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Sensual Krupówki. A Sensory Analysis of the Soundscape and Smellscape of the Most Famous Street in Podhale Region

ABSTRACT

This article and the research required for its creation serve a purpose to present the current cultural soundscape and smellscape of Krupówki Street in Zakopane, as well as to answer the question – how does the audio-sphere and smell-sphere which is experienced perceptually on this promenade influence the perception and interpretation of Krupówki by its inhabitants and tourists. While conducting this research the method of multisensory participating observation was applied combined with active listening, measurement of decibels, recording of sound, and perceptual recognition of smells. To complement this field research a survey was conducted among 50 informants. Based on the outcome, innovative sensory maps of sounds and smells of the most popular street in Podhale were created. It was also possible to analyze the ambivalent attitude of both inhabitants and tourists towards this street. To generalize the conclusions, one may state that the congruence of sounds and smells translates into high rating of this destination among tourists, and plainly put the sensory experience of this space constitutes the *genius loci* of Krupówki. On the other hand, the commercialized space of Krupówki is judged negatively by its permanent inhabitants, who are predisposed by the progressing gentrification of the center of Zakopane.

KEYWORDS: sounds, smells, senses, Podhale region, Zakopane, Krupówki Street, highlanders, tourism

STRESZCZENIE

Zmysłowe krupówki. Sensoryczna analiza audiosfery i odorantofery najsłynniejszej ulicy Podhala

Artykuł oraz przeprowadzone na jego potrzeby badania mają za zadanie przedstawić aktualny krajobraz dźwiękowy (*cultural soundscape*) i zapachowy

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(*smellscape*) ulicy Krupówki w Zakopanem, a także odpowiedzieć na pytanie, w jaki sposób audiosfera i odorantosfera doświadczana percepcyjnie na tym deptaku wpływa na postrzeganie i interpretowanie Krupówek przez mieszkańców i turystów. W badaniach nad tym zagadnieniem zastosowano metodę wielozmysłowej obserwacji uczestniczącej, połączonej z aktywnym słuchaniem, pomiarem decybeli i nagrywaniem dźwięku oraz percepcyjnym rozpoznawaniem zapachów. Dopelnieniem badań terenowych była ankieta przeprowadzona wśród 50 informatorów. Na podstawie otrzymanych wyników opracowano nowatorskie mapy sensoryczne zapachów i dźwięków najpopularniejszej ulicy Podhala. Możliwe stało się także przeanalizowanie ambiwalentnego stosunku względem tej ulicy wyrażanego przez mieszkańców i turystów. Uogólniając, należy stwierdzić, że kongruencja dźwięków z zapachami przekłada się na wysokie oceny tej destynacji wśród turystów, a sensoryczne doświadczenia przestrzeni w dużej mierze konstruują *genius loci* Krupówek. Z drugiej strony skomercjalizowana przestrzeń Krupówek wartościowana jest negatywnie przez stałych mieszkańców, co wpływa na postępującą gentryfikację centrum Zakopanego.

SŁOWA KLUCZE: dźwięki, zapachy, zmysły, Podhale, Zakopane, Krupówki, górale, turystyka

Skądkolwiek wieje wiatr, zawsze ma zapach Tatr.¹
Jan Sztudynger

The above short poem, titled *Tęsknota* (*Longing*), by Jan Sztudynger (1904–1970), adorns the facade of the wooden Koszysta villa in Zakopane.² In the 21st century, the phrase has taken on a new significance. It is no longer just a metaphor but it reflects a genuine longing for the scent of nature, which has become increasingly rare in urban environments. “In summer and winter, this poem feels like a farce – on Krupówki, you don’t smell the fresh air of the Tatra Mountains, but rather of French fries and fried onions” (Male informant, age 25, from Podhale).

This article, along with the accompanying research, seeks to explore the contemporary soundscape and smellscape of the popular Zakopane promenade. As Łukasz Sochacki noted, “active listening can be a method of learning about culture, both its stable (ongoing) and changeable (processes) forms” (Sochacki, 2022, p. 156). With this in mind, I aimed to identify and analyze fragments of Krupówki’s sound and scent environment and to document and share the findings through maps created from this research. The study explored how the senses of smell and hearing shape the experience and perception of reality on Krupówki Street, particularly

1 *Wherever the wind may choose to roam, it carries the scent of the Tatra home.*

2 The writer Jan Sztudynger lived in the house from 1955 to 1970.

in constructing its image as a tourist destination. The article draws on a pilot survey, field sound recordings, and organoleptic tests conducted during multi-sensory participatory observation. I focused on capturing the everyday sounds of Krupówki and the smells experienced by the average tourist walking along this Zakopane promenade.

The decision to study Krupówki Street – part of the Krupówki Cultural Park – was driven by two factors: increasing press reports criticizing the overwhelming harmful noise, and the street's role as an established central attraction for visitors to the Tatra Mountains, where it remains a key tourist magnet. The issue of noise on Krupówki was first raised by residents in 2015, when 117 people signed a petition to city authorities, reporting that sound intensity levels exceeded permissible standards around the clock (Bobak, 2015). The concentration of tourist traffic in Zakopane has led not only to noise disturbances for residents but also to the commercialization of the area, which in turn has contributed to the gentrification of the town's historic center.³

The smellscape and soundscape of Krupówki are inherently dynamic, fluctuating with the tourist season. During peak periods (April to October and December to February), the number of visitors to the Tatra Mountains far exceeds the number of permanent residents, with even greater intensification during holidays and vacation times.⁴ Regardless of the seasonal fluctuations in tourism, the soundscape and smellscape of Krupówki, combined with its physical surroundings, create a unique blend of sensory impressions that shape the experience and perception of this space.

To describe the soundscapes based on field recordings, I used the classification of sounds proposed by Canadian composer and researcher Raymond Murray Schafer (Schafer, 1977; Gradowski, 2004). Schafer introduced key concepts to the study of sound anthropology, including soundscape, which refers to the entirety of the sound environment along with the sources of sounds. To identify and describe the auditory characteristics of a place, Schafer also introduced terms such as keynotes, referring to the dominant sounds that form the acoustic background of a location or community, and sound signals, which are stimuli that attract widespread attention. A special category of sound signals are soundmarks – unique

3 Zakopane has seen a steady decline in permanent residents over the past two decades, from 29,693 in 1999 to 25,389 in 2022 (<https://www.polskawliczbach.pl/Zakopane>).

