

Acoustic Communities Represented: Sound preferences in the Scottish village of Dollar

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Abstract

Sound Preference Tests were applied at Strathdevon Primary School in the Scottish village of Dollar to study the preferences on the everyday sound and local sonic environments. The study draws on theory of acoustic communication and anthropological concept of dirt concentrating on the liked and disliked environmental sound. The answers elicited by questionnaires were analyzed and contextualized with previous research. The research shows that personal preferences are affected by the enculturation of the individuals, shared values of the community and the changes in acoustic and electroacoustic sound sources. Sound Preference Test and other methods presented in the article can be used for pedagogical purposes, too.

1. Introduction

Ubiquitous but often unnoticed sounds make the research on everyday sonic environments challenging for anthropologists, ethnomusicologists or anyone studying soundscapes in urban and rural contexts. While conducting a fieldwork on environmental sounds, especially meanings related to them, it is crucial to not only to focus on acoustical parameters of a given place but also to consult the people who are living within soundscape being researched. There is no such thing as a universal approach to listening; every individual, every group and every culture listens in its own way (Augoyard and Torgue 2008, 4). Drawing on this it is evident that applying qualitative methods such as interviews to fieldwork are not only highly recommended but they should be integrated to any research aiming to construct a comprehensive picture on any given soundscape.

Furthermore, it needs to be taken into consideration that soundscapes are not only constructed and interpreted in real-life situations by the people living within a sonic environment, but also represented in various ways such as in face-to-face discussions, in printed texts and electronic

media. This poses a challenge for the researcher interested in community attitudes towards soundscape: in which ways acoustic communities are being produced symbolically and represented and how they reflect the construction of soundscape in study. One way to overcome this obstacle is to apply different fieldwork methods developed among scholars of acoustic communication and soundscape studies. These methods include Sound Preference Test and Recorded Listening Walk.

Sound Preference Test was invented by the multidisciplinary *World Soundscape Project* at Simon Fraser University in 1975. The method was applied in *Five Village Soundscapes* project and further developed by *Acoustic Environments in Change* and the *Soundscapes and Cultural Sustainability* projects (Järviluoma, Kytö, Truax, Uimonen and Vikman 2009; SoCS 2011). The two research projects are intertwined. *Five Village Soundscapes* was the first comprehensive and comparative research studying various and diverse acoustic environments in Europe in 1975. The continuation research *Acoustic Environments in Change* was carried out twenty-five years later again to be followed by *Soundscapes and Cultural Sustainability* project in 2009 (see chapter three).

Sound Preference Tests were carried out during the fieldwork in all villages, including the Scottish village of Dollar thus enabling a long-term comparison on the pleasant and unpleasant sounds among different generations. (see Järviluoma, Kytö, Truax, Uimonen and Vikman 2009; SoCS 2013.) A more recent Recorded Listening Walk Method (Uimonen 2011) was first carried out as a pilot study at the University of Tampere, Finland in 2010. Dollar field trip presented in this article was planned after this pilot study with the goal of documenting the environmental sounds of the village and to analyse them in collaboration with the members of the community. Another goal for the Dollar research was to further develop the methodology of soundscape studies and to include pedagogical methods to the fieldwork in order to make the everyday sounds more audible for anyone interested.

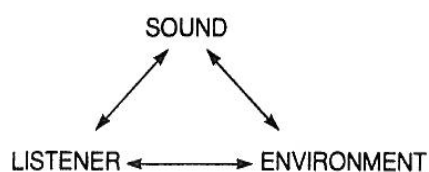
Theoretically, the article draws on the concept of acoustic community defined as "any soundscape in which acoustic information plays a pervasive role in the lives of the inhabitants (Truax 2001)". The article elaborates on how the acoustic community of Dollar has transformed sonically over the last quarter of a century, and more specifically concentrates on the how the members of the micro community of the local Strathdevon Primary School listen to and construct their sonic

environments. The empirical part of the paper introduces Sound Preference Test carried out in 2011 among school children paying special attention to how their acoustic communities are represented. The outcome is then presented with the results of the previous test enabling a comparison of liked and disliked sounds across three different generations.

