

The Idea of Soundscapegraphy and Its Description of Old Town of Kyoto with Gion Festival

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Abstract

This paper presents the idea of soundscapegraphy and describes the soundscape of Yamahoko-cho area in the old capital of Japan, Kyoto, from various aspects based on an intensive survey of acoustic ecology. The area is famous for Gion Festival that is one of the biggest and oldest festivals in the country. Ordinary day soundscape in the area is mostly predominated by sounds of automobiles passing through the streets. But it changes in July when the festival is undertaken over the month. The soundscape comes to be predominated by various sounds related to the festival. Questionnaire survey and interview of the inhabitants tell the festival music is recognised as indication of the city and is closely connected with the inhabitant's lives.

1 Introduction

Soundscape is defined as "an environment of sound (or sonic environment) with emphasis on the way it is perceived and understood by the individual, or by a society. It thus depends on the relationship between the individual and any such environment (Truax, 1978)." Then how can we record, describe, express or represent soundscape of a certain place of today or the past? It should not solely be a task of physical acoustics but something else that requires us to present a new concept. The concept of soundscapegraphy will work to describe, compare, evaluate the soundscape and tell its change.

The objective of the paper is first to present the concept of soundscapegraphy, and secondly to present the soundscapegraphy of an old town of Kyoto as an example.

2 Soundscapegraphy

2.1 Definition

The word *soundscapegraphy* was coined by Hayashi (1999) who presumably was inspired by the word *ethnography*. It means description of soundscape and is more than sonography in the sense that soundscape is sonic environment with emphasis in the way it is perceived and understood by the individual, or by a society. The author and his colleague use similar term *sound*

monograph (Nishimura and Hiramatsu, 1999) to express a kind of monograph on recording matter for description of soundscape.

Sonography is an analogy of photography expressing soundscape of a certain area as observed by an *external* standing on the top of the highest hill in the area or even sitting in an aeroplane flying over the area. Thus it basically describes objective sonic environment.

Soundscapegraphy is an description of soundscape which consists of physical, mental and social factors of sonic environments; noises, sound events, people's attitude toward sound sources, history of the community, images of sounds heard and/or having heard by inhabitants and many other aspects and factors related to life-histories of inhabitants in the area.

2.2 Basis of soundscapegraphy

2.2.1 Objective soundscape

Objective soundscape is basically expressed as physical sonic environment that the most conveniently and conventionally is observed by means of sound level meter and/or recording devices. Isobel map of a particular *sound species*, which is defined as a group of sounds recognised as the same kind, is a typical expression of objective soundscape. One may find one or more sounds the most prominent in the area on power basis or on occupation time basis. One can also cluster places or areas into groups on the basis of the physical properties of *sound species* heard. Noise mapping with the aid of GIS can be taken as a style of expressing objective soundscape. Record of sounds heard in a place or area for a specified period is another expression of objective soundscape. Objective soundscape thus secures an advantage of making comparatively accurate description of spatial and/or temporal change over subjective soundscape.

Objective soundscape can be described without obtaining any information from the *internals* living in the area, though it would better drawn-up with the information from the *internals*. It would be in most cases a soundscape described by the *external*. However, it should be noted that objective soundscape is neither free from the theory the reporter has and/or the method he or she uses (Hiramatsu 1994) nor from the reporter's subjectivity.

2.2.2 Subjective soundscape

Subjective sonic environment is described for the most part by the *external* on the basis of the individual or community response to sounds obtained by questionnaire survey, interview etc. Documents of earwitnesses related to the sonic environment will also be beneficially used for soundscapegraphy.

Soundscape is, in a sense, sonic life-world of an individual or a community. Everybody hears or listens to sounds, consciously or unconsciously, on the basis of his or her memory integrated through experiences even since the days of a foetus. It integrates memories while being surrounded in associated sounds of life events day after day, may it be emotional or otherwise. Life histories of the individuals residing in the field area and *living* the soundscape would provide a researcher of acoustic ecology with important and useful information. By that a researcher, being in most cases an *external*, would interpret sounds the *internals* hear, understand why they are attached to or hate the sounds, and find deeper ground for his or her description of the soundscapegraphy.

In this respect, Chuengsatiansup (1999) presented an excellent example in his report where he had to describe soundscape of everyday life above all when he discussed the illness experience of women in the Kui communities of Northeast Thailand. He “examined illness experience as it was constituted in the soundscape of everyday life to reveal how the meaning-endowed sounds aggravated the feeling of being vulnerable and defenceless.”

2.3 Sources of information

For soundscapegraphy it requires various sources of mediums, and personal experiences as listed in Table 1.