4 While Zakopane has a permanent population of around 25,000, in 2022 alone, the Tatra National Park recorded 4.6 million visitors. This number does not account for a significant group of tourists who did not purchase entrance tickets and were thus not included in official park statistics (<https://tpn.pl/zwiedzaj/turystyka/statystyka>, access: 12.06.2023). The low season falls during the two “dead” months (March and November), when the tourism industry rests, overhauls infrastructure and prepares for the next season.

sounds that are particularly significant for identifying a place and building its sense of identity, contributing to the cultural soundscape.

Sounds can represent social, spiritual, historical, national, or cultural memories associated with a place or society. They can be part of socially relevant knowledge, skills, or expressions that are continuously reproduced as carriers of cultural identity (Sochacki, 2021, p. 78).

In this way, sounds become part of a location's intangible cultural heritage, contributing to its cultural identity.⁵ Characteristic sounds of a place are often recalled, remembered, and treated as symbols by its inhabitants and visitors – for example, the sound of *zbyrcok* sheep bells in a pasture, the bugle call from the tower of St. Mary's Church in Krakow, the sea organ in Zadar, Croatia, or the now rare sound of a rooster crowing in the morning.

Photo 1. An *oscypek* cheese stand and a horse-drawn carriage stop at Krupówki



Photo by K. Ceklarz, 2023.

Methodology

As mentioned in the introduction, the study of the socio-acoustic environment, or soundscape (audiosphere), and smellscape (odorantosphere) is a pilot study, designed in two parts. The first part involved multi-sensory

5 The cultural soundscape is constantly evolving. Some sounds disappear, replaced by new lifestyles or technologies, while new sounds also emerge. Because of this, sound anthropology emphasizes the importance of preserving the cultural soundscape. This can be achieved through intergenerational transmission, recording and documenting sounds, and, in some cases, reconstructing them to safeguard their cultural value.

participatory observation on Krupówki Street, combining active listening, sound recording, and perceptual odor recognition (Stanisz, 2017). The second part consisted of a survey conducted with 50 informants.

The study focused on a representative section of Krupówki Street, located in the city center, covering approximately 700 meters from its intersection with Nowotarska Street to where it connects with Aleje 3 Maja.⁶ This area is entirely covered by cultural landscape protection as part of the Krupówki Cultural Park, established by a 2015 resolution of the Zakopane City Council (Resolution No. XII/183/2015). Along Krupówki, there are numerous establishments: 27 restaurants and cafés, 97 stores, 6 hotels, 10 private lodgings, and various offices (www.krupowki.biz). Ten buildings on Krupówki are listed in the register of historic monuments, including the Main Building of the Tatra Museum (Pinkwart & Długołęcka-Pinkwart, 2003, p. 45). As one of the most famous and crowded streets in Poland, Krupówki's popularity is reflected in attendance statistics (Pinkwart & Długołęcka-Pinkwart, 2003, p. 53).

The timing of the research was a crucial factor, as the fieldwork was conducted during the peak tourist season (May–August 2023). This period was selected due to the high volume of tourists on the Zakopane promenade, as well as the increased activity of the HoReCa (Hotel, Restaurant, and Café) industry and cultural and tourist institutions along Krupówki. Surveys were carried out on four occasions (May 28, July 8, August 6, and August 19), between 1:00 p.m. and 9:00 p.m. These dates were deliberately chosen as sunny weekend days when tourist traffic in Zakopane reaches its peak. The afternoon hours were selected to align with the daily rhythm of life on Krupówki, as most eateries and stores begin operating at noon and remain open late into the evening.⁷ The final survey, conducted on August 19, took place during peak tourist traffic, which, for many decades, has consistently occurred in mid-August around the “long weekend” associated with the Assumption of the Blessed Virgin Mary holiday. However, this survey did not reveal any new data regarding the recorded sounds or smells – only their intensity changed, as reflected in Charts 1 and 2.

The research was conducted at specific points along the street, with measurements and recordings (using digital technology) taken each time at seven fixed locations along Krupówki (see Map 1). In each location,

6 Krupówki Street is approximately 1,100 meters long, stretching from its intersection with Nowotarska Street to the intersection with Witkiewicza, Tetmajera, and Zamoyski Streets.

7 In the early morning hours, Krupówki Street is empty but far from quiet. The few passersby and employees hurrying to work in restaurants and shops are accompanied by the sounds of delivery trucks, which are permitted to enter Krupówki during the night and early morning hours (between 10:00 p.m. and 10:00 a.m.).

60-second sound recordings,⁸ decibel measurements,⁹ and perceptual observations of ambient odors were conducted. A total of 28 systematic measurements and recordings documenting the soundscape and scent environment of Krupówki were completed. The selection of measurement points was based on two factors: a high concentration of tourist traffic observed through years of experience and frequent visits to Krupówki, and the distance between points, spaced approximately 100–120 meters apart. While conducting the research, I considered the issue of representation, as noted by Łukasz Sochacki, who writes:

The microphone of a sound recorder, like the lens of a camera, is not cognitively neutral. It depends not only on who is listening and who is recording, but also on where, how, according to what sound idiom, and what technologies are being used. Even in sound studies, one must remain aware of the researcher's involvement and the mediatization of the research (Sochacki, 2021, p. 80).