Before presenting the results of the field work, a theoretical background and key concepts are defined including acoustic communication, acoustic community and anthropological concept of dirt as a "matter out of place" coined by Mary Douglas (Douglas 2000; Truax 2001). The theoretical definition is then combined with the results from previous Sound Preference Test carried out in Dollar in 1975 and 2000 (more detailed information can be found on Järviluoma, Kytö, Truax, Uimonen and Vikman 2009).

2. Acoustic Communities

Study of *acoustic communication* is concentrating on the exchange of sonic information including the cognitive processes that enable this information to be understood. The approach is clarified by the triangular relationship between sound, listener and environment. Hence, *acoustic community* stands for 'any soundscape in which acoustic information plays a pervasive role in the lives of the inhabitants (no matter how the commonality of such people is understood)' (Truax 2001, 11–12). Those living within an acoustic community are not only interpreting sonic information but also constructing their soundscapes through their activities. The model for acoustic communication shows how sound, listener and environment are interactive and intertwined (figure 1).



Model for acoustic communication (Truax 2001, 12)

The concept of the acoustic community is further elaborated by the fact that sharing of acoustic information within an acoustic space can be quite variable and it does not always involve simultaneity of any given aural experience. A given signal can be heard at regular times by various members of the community and by other member at other times, but they share a similar experience and identify and interpret the particular sounds. These communities may be very localized, such as a home, workplace, school etc. (Truax 2012.)

Soundscape competence is defined as “tacit knowledge that people have about the structure of environmental sounds, knowledge that manifests itself in behaviour that interprets such sound and acts upon it”. Soundscape competence allows us to understand environmental sounds as meaningful. It can be further divided between *general* and *specific* soundscape competences. The former is referring to general knowledge of a given area and the latter to special knowledge and the meanings of certain sounds. (Smith 1993, 401–402; Truax 2001, 57–58.)

Construction of acoustic community and soundscape competences can be further elaborated by introducing communication scholar James W. Carey’s (1994) *transfer* and the *ritual models* of communication. According to him communication is not only shaping the relationship between the environment and the members of the community, but also creating a social commonality (Ridell 1993, 10). This is what aforementioned *acoustic community* is by definition: any soundscape in which acoustic communication plays a pervasive role in the lives of the members of community. The notion is parallel to Raymond Williams’ ritual view of communication. In this context communication is linked to terms such as “sharing”, “participation”, “association” “commonness” and “communion”. More than towards the extension of messages in space, the ritual view of communication is directed toward maintenance of society in time and the representation of shared belief. (Carey 1989.)

Knowledge concerning sounds of acoustic community and the meanings connected to them can be further theorised with the help of terms of *communication*, *culture* and *meaning* by saying that culture *is* communication. Communication consists of symbolic forms and meanings. Human communication presupposes shared cultural meanings, so culture cannot exist without

communication. The only difference between communication and culture lies in how they are evaluated: “culture” stresses the structures of symbols and actions whereas “communication” stresses the processes of interaction – the function of symbols. (Fornäs 1998, 171–172.)

The communicational and cultural criteria are met when these notions are evaluated from the perspective of acoustic communication research. The interactive and symbolic meanings are very much present in ordinary environmental sounds, but also when something extraordinary takes place within the community. This can be elucidated by an example from Scottish village of Dollar. The acoustic communication in the village was altered interactively and symbolically in year 1990 when village life was connected sonically to the global geopolitical issues. Before the Gulf War the jets and propeller-driven planes from the Royal Air Force station located 65 kilometres east of Dollar in a small town of Leuchars were practicing low-flying along the valley and close to the village changing the soundscape radically with the sounds of their engines (Uimonen 2009, 205).

3. Douglasian dirt and semantic differential

Research on acoustic communities includes individual, social and cultural values connected to environmental sounds such as the liked and the disliked or any other sound heard within community. They can be approached theoretically and methodologically by applying anthropological concept of dirt to research and by using semantic differential in evaluating the environmental sounds.

