes the possibility of a multi-sensory interpretation of the world. In other words, a person placed in a lo-fi sound environment not only has difficulties interpreting the meanings of individual sounds, but his ability to accurately interpret the visible is also diminished as sounds become disconnected from their sources.

Returning to Lynch's classic research, it should be added that his experimental approach, a focus on field research and interaction with local residents, is still inspiring. This kind of approach is, of course, typical for social research, although not necessarily easy to implement in the case of soundscape research. It is worth noting in this context, an interesting multidisciplinary project of researchers focused in Wroclaw (Poland), which resulted in the book *Audiosfera Wrocławia* (Losiak, Tańczuk, 2014). One of the most important issues bothering the researchers was the specificity of Wroclaw's audiosphere and whether the soundscape can affect the identity of the city and its inhabitants. The book is clearly divided into three parts. The first is based on the researchers' field recordings and interpretations of selected sonic aspects of the city (e.g. fountains, bells, green areas).

The second part gives more of a voice to the city's residents. It is based primarily on material collected during qualitative interviews with residents. They elaborated on their sound experiences, but not necessarily in the field context, but rather based on their own memory and in isolation from the possibility of conducting their own field recordings. Finally, the third section relates to the memory of the city's past sounds. It is - necessarily - also based on qualitative interviews with long-time residents of the city and is clearly less structured than the research conducted in the second part. The summary of the research methodology in this book is interesting in that, on the one hand, it shows the wide range of methods possible for the social aspects of audiosphere research, while on the other hand exposing their weaknesses and limitations. Research based on field recordings may require technical and theoretical competence unavailable to residents. Classic social science methods such as interviews or questionnaires may prove too artificial or insufficient to fully understand the meanings that city residents read from the soundscape around them. Hence, in the pilot study discussed below, the inspiration for the work of Kevin Lynch lies, among other things, in the choice of the research walk as the main research method and the ongoing reflection on how city residents can be included in this type of research.

Before the Bialystok research would described in more detail, one more element should be noted. It is an element that unites the work of Kevin Lynch, his student - the pioneer of soundscape research - Michael Southworth (1969), R. Murray Schafer and many others. They viewed the space or soundscape of the city in a normative way, attempting not only to describe the surrounding urban fabric from a particular perspective, but at the same time to pay attention to how it could be made more legible, welcoming and healthy for the community. The study described below does not have such ambitions, primarily due to its exploratory and pilot nature. However, it seems that in the long run this research project could also take on such a character, directing attention to the quality of the sound messages coming from the city to its residents and the possibilities for improving them.

While preparing to work with sound walks in Bialystok, the researchers developed a number of research questions, two of which are important from the perspective of this article. One of them, a general one, refers to the assumptions of the *Wroclaw Audiosphere* project and concerns how do the participants of the walk hear and interpret the sounds of the city? The second question referred to the usefulness of the sound walk as a research method. Namely, it concerned the extent to which individual impressions of the sound walk can be compared with each other, the extent to which conclusions can be drawn on a group level, and finally, what tools or organizational arrangements are particularly conducive to this? In this regard, it was determined that some participants during the walks would take qualitative field notes, while others would rely on more standardized ways of evaluating the sounds using appropriate mobile apps. Both of these approaches will be described below, but before that, the general assumptions of the chosen route of the walks will be presented.

Given that the planned sound walks were to be pilot in nature, the researchers wanted their route to be as random as possible, rather than deliberately selected. The main idea was to avoid well-known, well-trodden paths for the participants, and to increase the likelihood of passing through areas of the city with different functionality, history, or development density. This decision brought the plan for the walks closer to the transect walk method (Okoko, Prempeh, 2023). It was decided that they would follow a path that coincided as much as possible with a radius determined between an arbitrarily chosen

point in the city center and its periphery. In order to determine the appropriate path, a circle divided into 360 degrees was superimposed on the city plan. Then, using a random number generator, three numbers ranging from 1 to 360 were selected to determine potential walking directions. Of these, the researchers arbitrarily selected one that most closely met the criteria mentioned above, covering the most diverse development zones. The final walking route was created by matching the general direction determined by the city's radius with the tracts that could be walked. In the broadest terms, it ran from the city center (encompassing both the busier, office-oriented and entertainment-oriented zones excluded from vehicular traffic), through residential neighborhoods with predominantly multifamily housing, industrial and post-industrial areas, residential neighborhoods with predominantly single-family housing and, finally, former rural areas incorporated into the city limits in the 1970s.