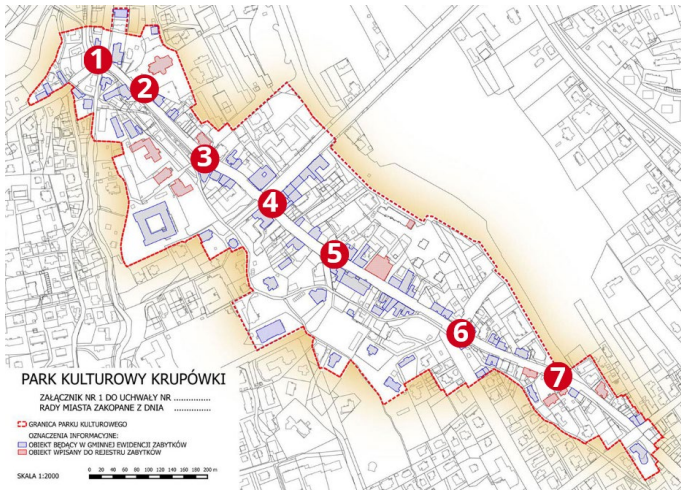
In addition to systematic recordings, several incidental sound events (sound signals) outside the designated points were also documented – for example, the sound of an emergency helicopter flying overhead, applause from a crowd gathered for a street performer, or the passage of a municipal garbage collection vehicle.

When examining the smellscape – the sphere of scents – I followed a similar approach. I made detailed field notes during four study visits to Krupówki, recording smells at the same seven measurement points used for sound recordings, as well as along the entire promenade. These observations allowed me to identify groups of dominant and occasional odors, which will be discussed further below. In addition to these recordings, I applied standard research methods such as participatory observation, photographic documentation, field notes, and plotting data on maps.

8 Sound recording (phonography), is one of three types of field recording, a technique (and also an effect) of documenting sounds (natural and anthropogenic) in the field, without arranging the situation.

9 Measurements were taken using a Soundmaster digital decibel meter.

Map 1. Location of Measurement Points



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Point 1. (Krupówki 1): located at the beginning of the promenade; Point 2 (Krupówki 4): near the Church of the Holy Family (Najświętszej Rodziny), close to a small square; Point 3 (Krupówki 12): at the intersection leading to the Main Building of the Tatra Museum; Point 4 (Krupówki 20): situated at the intersection with T. Kościuszko Street, which allows car traffic; Point 5 (Krupówki 26): at the intersection with Gen. Galicy Street; Point 6 (Krupówki 42): near the Water Pond, at the intersection with S. Staszica Street; Point 7 (Krupówki 50): near the monument to Count W. Władysław Zamoyski, where the promenade ends, and Krupówki transitions into a roadway designed for vehicular traffic.

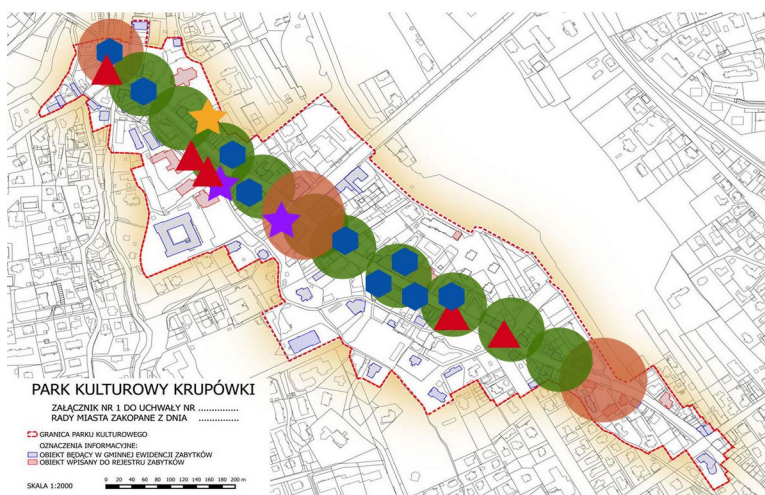
In addition to the field research, I conducted a survey with a sample of 50 individuals aged 19–50, all of whom had visited Krupówki at least once in the last two years (following the end of the COVID-19 pandemic). The group consisted of 29 men and 21 women, with 22 participants from Podhale. In terms of visit frequency, 20 respondents reported frequent visits, 28 occasional visits, and 2 had visited only once. The goal of the survey was to gather insights on the perception of Krupówki Street, particularly in relation to sensory experiences involving sound and smell. The data collected was compared with the findings from the field research.

What Can Be Heard on Krupówki – A Cacophony of Sounds

The type and intensity of noise on Krupówki depend on several factors, including the time of year (it is significantly louder in the summer when favorable weather conditions amplify sounds), the day of the week

(weekends, due to increased tourist traffic, differ from weekdays), the time of day (most sounds are concentrated in the afternoon and evening), as well as weather, location, and type of sound source.

Map 2. The Krupówki Soundscape



- | | |
|---------------------|---|
| ● Car traffic noise | ★ Neighing and horse hooves on cobblestones |
| ● Conversations | ★ Parrot voices |
| ⬡ Highlander music | ▲ Creek murmur |

Prepared by K. Ceklarz.

The soundscape of Krupówki is composed of a variety of sound sources (see Table 1): natural sounds, such as the flow of a nearby creek; human sounds, including conversations, laughter, and sneezing; music from both speakers and live performances; cultural sounds like local dialects and the clinking of cutlery; mechanical sounds, including air conditioners, cars, and garbage trucks; and technical sounds such as phone rings. The keynote sound of Krupówki (see Map 2) is the murmur of conversations, predominantly in Polish. However, during the 2023 tourist season, eastern languages such as Ukrainian and Russian, as well as Arabic from tourists from the Middle East, were also commonly heard.¹⁰ Conversations are

10 Visitors from the Emirates, Qatar, Kuwait, and Saudi Arabia arrive near the Tatra Mountains via Krakow, which has direct air connections to the Persian Gulf through airlines such as FlyDubai and Emirates. These tourists often travel with their families, and their distinctive attire (such as the hijab) has made their presence noticeable in Zakopane's tourist center. This

frequently punctuated by bursts of laughter from groups seated in restaurant gardens, blending with the clinking of tableware and cutlery. This soundscape is further enriched by the constant hum of air conditioners positioned near entrance doors and shop windows, as well as background music accompanying meals.