Anthropologist Mary Douglas defines dirt as a matter out of place or something we find inappropriate in a given context. This leads to a conclusion that communally disliked sounds are sounds in a wrong place. Also the dimension of time needs to be added to definition, since same sounds can have a different meanings depending on the time of the day when they are being heard. Furthermore, whenever dirt exists, there exists some kind of cultural or communal order. Cultures have their conceptions of dirt and about the overall cultural structure, which should be maintained by different means. (Douglas 2000, 85–86, 236; see also Bailey 1996; Uimonen 2005.)

In addition to the members of the community, who are pro order/equilibrium, there are also those who are breaking or disturbing the sonic order of the acoustic community. The noise making of the rule breakers is usually normalized to the order defined by the majority of the community. At one point the villagers of Dollar were disturbed by the noise of the youngsters made at nights in the centre of the village. They were causing anxiety about damage to property or that villagers in the nearby houses could not enjoy a proper sleep. However, the nuisance was temporary since little by little the “youngsters became a bit more responsible”, as one informant put it. In this case there was no need to take official action, since according to local authorities no noise complaints were put on the record. (Uimonen 2009, 199.)

Drawing on this, defining pleasant, unpleasant and even bearable sounds is not just about the individual preferences but also about community values and the predominant power relations: who has the right to define the pleasant and the unpleasant and to make these preferences audible by passing laws and to oversee that these laws are being obeyed (see also Corbin 1998).

When soundscape changes, the definitions of pleasant or unpleasant sounds are prone to change. This leads to constant re-definition and re-articulation of Douglasian dirt. Conventionally, these disturbing sounds are approached quantitatively by the noise measurements. With the help of decibel meter scale the subjective and undesirably dirty sounds can be disinfected to objectively measurable noise. Thus the problems of undesired sounds – if there are such – are handed over to organizations of specialists typical to modern society. However, it is not only the specialists who are controlling the sound making of the members of the acoustic community or re-articulating the concept of noise. Also the individuals are enculturated to the society and to its rules and norms and are thus spontaneously, willingly or unwillingly controlling their own sound making.

Light was shed on the the re-articulating of disturbing sounds of Dollar during a preliminary study of the Acoustic Environments in Change project. The elderly couple interviewed in 1999 pointed out that voices and shouts of the intoxicated young women at night-time would have been considered inappropriate a quarter of a century ago. This was underlined by the fact that at those times women were allowed to enter to bars or pubs and to consume alcohol only when accompanied by their husbands. (Uimonen 2009, 199.) Not only is the change of soundscape

reflecting the values of the community but more specifically it also brings forth the question on what kind of behaviour is considered to be appropriate to different genders.

Douglasian dirt can help in questioning the concepts of something or someone being “liked” or “disliked” and to culturally contextualise the spatiotemporal character of the sonic phenomena of a given community. However, it should be remembered that concepts of liking and disliking are multifaceted and ranging from appreciation to loving or from dislike to disgust or hate.

One way to solve the conceptual problem on methodological level would be to utilize the semantic differential method applied in assessing the built environment. The semantic differential can be used in eliciting the connotations and meanings attached to the sounds by of a given acoustic community. Also, sound preferences can be approached systematically with the polar oppositions instead of the personal likes and dislikes, which may differ considerably from each other.

Semantic differential method has been carried out by asking the informants to evaluate pictures of landscapes with the help of the adjective list of opposing adjectives such as beautiful-ugly, active-passive etc. The adjectives are arranged across a numerical range of seven points (1 to 7) with the purpose of to find out how well the adjectives can be used in describing the landscapes portrayed. In soundscape studies this method has been applied by recording the local environmental sounds, by playing them to informants and asking them to give their opinion on these sound events and soundscapes. (Uimonen 2005, 109.)