Observation is primarily done by a person who records and/or reports about soundscapegraphy. He or she will listen to every sound in the area or at the place and form his or her own impression as an *external*. Acoustic measurement and recording are basic sources of information to understand relatively objective soundscape. Audio- and video-mediums would offer ample information on the soundscape at present and in the past. Questionnaire survey to and interview of inhabitants, i.e. the *internals*, are no doubt an important way to know about subjective soundscape. By means of these mediums he or she can expect to draw information he or she has not thought of or remembered.

Recorded information should be utilised with full attention. Novels, descriptions, surveys, journalistic reports, academic papers, individual journals and diaries can give us useful

information about soundscape.

From pictures, photos and objects one can reproduce the soundscape of the past as archeologists and historians read from what have been excavated.

2.4 Description

Description of soundscape is in a sense another way to receive the source of information. Quantitative description of soundscape has been done by noise control engineers as expression and estimation of the state of noise environment. Verbal description of soundscape has thousands year history in literary works, sometimes even though the writers did not aim to do so. Modern technology has made it possible to transmit soundscape to other part of the planet thousands miles away. Broadcast has brought a new soundscape in its own way. Talking film requires as a matter of course reproduction or simulation of soundscape. Reproduced or described soundscape does not draw a line of boundary with sound art. Table 2 lists the means of soundscapegraphy.

3 Kyoto Soundscape

3.1 The study field

Soundscape of a part of Kyoto is presented here as an example of soundscapegraphy.

Kyoto was the capital of Japan for over 1,000 years from 794 to 1868. It is today one of the biggest towns of the country with the population of 1.5 millions and taken as the cultural capital to be a Mecca of Japanese tradition and culture.

The author conducted a field survey in a relatively small area in the centre of Kyoto for 5 years. The study area celebrates Gion Festival, one of the oldest, the biggest and the most famous festivals over the country having been celebrated for over 1,000 years. The area is named *Yamahoko-cho* because of the parade of beautifully decorated tall floats called *yama* or *hoko*.

The festival is one of the highlight events of Kyoto held in July every year fascinating citizens and tourists, and thus is an important tourism resource for the city. From the point of view of the soundscape, is important the music played by people with flutes, drums and small gongs on the upper deck of ten of the 32 tall floats during the course of the parade.

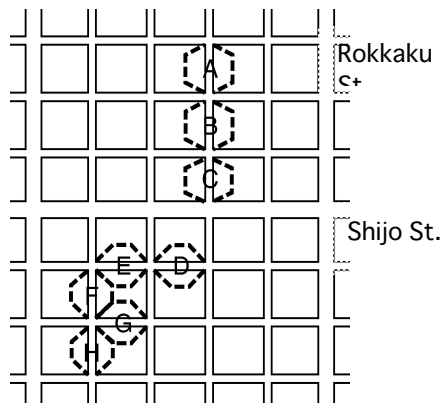
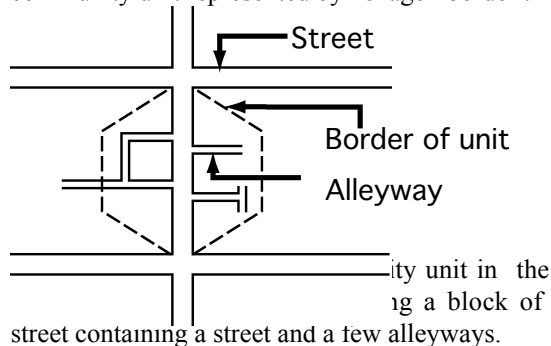


Figure 1. A map of the study area in Yamahoko-cho. Hexagons indicated by alphabets are the community units where the present survey was undertaken.

Yamahoko-cho is a fairly limited area of about 1 km² in the city centre where traditional houses stand among new buildings. The area is recognised as a very typical part of Kyoto because it is the oldest part of the town since the middle of 15th century when a large-scale civil war burnt down a majority of the city.

Figure 1 illustrates a map of the study area in Yamahoko-cho. The hexagons drawn by broken curves and indicated by alphabets are the community units where the present survey was undertaken. The units have floats and make the *yamahoko* parade on July 17 in Gion Festival.

Figure 2 illustrates an example of a community unit represented by hexagon border.



It formed itself in its long history as a neighbourhood along one block of the street with the length of 120m.

Yamahoko-cho is a commercial area of Japanese costumes. Many of the families in the traditional houses live in the area for a long time, even for generations. Most of the inhabitants in the area reside in traditional houses densely built along streets, or in alleyways where no traffic trespassing is possible.