The music on Krupówki varies depending on the time of day. In the early afternoon, one will primarily hear songs broadcast from loudspeakers in restaurants and shops selling regional products and souvenirs. These sounds are not confined to the interiors; many establishments with outdoor seating or open stalls also play music directly onto the promenade. This practice, however, results in a lack of coordination. With each place free to choose its own playlist, the overlapping music creates a cacophony, with different tunes clashing and drowning each other out. The most common genre is the so-called “highland disco-polo”,¹¹ but a variety of other music can also be heard, from “rock-polo” (with Sławomir’s *Miłość w Zakopanem* being particularly popular) to folk music. Notably, performances by Peruvian street musicians have become a permanent fixture at Point 7, adding another layer to the musical diversity, alongside traditional highland tunes.

Photo 2. Visitors from the East at Krupówki



Photo K. Ceklarz, 2023.

demographic shift has been widely remarked upon in local news outlets and press reports. See Matusiak, 2023.

- 11 Highland disco-polo is a fusion of traditional highland music with the disco-polo genre, characterized by catchy melodies, lively rhythms, and simple, upbeat lyrics that often reflect the region’s cultural traditions. In Podhale, this style is popularized by bands such as Baciary, Ogórki, Bajeranty, and many others.

During the afternoon, evening, and night, live performances of regional music are common (more on that below). Meanwhile, the constant background noise on Krupówki includes the hum of nearby cars, despite the promenade being closed to vehicular traffic. There are three spots where traffic remains present throughout the day.¹² Additionally, the sounds associated with municipal waste collection are regularly noted. Garbage collection occurs five times a day – at 11:00 a.m., 2:00 p.m., 4:00 p.m., 6:00 p.m., and once at night. The garbage truck rounds take up to 80 minutes, as they navigate the crowds, street performers, and their audiences, stopping at each garbage container.¹³ This frequent presence has made the municipal vehicle a recognizable part of Krupówki's landscape, and consequently, its soundscape and smellscape. The sounds include the truck's engine hum, the grinding of its waste compression system, and the clanging of its jaws. Nearby, the smell of garbage mixes with exhaust fumes from the slow-moving vehicle. Occasionally, a police car or private vehicle can also be seen creeping through the promenade (legally or otherwise), adding to the varied soundscape.¹⁴

The soundscape of Krupówki is further affected by religious music. In the lower part of the street, church hymns can be heard from loudspeakers during each mass – 8 times a day on Sundays and holidays, and 5 times during weekdays.¹⁵ Adding to this atmosphere is the occasional performance of the popular song *Barka* by a local street performer, known as the Krakow Barrel Organ, who moves freely along the promenade, shifting performance spots throughout the day.¹⁶ The only natural sound that can be heard along the promenade is the gentle flow of water from nearby streams (Measurement Points: 1, 3, and 6). At Point 1, visitors can hear the Młyniska creek, while points 3 and 6 – Folszowy Potok. The latter is an artificial branch of the Bystra creek created in the 19th century to supply water to the now-defunct broadcloth factory (*folusz*). This stream runs

12 There are three key traffic points along Krupówki: at its connection with Nowotarska Street, the thoroughfare in the direction of Kościelisko (Point 1); at the intersection with T. Kościuszko Street (Point 4), and where it meets Aleje 3 Maja (Point 7).

13 In 2021, the daily waste collection from street garbage cans averaged 40–45 m³, increasing to 50 m³ on weekends and up to 60 m³ during peak tourist season (Zakopane City Status Report, 2021).

14 Vans can often be seen moving along the street in the early morning before the shops and restaurants open.

15 At the Parish of Holy Family on Krupówki Street Masses are celebrated at the following times: Sundays and holidays at 6:30 a.m., 8:00 a.m., 9:30 a.m., 11:00 a.m., 12:30 p.m., 3:00 p.m., 5:00 p.m., and 7:00 p.m.; on weekdays at 6:30 a.m., 7:00 a.m., 8:00 a.m., 3:00 p.m., and 7:00 p.m.

16 The barrel organ's repertoire also includes well-known and recognizable songs, such as *Mamma Mia* by ABBA.

parallel to the promenade, primarily behind the buildings, making it visible and audible only at the designated points. Point 6, in particular, is noteworthy; it features an open section of the stream framed by a stone basin (Oczko Wodne) and a wooden bridge. The bridge offers a panoramic view of the Tatra Mountains and has become a popular spot for tourists seeking to capture commemorative photographs.

This soundscape is occasionally interrupted by distinct sound signals that draw attention due to their informative nature. These include spontaneous calls from tourists, such as “Mom!” or “Hello, here we are!”; directions from guides and group leaders, like “Don’t spread out,” or “Please join the group!”; and the lively announcements of street vendors and solicitors, exclaiming phrases like “Cheap!,” “Morskie Oko Lake, Dunajec rafting!,” “Highland cuisine!,” and “You can feed the rabbits, stroke them, and take photos!” Additionally, the sounds of everyday life contribute to the atmosphere, with children crying, dogs barking, bicycle wheels ticking, suitcases clattering against the cobblestones, and cell phones ringing.¹⁷

The third group of noises are sounds unique to Krupówki, which include highlander music performed by several-member (4–5-player) bands. During the summer season of 2023, as many as 13 dining establishments simultaneously offered the opportunity to listen to live music along Krupówki Street. Musicians on Krupówki entertained tourists every day, from 6 p.m. to 10:00 p.m. During the peak tourist season in 2023 along Krupówki Street, live music can be listened to simultaneously in as many as 13 establishments. The repertoire available to listeners is diverse, featuring a range of pieces primarily classified as folk music. This includes traditional melodies from the Podhale region, Slovak waltzes, Hungarian csárdáses, and Balkan tunes, as well as songs by well-known Polish artists (Wesołowski, 2023, p. 15).

In 2022, a new musical trend emerged in Krupówki: lively disco-polo songs and folk music performed live by 4- to 5-member Roma groups. The controversial performers play instruments such as guitars, accordions, and cajón-style percussion boxes. The line-ups are predominantly male, often featuring young boys, but women occasionally join in as well, adding their voices and playing tambourines. The songs are performed in both Romani and Polish. The most recognizable songs are *Aleksandra*,¹⁸ sung alternately in Romani and Polish, a reworking of the Italian *Marina*,¹⁹ and

17 The former cause a reflex in women to look around, and the latter to grab their pockets or put their purse to their ear.