The semantic differential should not be considered as a substitute or a separate method especially when sounds and their meanings are being scrutinized. Semantic differential can raise connotations which would otherwise be difficult to recall from memory and thus hard to verbalise. Polar oppositions can also serve as a catalyst capable of evoking emotions and memories when connected to the sounds of the environment. Furthermore the semantic differential can also be applied to a sound preference test when a large number of people are being surveyed. (Kang & Zhang 2009; Uimonen 2005, 110.)

4. European Villages and Recorded Listening Walks

In 1975 Canadian World Soundscape Project research group carried out a first large-scale soundscape research in Europe called *Five Village Soundscapes*. Twenty-five years later, the Finnish *Acoustic Environments in Change* research team visited the villages of Skruv, Bissingen, Cembra, Lesconil and Dollar villages in Sweden, Germany, Italy, France and Scotland, respectively. In 2000 a Finnish village of Nauvo was added as sixth village to research.



Six villages studied (Järviluoma, Kytö, Truax, Uimonen & Vikman 2009, 17)

Both research teams were applying quantitative and qualitative methods in fieldwork while researching sonic environments. The methods included listening walks and aforementioned sound preference tests (Schafer 1977; Järviluoma, Kytö, Truax, Uimonen and Vikman 2009).

In general, the recurring qualitative phenomena can be coded to statistical representations. After this the results of the quantitative analysis can be used as leads. However, it should be remembered that the essence of the qualitative research is the interpreting of the meanings. (Alasuutari 2011, 53.)

This was applied in the methodology of *Acoustic Environments in Change* study. The acoustic rhythms and densities of the villages were studied by collecting numerical data on traffic, signals and all other acoustic event in different areas of the villages. Also, the listening walks were applied during which the analytical listening and systematic classification of environmental sounds was carried out by dividing the heard sounds to ten categories. The categories were motor traffic, human traffic (e.g. footsteps, bikes), voices, indoor human activity, outdoor human activity, domestic animals, electroacoustic sounds, signals (non-regular), other transportation sounds (brakes, doors, ignition, etc.), and planes (Uimonen 2011, 258). It goes without saying that this quantitative information on acoustic phenomena was often brought up and discussed in personal and group interviews and thus integrated to qualitative research.

This utilising of qualitative and quantitative data was also pointed out in *Acoustic Environments in Change* publication, when the Sound Preference Test was evaluated. It was clear that when reading the percentage from the tables one needs to bear in mind that they are not meant for statistical analysis but to arrange information for more profound qualitative analysis. (Järviluoma, Kytö, Truax, Uimonen and Vikman 2009, 226.)

Another methodological goal for *Soundscapes and Cultural Sustainability* project stated in research plan was to organise courses and "Ear Cleaning" listening exercises at local schools. The exercises were combining pedagogical actions, field research and participatory methods: the children were observing and documenting their own sonic environments with most of the classes held outside the school building. (SoCS 2013.) Furthermore, the reflective methods such as the Sound Preference Tests and listening walks were applied.

Recorded Listening Walk is a method for studying the meanings of environmental sound with the help of recording equipment, documenting the verbal descriptions of the recording event and by filling out the questionnaires. It was first carried out at University of Tampere, Finland, in order to find out how individual recordists experienced their soundscapes, did they want to change their sonic environments and how recording event changed their modes of listening. Some of the comments on recording event compared to everyday listening were as follows: 'You tend to listen in a more analytical way'. 'You seldom listen in everyday situations'. 'The mode of listening is more

analytical than everyday listening', 'After this kind of task, you walk in your everyday surroundings with your ears open'. (Uimonen 2011, 260.)

As a result, better sound insulation and acoustics were suggested as desirable changes in school premises. In general, the recordists wanted to get rid of the hums and buzzes and retain the sounds of human interaction. The pilot research also shows, that interpretation of soundscape is affected not only by these factors, but also how individuals have been educated or how they have educated themselves to listen to and interpret sounds - musical or other - and how they apply this competence to environmental sounds. (Uimonen 2011, 260.)