Several walks were conducted along this route. The first was preparatory in nature, with the aim of checking the physical possibility of walking the designated route, estimating the potential length of the walk (which eventually amounted to about three hours), determining stopping points, etc. The second walk was conducted with the largest and most diverse group (sociologists, field recorder, photographer, students, interested parties). This was also the time when most of the qualitative and quantitative research notes described below were produced, as well as an audio recording of the entire walk. Subsequent walks were conducted with a narrower group of researchers, who covered the entire route or selected sections of it in order to deepen or verify the knowledge gained earlier.

The qualitative evaluation of the walk was based on low-structured dispositions, asking general questions (e.g., How do you hear the city? How do you listen to the city?) and recalling key concepts, such as soundscape, sound enclave, sound borderlands etc. In addition to the general guidelines, participants had complete freedom in terms of the form of the notes and their comprehensiveness. They were able to write down notes while walking, or by stopping at any location. What's more, the walking route was divided in advance into sections, between which short breaks were planned, among other things, for completing notes or writing down more general conclusions.

As expected, the collected notes varied greatly in terms of form, while in terms of content they tended to focus on the categories of noise and silence. Participants in the study were quite unanimous in noting that noise is the natural sound of the city. On the one hand noise defines it, while on the other hand it is so generic that it is difficult to extract from it any information more specific than the time of day or week on which traffic volume depends. Thus, these were observations referring to Schafer's category of lo-fi sound environment. Noise in the city is, in the opinion of most participants, non-negotiable, but at the same time usually described as tiring, annoying, negatively affecting well-being. In contrast, experiencing relative silence, or situations in which the sounds of nature became dominant in the audiosphere, were usually described in positive terms, as soothing, bringing relief, being a pleasant surprise. It is noteworthy that such descriptions prevailed even in situations where the sounds of nature, such as close flocks of noisy birds, approached the average level of traffic noise. Notes, unlike mechanical sound recorders, tended not to record this fact. This suggests that positively valued sounds of natural origin are associated with silence, while at the same time often being described as non-urban. Participants, for example, wrote about feeling like they were in the countryside or at grandma's house.

Aspects of experiencing the city in terms of silence and noise, and the associations that arose in the face of this, were reproducible enough to allow for comparisons and inferences at the group level. It should be said, however, that beyond this, the notes from the walks were exceptionally varied material, suggesting that the interpretation of the city's soundscape is a highly individual matter, and, moreover, may depend to a large extent on a number of factors and competencies that are difficult or impossible to control, such as the general condition of the hearing apparatus, experience in active listening, or linguistic competence. The latter, in particular, seem crucial from a social research point of view, since the notes from the walks showed that the same sounds can be described by different people in various ways, which can probably be linked to differences in cultural capital.

The low-structured field notes thus provided interesting qualitative insights into experiencing the city's soundscape. As expected, however, it was not an easy material for creating comparisons and generalizing conclusions. Hence, in parallel, tools were sought to make the experience and interpretation of the audiosphere, and its subsequent evaluation and communication about it, more standardized. In context of the non-obvious route of the sound walk and its length, it would have been difficult to expect the effectiveness of the paper questionnaires prepared in advance. Hence, the choice was made to use mobile apps as a research tool. Before the walks, researchers analyzed the apps for the following criteria: 1) accessibility of the app (Is it free? Can it be used on different devices? Can it be operated in Polish?); 2) the ability to record sounds; 3) the ability to geolocate; 4) the ability to evaluate the sounds in a standardized way. The first criterion was the most problematic, as it turned out that most of the apps meeting the other conditions are available in English, which could be a barrier if the researchers wanted to use the tool to work with a wide range of residents.

Of the available apps, two were selected for testing during the sound walk. The first was the Hush City app, developed by Antonella Radicchi, the aforementioned soundscape researcher. The official website states that Hush City is "a free, citizen science mobile app, which empowers people to identify and assess quiet areas in cities as to create an open access, web-based map of quiet areas, with the potential of orientating plans and policies for healthier living, in response to issues framed by European environmental policies (e.g. the EC END 49/2002)." (Hush City Lab, n.d.).