18 The piece, written by Andrzej Marcysiak in 2013, has 103 million views on YouTube.

19 A piece by singer and accordionist Rocco Granata published in 1959.

the Latin *Despacito*.²⁰ Usually you can find 2–3 groups of musicians performing simultaneously in different parts of Krupówki. However, there are instances where the number of Roma performers increases, as the Zakopane municipal police have reported simultaneous performances by up to seven independent illegal groups.²¹ For tourists, these performances serve as an attraction, evident from the frequency of donations given to the musicians, the sizable audiences that gather around them, and the thunderous applause they receive between songs. In contrast, the reception of this art form by local residents and those employed in establishments along Krupówki is less favorable, as they often associate it with noise disturbance. The sound intensity generated by the Roma performers has been recorded at levels reaching up to 101 dB (measured on August 19, 2023). Notably, other street performers, such as violinists, guitarists, and vocal soloists using pre-recorded background music, tend to be much quieter, even though they utilize microphones and sound systems, unlike the Roma groups.

Photo 3. A Roma band during a performance at Krupówki



Photo by K. Ceklarz, 2023.

Among the unique sounds of Krupówki are those made by animals, particularly the horses harnessed to horse-drawn carriages. The vehicles

20 The song was originally performed by Puerto Rican singer Luis Fonsi, and released in 2017. In addition, the Roma band's performance also includes *Ona tańczy dla mnie* and *Przez twe oczy zielone*.

21 In the area of the Krupówki Cultural Park, off-premises artistic performances (on the promenade) by artists who have obtained appropriate permits from the municipal authorities are allowed (Bobak, 2023).

have a designated stop in the lower part of the promenade, opposite the Sabała Hotel (Krupówki 11), and are occasionally seen at the intersection of Krupówki and Zaruskiego Street. As they carry visitors or return empty from rides, the horses can be heard neighing, tapping their hooves against the cobblestones, and clanking their tacks. Accompanying these sounds are the loud and casual conversations of the carriage drivers, conducted in the local Podhale dialect. This horse-drawn carriage stop also plays a significant role in the area's smellscape, with the distinctive smell of horses reaching its peak here.

Additionally, loud squawking of birds can be heard throughout Krupówki, though these are not native species but rather exotic parrots. Dozens of these birds, including macaws, are housed in three small rooms, with the main exit located down the pedestrian zone (Krupówki 9). The wide-open doors, separated by mesh to prevent the birds from escaping, attract passersby and provide both an advertisement and a constant source of sound.

Another notable auditory feature of Krupówki is the occasional sound of a TOPR rescue helicopter flying overhead. During the three-month summer season (July–September) of 2021, the helicopter participated in 131 rescue operations (TOPR, 2021); in 2022, it was involved in 86 operations (TOPR, 2022). Rescuers sometimes use the helicopter multiple times in a single day, flying over the promenade and causing temporary noise levels to exceed 110 dB. The frequency of flights tends to increase on weekends and holidays when Zakopane, particularly Krupówki, sees the highest influx of tourists.

Krupówki is also characterized by the sounds emitted by various souvenirs. This includes the squeaks of interactive battery-operated toys – such as dogs, cats, and rabbits – displayed outside souvenir stands, often directly on the cobblestones. Additionally, the cracking sounds of “shooting devils,” small firecrackers that children detonate for fun, add to the lively soundscape. Periodically (especially during sporting events such as ski jumping), an additional source of sound become vuvuzelas used by fans, producing a sound similar to the roaring of an elephant at about 140 dB.

Table 1. Types of sounds noted in Krupówki

No.	Type of sound according to Schafer's classification	Examples of sounds created in Krupówki
1	Keynote – dominant sounds, omnipresent, existing in the background of individual perception	<ul style="list-style-type: none"> • Conversations: <ol style="list-style-type: none"> 1. in the Polish language (dominant) 2. Ukrainian, Russian, Arabic (frequent) 3. Spanish, English, Slovak, Hungarian (occasional) • Highland or pseudo-highland music flowing from the speakers • Laughter • Car noise • Noise of air conditioners and fans • Cutlery clanking • Clatter of wheeled a travel suitcase • Bicycle wheels ticking • Garbage truck noise • The murmur of water in the creek
2	Sound signals – noises listened to consciously and attentively, carrying some kind of information	<ul style="list-style-type: none"> • Children crying • Telephone rings • Dog barking • Tourists calling out • Voice ads – calls from vendors offering products and services, e.g., 1-day tours, rabbit house tours, etc.
3	Soundmark – unique, site-specific sounds	<ul style="list-style-type: none"> • highlander music performed live • performances by Roma groups • clatter of horses' hooves on the cobblestones, neighing • applause for street artists • dialect conversations of carriage drivers • sounds made by parrots • passing rescue helicopter noise • peeping of souvenir toys • firecracker noises

Prepared by K. Ceklarz.

Noise Intensity

Using terminology from the Regulation of the Minister of the Environment concerning permissible noise levels, Krupówki Street can be classified as being exposed to both municipal (residential) noise and traffic noise. This is particularly noticeable in areas where the promenade connects with other roadways. According to the regulation, in areas designated

for recreational and residential-commercial purposes (which both apply to Krupówki Street), the permissible environmental noise levels are 65 dB during the day (6:00 a.m. to 10:00 p.m.) and 56 dB at night (10:00 p.m. to 6:00 a.m.) (Minister of Environment Decree, October 1, 2012).²² Measurements conducted in the early afternoon (between 1:30 p.m. and 2:30 p.m.) showed slight exceedances of the standard permissible levels in the main section of the promenade, where noise ranged from 62 to 75 dB. Significant exceedances were recorded in areas adjacent to busy streets, where noise levels ranged between 75 and 81 dB. During the afternoon hours (6:15 p.m. to 8:00 p.m.), the intensity of sounds on Krupówki increased along the entire length of the street, with values ranging between 66 and 99 dB. The upper part of the promenade (Points 5–7) was particularly loud, with noise levels recorded between 73 and 99 dB. In the evening (between 8:15 p.m. and 9:15 p.m.), noise intensity remained high, oscillating between 63 and 93 dB, though it was generally lower than during the earlier afternoon hours. This slight decrease can be attributed to the shift from music emitted through loudspeakers to live music played inside establishments, making the street somewhat quieter. Thus, the peak noise levels on Krupówki occur in the afternoon (as shown in Table 2 and Figures 1 and 2), coinciding with increased tourist traffic. During this time, the sounds of conversations and calls, along with those produced by street performers, loudspeakers, and radios, all accumulate, contributing to the overall noise level.