In Dollar Recorded Listening Walks were applied in different ways: at home and in the schoolyard. First, sixteen pupils of Strathdevon Primary School took part in morning listening exercise. The participants aged of seven and eight were listening to their everyday sounds and also making sounds in the schoolyard in groups of fours. The pupils were asked to describe verbally sound-making to someone who is not present to witness what is actually happening during the recording event. These few-minute soundwalks were recorded and edited to sound samples. As a result a diverse compilation of rhythms and timbres of the sounds that usually go unnoticed were documented: soft polystyrene foam, crisp packets, empty plastic bottles, railings, different surfaces under the feet, sounds of the swing and so on. (SoCSblog 2011.)

Document 1. Making Everyday Sounds More Audible (SoCSBlog 30 April 2011)

Second, three 10-year-old students of Strathdevon Primary School took portable digital recorders and earphones home. They were advised to document their soundscapes by searching for the sounds they like and dislike. In order to make the documents identifiable, they were asked to tell their names and what they were documenting to the recording. Next day the outcome was introduced to the rest of the class who participated by telling their opinions and commenting on the sounds. The recordist described where in Dollar area the recording homework was carried out how they thought they succeeded in their jobs. (SoCSblog 2011.) The liked sounds were the ones of laughter, running water and crunching leaves. The disliked were a revving car, high heels on the pavement and voice of a little brother. Besides the recording event, a new and somewhat exiting sound-related experience for the recordists was to hear one's voice recorded for the first time.

This was actually somewhat surprising in this day and age of smart phones and computers with voice-recording options. The detailed description of the Recorded Listening Walks and Homework Recordings including the sound samples and pictures can be found on the Dollar Soundscape Blog (SoCSblog 2011).

Document 2. Homework Recording (SoCSBlog 2011, 28 April 2011)

5. Sound Preference Tests at Strathdevon Primary School

A person's relation to sonic environments is affected by several individual factors such as how they are enculturated to their acoustic communities, how they have been educated or have educated themselves to listen to music or environmental sounds. This enculturation lays a foundation on how the values of a given acoustic community are reflected in sound preferences. Although music education is integrated to contemporary curriculums at schools, education on environmental sounds seems to play a minor if not a practically non-existing part (Kankkunen 2013¹). It should be noted, though, that the issues of sounds had already been taken into discussion at Strathdevon Primary School. A place called Quiet Garden located in school area was characterised as "the place for peace in the playground" (SoCSblog 2011).

While conducting Sound Preference Test the children were advised to write down the sounds they find pleasant and unpleasant. Pupils of Strathdevon Primary School participated on test on Thursday 28th April 2011. The informants were inquired to write down five sounds they liked and five sounds they disliked and where in Dollar these sounds could be heard (Schafer 1977; SoCSblog 2011.)

The most *pleasant* sounds according to the 10 to 11 years old (31 pupils) were the sounds of the Dollar Burn and the birds. Dollar Burn is a small river that streams in the middle of the village. Its sounds can be heard distinctively in the yard of Strathdevon Primary School. According to the answers the singing of birds can be heard in Dollar almost everywhere. Other favourite sounds mentioned were the rustling of the leaves of the trees.

¹ At least Finnish education system does not recognise the teaching on environmental sounds

The results equal to answers of 1975 and 2000, when the aforementioned sounds were selected to be the most pleasant, too. An explanation for this might be simply the fact that the sounds of the birds are practically omnipresent in Dollar. This was also as stated in the answers. Again, the popularity of the Dollar Burn could be explained by the omnipresence of its sound: it is clearly audible in the schoolyard of Strathdevon Primary school. Sounds of the nature were preferred also in other five villages, probably due to the same reason: they were very much present in these acoustic communities, such as sounds of sea and seagulls in Lesconil, France or birds in Skruv, Sweden (For more comparison, see Järviluoma, Kytö, Truax, Uimonen and Vikman 2009).

The most pleasant sounds are presented in table and compared to information collected from *Five Village Soundscapes* and *Acoustic Environments in Change* projects in 1975 and 2000.