As one can see, the app's developers primarily write about the soundscape in the context of silence, valuing it positively. Meanwhile, in practice the tool can be used to evaluate sounds in a variety of ways. Any significant sound heard by a person equipped with the app can be recorded in the form of a thirty-second sample, which can then be combined with labeling on a map, a photograph of the sound source or surroundings, and a relatively elaborate evaluation questionnaire addressing such issues as the source of the sound, its nature, or the listener's attitudes toward what he or she hears. From the perspective of social scientists, questions about the extent to which the sounds in question encourage social interaction or conversation, or whether human voices are heard in the area, seem particularly interesting. The question of the audibility of human voices refers at the same time to the work of R. Murray Schafer, who identified the audibility of the human voice as a fundamental element in measuring the acoustic environment (Radicchi, 2018).

The Hush Cities application was developed to record sounds at specific locations (points), so at the same time, the Noise Capture application was chosen as the research tool

that allowed continuous recording of the soundscape. It was developed by researchers affiliated with École Centrale de Nantes and Université Bretagne Sud (Noise-Planet - NoiseCapture, n.d.). As the name implies, this application, too, primarily refers to the intensity of sound, that is, the contrast between noise and silence. With the app sound intensity could be recorded along the entire route of the walk, creating a real-time noise map. The application also allows to analyze the spectrogram of the audiosphere, which in practice can help analyze and evaluate sounds of similar intensity but different nature (e.g., traffic, loud bird sounds, machine sounds in industrial plants), and evaluate sounds heard at specific points based on a simple survey. The survey is much less complicated than Hush City's, allowing users to rate sounds on a pleasant-unpleasant scale and the type of sound source. The survey can also be accompanied by a photograph of the environment and open notes.

The use of both apps by participants in the research sound walks made it possible to identify their main advantages and disadvantages as tools for studying social aspects of the urban soundscape. The advantages include, first, the ability to combine sound recording, geolocation and evaluation of the sound environment. In this way, those taking part in the study can link sound impressions to specific locations in the space and the city's iconosphere. Second, the evaluation of sounds using questionnaires makes it possible to compare in a standardized way how the sounds of the city are interpreted by residents, whether the meanings associated with the audiosphere are intersubjectively comparable and clear. Third, the advantage of using applications is the relative ease of use, that is, both recording the data and then exporting it to databases, analysis and interpretation. These tools also have significant limitations, though. First, it is worth noting that despite the aforementioned ease of use, the apps require certain digital competencies and English language skills, which means that training in their use would be required if the tools were to be used among larger groups, such as residents of a particular neighborhood. Second, the answers proposed by the apps in questionnaires can be inadequate - as in Noise Capture, where the questions only ask about the type of sound source and the pleasant-unpleasant category - or ambiguous or disjointed. Such is the case with Hush City, if only for the unclear boundaries between the categories of human movement/ non-motorized transport or meaningful/informative. Finally, both of the applications use primarily categories of silence and noise, which may affect the data obtained during the sound walks. Incidentally, as mentioned above, the low-structured qualitative notes from the walks show that the categories of silence and noise seem to be the most common way of evaluating urban sounds, but perhaps at the same time these are too superficial to fully understand the urban soundscape and its meaning. Of course, the observation that the city communicates its existence with noise, and that silence is considered as a temporary or in its essence a non-urban experience (especially if the generalized urban drone is replaced by the sounds of nature) is important, but not particularly beyond common beliefs.

Conclusion and evaluation

The described exploratory and pilot study answered several questions and opened some perspectives for further research.

It is certainly worth noting the varied nature of the materials collected during the walks (qualitative notes, evaluation surveys, photos, recordings, geolocation tags). They show significant differences in individual interpretations of the audiosphere among

the participants of the walks, while using certain common key categories. First and foremost were the categories of silence and noise. The latter, often defined as a necessary attribute of the city, was primarily associated with traffic and valued negatively. At the same time, the dominance of traffic (drone) in the urban soundscape results in very limited possibilities for conveying meanings in soundscape. Of course, the sheer volume of noise suggests certain meanings (the louder, the less pleasant). Other meanings could be carried primarily by sound sources that are even louder than urban drone and/or unexpected, and thus even less pleasant (alarm signals, loud barking dogs, etc.). The meanings of sounds become potentially richer during the relatively rare moments when the soundscape takes on hi-fi qualities. Human voices or the usually positively valued sounds of nature (birds, wind moving tree leaves) can then be heard clearly.