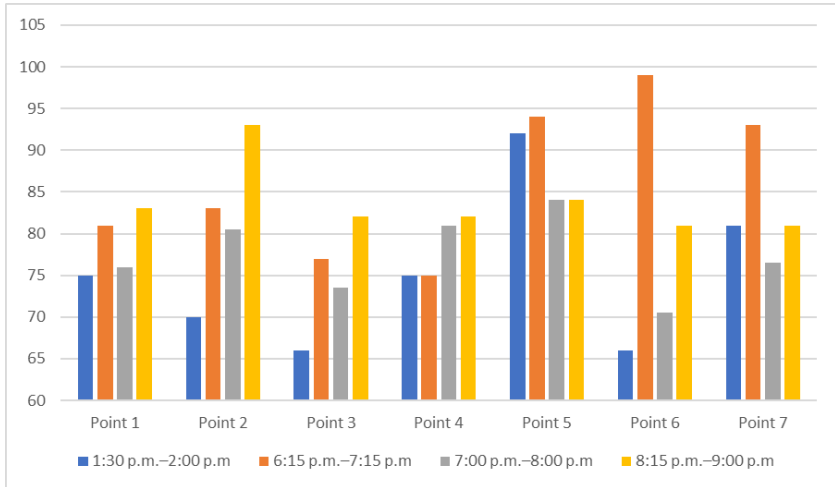
It is also worth noting that no galenosphere – an area of peace and quiet – was observed during the fieldwork. Such a phenomenon simply does not exist on Krupówki during the tourist season.

22 The study did not account for the noise caused by a rescue helicopter that flew over multiple times during the research period.

Table 2. Noise intensity in dB, measured at 7 points designated on Krupówki Street in Zakopane

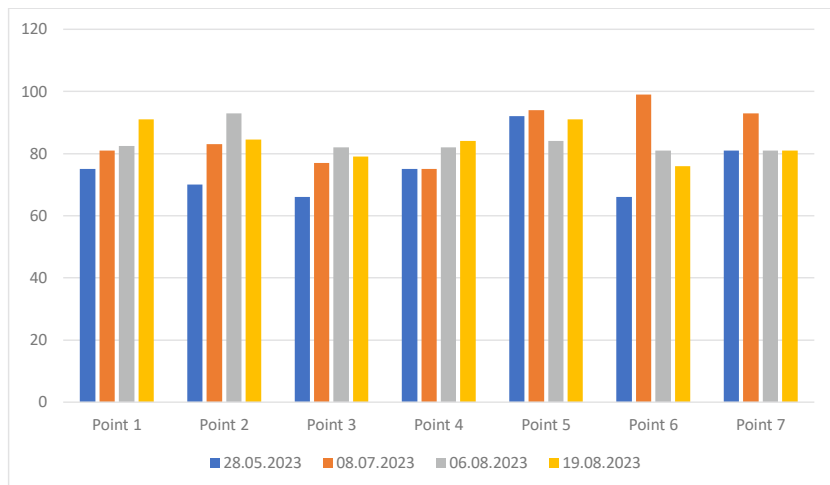
Date	Time	Point 1, Krupówki 1	Point 2, Krupówki 4	Point 3, Krupówki 12	Point 4, Krupówki 20	Point 5, Krupówki 26	Point 6, Krupówki 42	Point 7, Krupówki 50
28.05.23	1:30 p.m.	66–75 dB						
28.05.23	1:40 p.m.		65–70 dB					
28.05.23	1:50 p.m.			62–66 dB				
28.05.23	2:00 p.m.				63–75 dB			
28.05.23	2:10 p.m.					83–92 dB		
28.05.23	2:20 p.m.						64–66 dB	
28.05.23	2:30 p.m.							69–81 dB
8.07.23	6:13 p.m.	76–81 dB						
7/8/2023	6:23 p.m.		74–83 dB					
8.07.23	6:50 p.m.			66–77 dB				
8.07.23	6:55 p.m.				66–75 dB			
8.07.23	6:58 p.m.					80–94 dB		
8.07.23	7:04 p.m.						77–99dB	
8.07.23	7:08 p.m.							73–93 dB
6.08.23	8:17 p.m.	68–82.5 dB						
6.08.23	8:23 p.m.		82–93 dB					
6.08.23	8:28 p.m.			66–82 dB				
6.08.23	8:35 p.m.				63–82 dB			
6.08.20	8:42 p.m.					77–84 dB		
6.08.23	8:49 p.m.						68–81 dB	
6.08.23	8:55 p.m.							76–81 dB
19.08.23	7:03 p.m.	70–91 dB						
19.08.23	7:10 p.m.		77–84.5 dB					
19.08.23	7:18 p.m.			68–79 dB				
19.08.23	7:30 p.m.				77–84 dB			
19.08.23	7:37 p.m.					77–91 dB		
19.08.23	7:47 p.m.						65–76 dB	
19.08.23	7:59 p.m.							72–81 dB

Graph 1. Maximum noise intensity measured on Krupówki Street on various times of the day



Prepared by K. Ceklarz.