Most Pleasant Sounds

	1975	2000	2011	1975	2000	2011
birds	19	11	25	26 %	14 %	18 %
Dollar Burn	13	6	31	18 %	8 %	22 %
rustling leaves	13	6	18	18 %	8 %	13 %
water	10	1	0	14 %	1 %	0 %
clinking coins	8	0	0	11 %	0 %	0 %
rain	5	0	1	7 %	0 %	0 %
wind	5	6	4	7 %	8 %	3 %
<i>Other sounds</i>		49	63		62 %	44 %
signals		6	6		8 %	4 %
voices		9	7		11 %	5 %
music		5	13		6 %	9 %
nature		5	-		6 %	0
objects, action		7	15		9 %	10 %
technology		13	5		16 %	3 %
animals		4	17		5 %	12 %
Total	73	79	142	100 %	100 %	100 %

Category for *other* sound provided some interesting preferences, not to mention that the percentage of these sounds was remarkably high. In 2000 over sixty and in 2011 over forty percent of the pleasant sounds were classified in this category.

First music. As stated in study of 2000, it is difficult to believe that children in 1975 were not listening to any kind of music. The explanation for this lies in the fact that possibly musical sounds were not considered to be included to sound preferences. (Järviluoma, Kytö, Truax, Uimonen and Vikman 2009; Uimonen 2012.) Furthermore, the answers are in strong contrast with the dissemination of the new music technology of the 1970s. Compact cassettes introduced in 1963 were revolutionising the personal and collective music listening, home taping and sharing of music practically everywhere in the world during the 1970s. It would be hard to imagine that these innovations would have left Dollar untouched. Drawing on that it does not come as a surprise, that twenty-five years later radio and music were mentioned on the list of pleasant sounds.

Also in 2011 music and mobile listening equipment were mentioned in many answers. The favourite artists (Cyrus, Fred) were considered pleasant; also different listening devices and ways of disseminating music such as radios, iPods and internet music services were mentioned, including YouTube. It goes without saying that new technology becoming popular among the children has changed not only acoustic communities but also music sharing. According to recent study American teenagers listen nowadays most of their music from YouTube surpassing radio and CDs (Guardian 2012).

Additional pleasant sounds included sounds of animals and voices and from category *objects/action*. Apart from a single wild animal ("fox"), the animals were mainly domestic ones, such as cats, dogs, sheep on a local golf course and one gecko. Human sounds such as laughter, chatting and whistling were considered pleasant as well. A minor acoustic community of Strathdevon Primary School was represented by sounds of ripping paper and scissors. Also a novel sound event presumably spread to different parts of the world is plastic bubble wrap, because of entertaining popping sound it makes when the bubbles are being deliberately deflated.

The most *unpleasant* sounds according to the 10 to 11 years old children were traffic including loud engines. The percentage was even higher in 2011 when compared to previous answers. In

2000 fifty-four per cent of the unpleasant sounds were human voices. Twenty-five years earlier it was only screaming that was disliked of the human sounds. In 2000 disliked human sounds included neighbours, mother's voice and a shouting teacher among others. Furthermore some sounds of their own families were annoying the respondents. The human voices and sounds were disliked by the children in other villages as well. For instance in Finnish Nauvo, the boys of the age of 14–15 who had their ongoing love/hate relationship with girls and their voices (for more comparison, see Järviluoma, Kytö, Truax, Uimonen and Vikman 2009).

In 2011 the percentage of unpleasant human sounds had dropped to twenty-five per cent of all answers. Category "voices" included people shouting, screaming, swearing and crying babies. Alongside with physical response to loud sounds the answers are telling about upbringing: what you are supposed to say and what not such as profanities or swearing. Another explanation for disliking human sounds can be the fact that that school children spend most of their days in environment where acoustic community is shared with other sound-making people: teachers, schoolmates, siblings and the rest of the villagers. As with sounds of nature, the references for the liked and disliked sounds are repeatedly selected from soundscape you live within.

The most unpleasant sounds are presented in table and compared to information collected from *Five Village Soundscapes* and *Acoustic Environments in Change* projects in 1975 and 2000.