3.2 Methods

The methods used in the study were as follows; 1) measurement of sound level and

recording of environmental sounds to observe physical properties of the soundscape, 2) collection of printed matters on Gion Festival and Yamahoko-cho to obtain the historical information of the area, 3) a free-answer questionnaire survey and interview of local people to understand the *internals'* impression and opinion about the soundscape and grasp the relationship between inhabitants and sounds. The questionnaire consisted of questions asking about the sounds they heard on various occasions related with seasons, time, nature, weather, ceremonies, business, distress, annoyance and so on. Table 4 is an abbreviated list of the questionnaire items to which they answered by writing the *sound species*.

3.3 Ordinary day's soundscape of Yamahoko-cho

During ordinary days in Yamahoko-cho traffic noise is the most prominent in the soundscape, as is usually the case with urbanised area all over the world. The questionnaire survey uncovered many different kinds of sounds related with local life and family activity are heard in the area, such as voices of hawkers, seasonal sounds, ambulance, chanting made by Buddhists, bells of temples and so on. It is interesting to know that the traffic noise is considered as an indicator of commercial activities, but scarcely as audio annoyance. People are the most annoyed by sounds of reckless driving in the weekend midnight though the sound level is considerably lower than that of traffic passing in front of their houses.

The above is the soundscape of overall Yamahoko-cho and represents that experienced by people living along the streets. People living in alleyways, on the other hand, enjoy pretty quiet soundscape.

Alleyways in the area came into being as local inhabitants built their houses in dense and small spaces to protect themselves from outsiders in the medieval era when vandalism was wide spread in the town. When an emperor who reigned in the 8th century founded the city, the streets were planned to form a grid imitating the Chinese capital in those days. Living in the pocket of alleyway is quiet and cosy according to the inhabitants. Sound levels in the alleys are about 10 to 20 dB lower than those in the streets. As a result, alleyway inhabitants scarcely hear traffic noise from the streets, but hear neighbourhood family sounds, wind, birds, temple bell and so on. It is more like rural soundscape than urban.

3.4 Soundscape during the festival

Soundscape of Yamahoko-cho reveals drastic

changes during the period of Gion Festival. The festival consists of a series of events starting on the first of July from the practice of the festival music in the evening and lasting until the end of the month. In Table 4 is shown a long note of the sounds connected to the festival events heard in the area in July.

It clearly tells us how the area is covered by different kinds of festival sounds. July is for Yamahoko-cho literally a festival month. The scenes of the festival have been drawn in pictures for hundreds years which give us rich information of what have been done during these festivals. Among the many kinds of festival events the parade of tall floats marching around the streets in the city centre on July 17th is the most exciting and impressive one. A few days before the parade, is also a popular event when hundreds of thousands citizens and tourists enjoy summer evening walks and shopping at open-air stalls in the quarter.

The festival music is no doubt the best known over the country through the media of TV and radio and is indication of Kyoto's summer. Locals are very proud of the sound.

Figure 3 indicates the zone where the music from one of the ten floats is audible. The sound level exceeds 100dB on the upper deck of the float where over 40 people play the music. The size of the affected area must have been much larger, say, one hundred years ago when houses were lower and no high building existed as there are today. Photographs taken in those days show the upper deck of tall floats was as high as the top of a house. But there is no record left or available for us to estimate the size of the zone in which the music was audible.

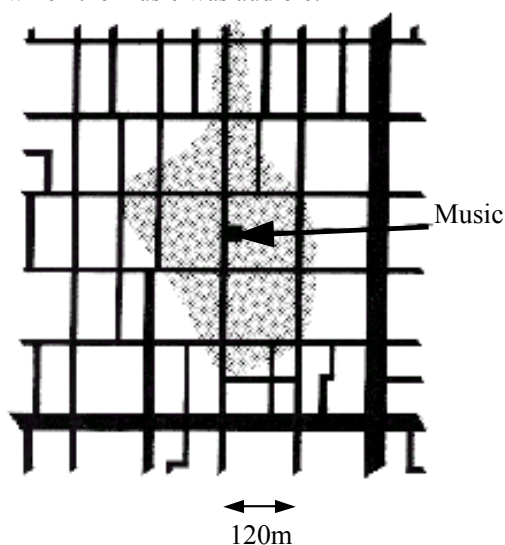


Figure 3. The area where the music of one of the ten floats is audible.