Graph 2. The average noise intensity in dB, measured at 7 points designated on Krupówki Street in Zakopane on each research day

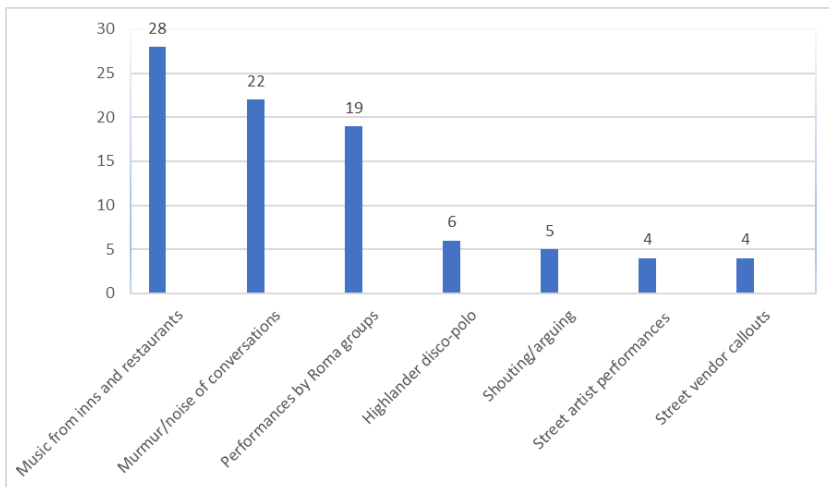


Prepared by K. Ceklarz.

The survey results confirm the observations above. Respondents primarily noted the large crowds and heavy tourist presence in Krupówki (42 responses), as well as the associated noise (13 responses). When asked about their impressions of Krupówki, negative opinions dominated:

“It’s like a lens that concentrates the tourist traffic of Zakopane – crowded, noisy, and often dangerous” (Male, 28, from Podhale); “It’s crowded, lots of people, masses of tourists, regional souvenirs” (Female, 24, from Podhale); “It’s always noisy” (Male, 24, from Podhale); “There are crowds all the time – gypsies playing during the day and fights at night” (Male, 32, from outside Podhale); “There’s a lot of chaos, it’s loud, and it’s trashy” (Male, 22, from outside Podhale). However, there were also positive remarks, with some appreciating the concentration of restaurants and shops (including specialized mountain gear stores) in one place. Respondents also highlighted the unique character of Krupówki: “People come together to experience the city’s atmosphere and the culture of Podhale” (Male, 20, from Podhale); “You can have a good time with family and friends” (Male, 24, from Podhale). When asked what they liked most about Krupówki, respondents gave a variety of answers, highlighting both the general appeal of Krupówki (such as the concentration of stores, restaurants, its unique atmosphere, and historic architecture), and specific attractions (such as the Poraj Bookstore, the Tatra Museum, the viewing terrace in the gallery, the pond, and horse-drawn carriages). Some also noted the visible multiculturalism or the memories evoked during their walk.

Graph 3. Sounds prevalent in Krupówki (according to respondents)



Prepared by K. Ceklarz.

The dominant sounds in Krupówki were mainly highlander music from local establishments, the hum of conversations in various languages, and the sounds made by Roma musicians. The fact that Roma bands ranked third in the list of notable sounds underscores how prominent they

are in the urban landscape. Respondents tended to treat them as a separate category of sound source, rather than as a typical form of street performance (like guitarists or violinists), though they technically are. Additionally, respondents mentioned the shouting and arguing of tourists, the loud calls from vendors, and even the swearing and “drunken gibberish” from visitors. They also noted the honking of vehicles, the squeaks of toys, the clatter of horse-drawn carriages, and, in general, an array of chaotic or unidentifiable sounds.

What Krupówki smells like – the smellscape of the Zakopane promenade

It is well-known that pleasant smells evoke positive emotional states, while unpleasant odors tend to trigger negative emotions. Similarly, it is widely recognized that the ability to perceive smells is influenced by individual factors such as age, gender, and health conditions, as well as external factors like atmospheric conditions (Mania & Szymusiak, 2012, p. 153). Despite personal preferences, people generally categorize odors into two main groups: pleasant and unpleasant. This distinction directly influences the perception and memory of a place or moment, whether positively or negatively. Odor stimuli also have the unique ability to trigger memories. According to researchers studying this phenomenon in commercial spaces:

a pleasant smell generates a positive emotional response, which increases the likelihood of “come-hither” behaviors. These behaviors include the desire to stay longer in an establishment, the intention to return, or the inclination to make a purchase. The opposite of approaching is avoidance, which is the outcome of a negative affective reaction resulting from the impact of an unpleasant odor (Mania & Szymusiak, 2012, pp. 158–159).

Thus, volatile substances one can smell in Krupówki can have a bearing on the perception of the place *at locum* and *in futuro*, as well as on decisions to return to that place.

Proceeding analogously to the description of the soundscape, it was possible to identify the dominant scents, constantly or frequently present on the promenade, and the side scents occurring occasionally. The scents perceptible in the first place were cooking aromas, which intermingle and mix almost along the entire length of the promenade, forming a pervasive composition of the leading scent. During the survey, strong smells of sauerkraut or *kwassnica* soup made from it, sautéed onions, meats roasted on open grills (especially in the late afternoon), potato pancakes, and pizza

from the oven were noted, among others. Also present were “sweet” smells such as the scent of waffles and doughnuts (especially down the street), cinnamon *kürtöskalács* (cylinder-shaped Hungarian cakes), cotton candy, and mulled wine. These scents do not go unnoticed by passersby – they evoke sensations of hunger, joy, excitement, and relaxation, thereby influencing decisions to make purchases, sit down at a table, and even consider returning in the future. An unmissable olfactory experience is also provided by *osypek* stands, of which 16 stood throughout the promenade during the 2023 tourist season.²³ The distinct aroma of these smoked cheeses wafted around each stall, a hallmark of Krupówki that sets this pedestrian zone apart from others. As people walk down the street, they encounter a cheese stand every few dozen meters, entering the scent zone it creates (Map 3). The smell is noticeable and positively received – none of the respondents used negative terms like “stench” or “odor” when referring to *osypek*. In the surveys, the scent of cheeses ranked second among all scents associated with Krupówki (Chart 4).