Most Unpleasant Sounds

	1975	2000	2011	1975	2000	2011
traffic	5	6	31	14 %	8 %	23 %
chair scraping floor	5	2	0	14 %	3 %	
screeching brakes	4	0	0	11 %	0 %	
chalk on blackboard	4	1	7	11 %	1 %	5 %
door slam	3	1	0	8 %	1 %	
desk banging	3	0	0	8 %	0 %	
rain	3	2	0	8 %	3 %	
screaming	3	0	0	8 %	0 %	
squeaking	3	0	0	8 %	0 %	
styrofoam	3	0	0	8 %	0 %	
<i>Other sounds</i>		59	96		83 %	71 %

nature		3	0		5 %	
objects/action		9	36		16 %	26 %
technology motor traffic		6	0		11 %	
animals		3	14		5 %	10 %
signals		7	13		12 %	10 %
voices		31	33		54 %	25 %
Total	36	71	134	100 %	100 %	100 %

High percentage of disliked sound in category *objects/action* included building sites, domestic and, again, sound of schools such as knives on plates, paper ripping, pencils on desk, sharpeners scraping on tables, nails on chalkboard and the paper cutter with the sharp cutting blade and a crunching sound (“gillotene at school”).

“Rain all the time” was not liked. Also, upbringing is notable here: splashing on muddy puddles is supposedly something that pupils are not allowed to do and thus considered a disliked sound. Another disliked sound is “TV that no-one is watching”, which can be explained by parents telling their children to switch off the television. Signals such as ambulance sounds, alarm clock and car alarm were not liked either. Other sounds considered unpleasant were the sandpaper and rolling baskets in the local grocery store. Also, barking dogs and birds in the trees (sound that were actually liked very much, too).

The international music industry and the music tastes of the children were present in the answers. Loud and noisy music was disliked in general; pop star Justin Bieber in particular. (SocSBlog 2011.) Disliking Bieber can be explained by the change of the youths’ media use, which includes forming of various fan groups or followers of certain artists. Popular music is used in constructing one’s identity and belonging to a certain group. The meanings attached to a certain piece of music or artists might cause the informants to give their answers in more emotional way than what they would do when evaluating the non-musical environmental sounds. Also, music is what you select deliberately to listen to unlike environmental sounds thus making it a special acoustic sound phenomenon compared to other sounds.

For comparison, the Sound Preference Test was carried out with the 7-year-old children, too. In their age group the most *liked* sounds according to the 7 years old (27 pupils) were the sounds of the birds “in trees”, “in garden” and “everywhere”. Other sounds mentioned were quite diverse including rain, sounds of cars, rustling of the leaves and “barking in my house” (pet dog, presumably). Music was liked both indoors and outdoors i.e. “in the car” and “Dollar Academy Band”, the latter referring to the Dollar Academy Pipe Band, which is a local bagpipe orchestra rehearsing outdoors during summer semester.

The most *disliked* sounds according to the 7-year olds were, again, voices and human sounds: people shouting and screaming at school and home (teacher, parents). Whispering in the house was not liked either, not to mention the siblings (“Sally asking me to play when I’m reading”). Disliked sounds included cars, lorries and engines. Also, wind on the window, turning pages at school, kettle boiling, cracking of glass were mentioned. The older ones pay more attention to the traffic sounds not present most of the time whereas the little ones are more sensitive to shouts, screams and cries around them. In the school environment, the high-pitched sound of the blackboard was equally disliked. Music was evaluated both qualitatively (“bad music”) and quantitatively (“really loud music in my sister’s room”).

6. Conclusion

The outcome of the *Soundscapes and Cultural Sustainability* project was elucidated as follows: to develop theory and methods of participatory cultural ethnography and have practical final outcomes. As a result the degree of soundscape awareness in the regions studied will be at higher level than before. Special attention was paid to young people and children. With this in mind, the research and fieldwork was carried out at Strathdevon Primary School: to make the everyday sounds more audible and to underline, that soundscape consists of diverse sound that construct the everyday life of the children.