3.5 What the questionnaire survey tells

Table 5 shows the percentage of respondents who answered the festival music to the free answer questionnaire. When asked about the sounds of religion and/or ceremony around a half of the population in the units with music bands wrote festival music, while in the units without music band one third of the population did. In the case of the typical sound of summer heard in the area, the rate of description in the units without music band is one forth on average. The festival music is considered to be the indication of Kyoto's characteristic by 72% of inhabitants in the units with music bands, which is considerably high percentage as a free response. The percentage is also high in the units without music bands as much as 54%. It would be possible to say that the difference of the response rate is the reflection of the difference in the attitude toward the festival music. For the inhabitants in the units with music bands the music is by all means their own sound. In July every year during the first half of the month the bands practice nearly every evening. Moreover, most of the male inhabitants have experiences attending the bands for the most cases in their teenage years. It would not be an overstatement to say that the music is indelibly moulded in their hearts.

3.6 Interview of inhabitants

Interview of inhabitants makes our understanding of the soundscape more profound. A woman who spent ten years in bed due to tuberculosis in her youth said she was listening to sounds coming from the outside. It was one of the very limited channels she had bringing information of what was going on the outside. Birds visiting the small garden her bedroom used to face would often make noise to her joy. The festival music starting on the first of July was to her the evidence that she had survived a year. The music was her encouragement for life.

A man who loves the festival had a son who wanted to join the music band when he was very young. At the age of 14 when he was allowed to join the band he was nearly mad with joy. But he had heart disease and could not survive, thus passed away three years later. The man is still an enthusiastic member of the festival. He says every time he hears the music it reminds him of his son.

4 Concluding Remarks

What is mentioned above is just a small portion of the soundscape of Yamahoko-cho. Description of soundscape becomes abundant and fruitful when it is analysed and compiled

from a variety of soundscape and it should be because the reality of soundscape is as complex as life.

For the workers who mostly are the *externals* it is essentially important to make interviews to the *internals* and listen to their life histories if they wish to avoid their work being superficial.

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Table 1. Sources of information for soundscapegraphy

Observation	Acoustic measurement/recording/calculation of sound level
	Questionnaire survey/interview
	Audio- & video-mediums
Record	Documents (novel/report/journal/diary/paper)/picture/photo/map
Others	Sound objects

Table 2. Means of soundscapegraphy

Quantitative	Graph/table/formula
Verbal	Voice/document/audio & video mediums
Pictorial	Map/picture/notation/design drawing

Table 3. A note of the festival soundscape of Yamahoko-cho

Day	Time	Sound & Event
End/June		Voice/“Festival is just around the corner
30/June	1300	Preparation for practicing music.
1-6/July	1730-2100	Practice of music / preparation for festival/ children's voice.
10/July	1000	Kippuri ceremony
12/July	0600-1600	Building the float/ Raising the pine tree/ carpenter's voices
13/July	0830-1500	Trial of float parade/ voices of children and mothers music
	1900-2130	Practice of music
14/July	0930-1000	Fire drill/ siren
	Afternoon	Booth keepers prepare/ walkers
	1900-2130	Music / bustle of open-air market
15/July	1900-2130	Music / bustle of open-air market
16/July	1100-1140	Ceremony/ music and voice of Shinto priest
	1400	Mountain priest/sound of trumpet shell
	1800-2200	Music
	2230-2400	Music parade
	All day	Bustle of open-air market
	Midnight	City workers
17/July	0900	Float parade Music and songs / screaming noise
	1400	Dismantlement of float/ carpenter's voices
18/July	0800	Storing float pieces

Table 4. Questions regarding sounds heard in Yamahoko-cho

Question item	Example of Contents
Noise	motor cycle/automobile
Sound of season spring/summer/autumn/winter	bird, cicada, festival music, cricket, Buddhists' chanting
Sound of time	tofu vender, temple bell
Sound of business hawker/commercial activity	noodle stall, collecting used paper street vender
Sound of ceremony religion/festival/ceremony	festival music, Buddhist's chanting, temple bell
Sound of animal	bird/dog/cat
Signal sound	ambulance

Table 5. Percentage of description of the festival music in free answer questionnaire survey regarding the sounds of religion & ceremony, of summer, and indication of Kyoto

Community unit	Community unit having a float with music band				Community unit having a float without music band					
	A	B	C	average	D	E	F	G	H	average
Regarding religion	69_	58_	56_	49_	50_	13_	29_	43_	27_	33_
Regarding summer	50_	52_	56_	52_	23_	33_	25_	27_	22_	25_
Indication of Kyoto	75_	71_	75_	72_	64_	54_	50_	50_	55_	54_
Average	57_	64_	59_		45_	33_	35_	40_	35_	
Average over units		60_					37_			45_