Photo 4. August crowds of tourists in Krupówki Street

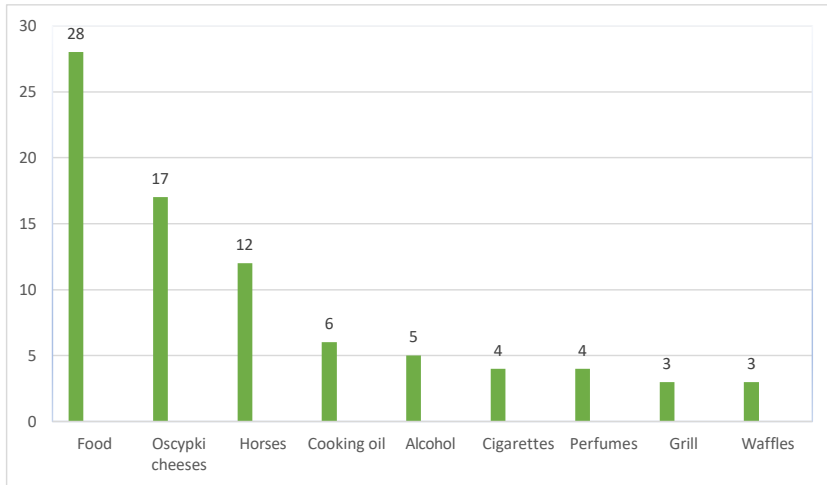


Photo by K. Ceklarz, 2023.

Another food-related scent is the smell of cooking oil, an olfactory stimulus particularly noticeable in the three areas marked on the map (Map 3). It is a strong, often unpleasant odor, stemming from the reused vegetable oils used to fry popular snacks like spiral-cut fries made from a single potato.

23 Lease of regional stands with “*osypek* and other dairy products” is conducted by Zakopane Cultural Center (<https://bip.zakopane.eu/>).

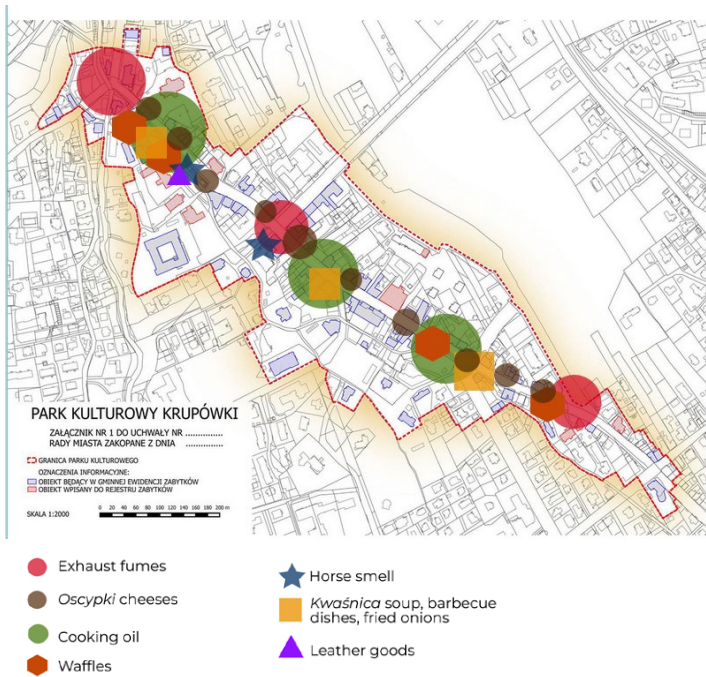
Graph 4. Smells prevalent in Krupówki (according to respondents)



Beyond the kitchen-related smells, Krupówki is filled with various “technical” odors, typically perceived as unpleasant. Increased exhaust fumes are noticeable in three specific areas, linked to the nearby traffic routes that either border or intersect the pedestrian zone. This category of odors also includes alcohol, garbage cans, human sweat, horse urine, and cigarette smoke. Occasionally, smog from restaurant chimneys or coal-fired stoves drifts onto the promenade, along with that from the nearby houses that have coal-fired heating. Additionally, the scent of diverse perfumes worn by “dolled-up ladies” (as described by a 45-year-old male informant from Podhale) can often be detected. Arab tourists – who, according to the Tatra Chamber of Commerce, make up 30–40% of all visitors to Zakopane – are particularly associated with this scent. Near souvenir stands, the smell of leather (slippers, handbags, and furs), as well as fabrics and plastics (clothing and toys), further adds to the sensory landscape.

Zones free from anthropogenic odors were also identified during the field survey (see Map 3). This does not mean that there were no odors present in these areas (between Points 3 and 4, and between Points 5 and 6), but rather that they lacked the strong, distinct characteristics of the previously described scents. Instead, these spaces offered fresher air, especially during the summer season. Interestingly, tourists from the Middle East particularly appreciated the smell of rain and the humidity, which are absent in their home regions. These areas are characterized by lower buildings, allowing for better ventilation and aeration along these sections of the promenade.

Map 3. Krupówki's smellscape



Prepared by K. Ceklarz.

Conclusion

The urban soundscape and smellscape of Krupówki, with the street's array of stimuli and disruptions, shape the everyday environment of this space. A constant presence of highlander or pseudo-highlander music, combined with the murmur of conversations from tourists and businesses catering to them, alongside the aromas of local cuisine, *oscypek* cheese, horses, and perfumes, have become integral elements of the Krupówki experience. These sensory inputs influence emotions, perceptions, and ultimately, behavior. Together, they contribute to the image and distinctive atmosphere of the area. Well-chosen, lively music sets the rhythm of life in Krupówki, fosters social interactions, and enhances the overall sense of enjoyment (Czerniawska & Czerniawska-Far, 2007). The combination of these sounds and scents contributes to the high ratings this destination receives from tourists. Visitors to Zakopane have tamed the soundscape and smellscape to such an extent that in a pandemic situation when all institutions were put on lockdown (March 27, 2021), the deserted and quiet Krupówki was

intimidating.²⁴ The silence, unnatural for the place, signified a difficult to accept change, evoking feelings of uncertainty, as if someone had stopped the hitherto stable pulse of the city.

The aural and olfactory markers of Krupówki's everyday tourist life described above form the street's distinctive intangible cultural heritage. It is it that builds the world of Krupówki experienced and interpreted by residents and tourists. The distinct experience of the space constructs the *genius loci* of this place, which is a magnet for millions of tourists. On the other hand, this excessive concentration of tourist traffic and the associated commercialization of space contribute to the progressive gentrification of Zakopane's center.

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24 “Just a few days ago Krupówki was bustling with life. Now it’s empty there. Literally empty” or “No tourists, no life” (Lupa, 2021).

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