In this article this was approached theoretically with the model of acoustic communication. Methodologically this goal was partly achieved by introducing the listening walks combined with soundscape recordings and the Sound Preference Tests. The latter was utilised to find out how

the changes in acoustic environment are reflected in sound preferences. As the model of acoustic communication shows, the individuals are not only interpreting but also constructing their acoustic environment: how children have been acculturated in making sounds and evaluating sounds as members of their communities.

The sound preferences of the acoustic communities are representations of the soundscape of a given place. They are not notions of the pleasant and unpleasant sounds to be generalised. Dollar Burn was considered a pleasant sound by the respondents. Objectively it is debatable, if that is a typical Dollar sound, since any river may have these same sonic qualities. However, for an insider living within a given acoustic community it certainly is, and in research should be treated as such. When examining the relationship between sounds and spaces, it should be noticed that alongside with spatial and temporal conditions of physical signal propagation, sound is shaped subjectively by the auditory capacity, attitude, psychology and culture of the listener. As previously stated every individual, every group and every culture listens in its own way (Augoyard and Torgue 2008, 4). These qualitative data can then be combined with the quantitative ones such as measuring sound propagation or acoustic properties of a given space.

The sound preferences of the Strathdevon Primary School pupils are reflecting the enculturation and upbringing and thus making the Douglasian dirt visible in the answers. On the other hand, from time to time children are not "politically correct" in evaluating the sounds they like and dislike. Disliking a sound of eating with your mouth open is clearly something what the children are advised not to do; disliking the sound of a little brother is clearly a personal preference. Interestingly, when the recording of the little brother's voice was played as a disliked sound, the whole classroom found it highly amusing. In general it is not appropriate to dislike you sibling, so what the classroom heard was *actually* and personally a very unpleasant sound, although at the same time somewhat hilarious.

The increase of individual and collective music consumption was visible when compared to year 2000. Unfortunately we did not have information from year 1975 at our disposal. However, there is a potential pitfall when you ask the pupils to talk about music as a sound preference, since instead of evaluation of environmental sounds you might get the list of the favourite bands or

singers the pupils like - or the ones they don't like. However, this way you might get quite realistic picture on what a soundscape of today's teenagers actually is.

This also raises a question on what is the commonly shared soundscape if we evaluate it in terms of acoustic and electroacoustic communities? With the iPods, cellular phones and other electroacoustic devices becoming popular, the acoustic and electroacoustic communities are definitely overlapping and communities have become fragmented not only individually but also socially. The questions of defining the borders of private and public soundscapes and acoustic communities in the future are thus highly relevant, too.

Also, we should be aware that the ideals of preferable sonic environment are in some cases presented by the adults to children. Sometimes pupils tend to give the "right" answers, which is somewhat evident in place like classroom, where you are *supposed* to give right answers when you skills and education is being tested. In one of the European village schools the teacher had just talked about noise and tinnitus, so not surprisingly the most disturbing noise was considered to be tinnitus. The answer was not stated in other European schools studied (Järviluoma, Kytö, Truax, Uimonen and Vikman 2009, 228). However, this proves that the school children are actually listening what their teachers are telling to them, which of course provides a prominent channel for the future sound education.

Sound preference test were not accomplished in laboratory settings, which means that some of the results are reflecting the environment where the test was carried out. It did get biased towards sounds heard at school but on the other hand this provides an opportunity for acoustic design in getting rid of the unpleasant sounds. This is parallel to the principle for the soundscape studies in the first place: to research sonic environment in situ with the informants in order to provide tools for perceiving, analysing and taking the necessary steps in improving their soundscapes if the informants find that preferable.

Also pedagogical aspects should be taken into consideration and developed further. This could be used in collaboration as part of music education in pointing out the elements of music that can be found in everyday surroundings. Another way of improving the knowledge of soundscape - if such a need exists - would be to integrate so-called "ear-cleaning/listening exercises to curriculum.

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