The use of tools such as the aforementioned applications on a wider scale can be very useful in social research of the urban audiosphere. The relative ease of use and standardization provides opportunities to collate and confront the opinions of many people about the sounds typical of a particular space. In this way, questions about the meanings that urban sounds carry, as well as their functions, can be answered in a fairly easy and safe way.

Summarizing the field experience, it also seems that an interesting and potentially fertile prospect for future use is to treat sound walks as one of many research techniques that could be used to study the complex, multi-sensory impact of urban space on its inhabitants. In such arrangement, sound walks, both individually and in small research groups, could be a good source for exploring the area, helping to pose hypotheses and research questions, as well as mapping areas according to objective indicators (such as sound intensity) and intersubjective indicators (such as evaluating sounds on a pleasant-unpleasant scale). It could be also helpful to delimitate sound enclaves and sound borderlands in the city and to understand the role of such spaces in everyday practices of city residents. Walks conducted with interested residents of specific neighborhoods can also be viewed as elements of an approach known as participatory action research, which emphasizes participatory, socialized knowledge production and collaboration between researchers and residents to improve the quality of life, for instance to improve the quality of urban soundscapes. In this sense, they would relate to the aforementioned tradition of urban research represented by Kevin Lynch or R. Murray Schafer.

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Bir İletişim Aracı Olarak Kentsel Ses Manzarası

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Genişletilmiş Özet

Makale, anlamlı bir mesaj sistemi olarak kentsel ses ortamıyla ilgili seçilmiş temaları vurgulamaktadır. Kentsel ses manzarası (odyosfer) konusunu ve araştırma alanlarının incelenmesini amaçlamaktadır.

Metnin ilk bölümü literatür taramasına içermektedir. Kentsel ses manzarası (odyosfer) konusunu ve araştırma alanını, öncelikle sosyal bilim perspektifinden incelenmesini amaçlamaktadır. Duyusal şehircilik diye tariflenen anlayışa ve R. Murray Schafer ve Kevin Lynch gibi bazı klasik araştırmacıların görüşlerine yer verilmiştir.

Kentsel mekânı algılamak ve yorumlamak için tek duyunun işitme olmadığı ve çoğu durumda en önemlisi de olmadığı açıktır. Kentsel mekânla ilgili sosyal çalışmalarda, görsel yönlere (şehrin ikonosferi) daha çok önem verilmektedir. Öyle ki, insanlar sesleri işittiklerinde kaynaklarını bulma veya hayal etme eğilimindedirler, dolayısıyla bu yönü tamamen göz ardı etmek imkânsızdır. Dolayısıyla, kentsel çevredeki araştırmalara yönelik en ilginç ve kapsamlı yaklaşımın, şehrin çoklu duyusal deneyimine atıfta bulunan bir dizi yansıma ve uygulama olarak anlaşılan duyusal şehircilik olduğu varsayılabilir.

Aşağıda açıklanan araştırma perspektifiyle de ilgili olan, odyosferin, sosyal bilimlerde kullanılan en temel terimlerde bile başka duyulara yapılan çalışmalarla ilgili olabileceğini belirtmek önem arz etmektedir. İlk ve en önemli terim, R. Murray Shafer tarafından popüler hale getirilen, belirli bir akustik ortamdaki tüm seslerin o ortamda bulunan insanlar tarafından yorumlanması olarak anlaşılabilen ses düzenidir. Ses manzarası terimi, görsel muadili olan manzara ile çağrışımlar sağlamaktadır. Ayrıca, metinde farklı mekânsal çağrışımlara sahip en az iki terim önemli bulunmuştur. Birincisi, çevresinden farklı ve potansiyel olarak önemli olan nispeten kalıcı bir ses manzarası ile karakterize edilen, sınırlı bir alan olarak anlaşılabilen ses alanıdır. Başka bir deyişle, bu terim akustik topluluğun mekânsal bir boyutu olarak anlaşılabilir. Çoğu durumda, kentsel mekânda anklavların sınırlarını net ve kesin olarak çizmenin zor olması nedeniyle, mekânsal hayal gücünden çıkarılan bir diğer yararlı kavram, net sınır bölgesi olarak tespit edilmiştir. Bu, sosyal bilimlerdeki sınır bölgeleri kavramının anlamına yakın olarak, dinleyiciler tarafından kendilerine atfedilen, önemli ölçüde farklı kaynaklara, doğaya ve anlamlara sahip seslerin temas alanı (işitilebilirlik) olarak anlaşılabilir.

Kentsel ses peyzajı çalışmasının, duyusal şehirciliğin daha geniş eğilimine dâhil edilebileceğini düşüncesiyle, bu metinde tartışılan araştırma için de önemli olan ilgili ilhamları ve temaları belirlenmesi yararlı olacaktır. Bu amaçla, Kevin Lynch'in klasik araştırmasına atıfta bulunulmuştur. Öncelikle, şehirde olmanın görsel katmanı üzerine düşünceler birbiriyle bağlantılı olabilir, ancak, araştırma yöntemi ise daha geniş bir şekilde uygulanabilir. Klasik eseri *The Image Of The City'*de (Lynch, 1960), sakinlerin kent mekânını yorumlama ve anlama sürecine dikkat çekmektedir. Onun savunduğu gibi, insanlar uzayı tekrarlayan, evrensel öğeleri (yollar, mahalleler, bulvarlar, işaretler) kullanarak oluşturdukları zihinsel haritalar yoluyla anlama eğilimindedir. Bu nedenle, bir şehrin okunabilirliği belirli standartlar ve özneler arası referans noktalarıyla bağlantılıdır. Kentsel ses manzarasının netliğinin analog unsurlara, yani dinleyicilerin

mekânda kendilerini yönlendirmelerine ve buna tepki vermelerine izin veren, alınabilen ve yorumlanabilen ses sinyallerine dayandığı varsayılabilir.

Bu gözlem, R. Murray Schafer (2004) tarafından oluşturulan lo-fi ve hi-fi ses düzeni kategorilerine atıfta bulunmaktadır. Diğer bir ifadeyle, ikincil ortamda bireysel sesleri ve kaynaklarını yakalamak ve tanımlamak mümkündür, birincisinde ise belirli bir ortamı kaplayan, genel bir gürültü, ambiyans hakimdir. Bu bakış açısıyla, hi-fi ses manzaraları, bir şehrin ve sakinlerinin sonik iletişimine elverişli olacaktır, ancak pratikte bir şehrin sesleri genellikle karayolu ulaşım gürültüsünün hakim olduğu lo-fi olarak tanımlanabilmektedir.

Makale, Bialystok Üniversitesi, Sosyoloji Enstitüsü'nden araştırmacılar tarafından 2022-2023 yıllarında ses yürüyüşleri yöntemine dayalı olarak yürütülen, Bialystok'un (Polonya) kentsel odyosferinin sosyal yönlerine ilişkin pilot çalışmayı merkeze almaktadır. Araştırmacılar, Bialystok'ta ses yürüyüşleriyle çalışmaya hazırlanırken, ikisi bu makale açısından önemli olan bir dizi araştırma sorusu geliştirmiştir. Bu sorulardan ilki ses yürüyüşlerine katılanların şehrin seslerini nasıl duyup yorumladıklarını araştırmaktadır. İkinci soru, bir araştırma yöntemi olarak ses yürüyüşünün yararlılığını ele almaktadır. Yani, ses yürüyüşünün bireysel izlenimlerinin ne ölçüde birbiriyle karşılaştırılabileceği, grup düzeyinde hangi sonuçların ne ölçüde çıkarılabileceği ve son olarak hangi araçların veya organizasyonel düzenlemelerin buna özellikle yardımcı olduğu ile ilgili olarak yapılandırılmıştır.

Bu bağlamda, yürüyüşler sırasında bazı katılımcılar niteliksel alan notları alırken, bazılarının ise uygun mobil uygulamalar kullanarak sesleri değerlendirmede daha standart yöntemlere başvurdukları belirlenmiştir. Bu yaklaşımların her ikisi de makalede detaylı olarak incelenmiştir.

Anahtar Kelimeler: Odyosfer, Ses Ortamı, Kentsel Çalışmalar, Sesli Yürüyüş, Duyusal Şehircilik.

Bu makale **intihal tespit yazılımlarıyla** taranmıştır. İntihal tespit edilmemiştir.

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