

THE SOUND ARCHIVE AT SCHOOL: A PROJECT TO PREVENT VIOLENCE IN EARLY CHILDHOOD EDUCATION

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I. Sound and listening

Recorded sound is a base of information and knowledge, the testimony of persons and societies; an intangible memory that will show future generations what we are. Throughout history, the sounds people hear have changed causing societies to change their listening habits.

From the perspective of sound, the pre-industrial society was characterized mainly by human and natural sounds, while the industrial society was characterized by the sounds of technology and the emergence of noise. In the post-industrial society natural and human sounds have moved to second and third level to give prominence to those sounds generated by technology.

About 150 years ago, it became possible to record sound. Since then there has been continuous developments in sound recording and reproduction equipment. These developments have provided improvements in the quality of reproduction, surround sound, and portable equipment. This has changed the habits of listening. One of these new habits is the act of listening at high volume levels. This is part of a common problem of industrialized societies: noise.

Recent research has studied the relationship between high levels of sound, which is considered noise, and violence as social expression. "Acoustic violence is an expression of modern society — a lack of solidarity and respect towards fellow human beings and to the environmental habitat."¹¹⁶ Pilar Lago has said, "Acoustic violence is a new form of social violence."¹¹⁷ Violence levels are increased in noisy spaces — spaces in which communication is nearly impossible. For example, massive spectacles that utilize loudspeakers, music at high volumes, and fireworks affect people who are powerless against such aggression. Transit for a long time in a traffic environment can cause aggressive behavior by drivers.

Noise pollution can cause anxiety, stress, nervousness, nausea, headache, emotional instability, tendency to argue, sexual impotence, mood changes, increased social conflict, neurosis, hysteria, and psychosis.¹¹⁸ Also prolonged exposure to noise can affect health, interfere with communication, and affect memory and learning.¹¹⁹ Furthermore, long exposure to unwanted sounds can cause a distortion of sound aesthetic appreciation, leading to the acceptance of general industrial sounds as normal, for example, the sound of cars, which often leads to a counter-perception that natural sound environments are unhealthy. With these loud noises in our industrial and post-industrial landscape — listening to the television at high volumes, speaking loudly, listening to very loud music — we isolate ourselves. We become noise producers, unconsciously contributing to the generation of spaces characterized by noise pollution, which generates a form of violence: acoustic violence. Acoustic violence — intense noise that affects our health — is just one form of violence through sound.¹²⁰ At this point, what can we do as sound archivists and documentalists to counter acoustic violence?

116 ASOLOFAL. III Jornadas Internacionales Multidisciplinarias sobre violencia acústica, *Asociación de Logopedia, Foniatría y Audiología del Litoral*. Rosario, Argentina, 2000.

117 Lago Castro, Pilar. La contaminación sonora: una nueva forma de violencia social. Universidad Nacional de Educación a Distancia. Facultad de Educación. España, 2003.

118 Goines Lisa and Hagler L. Noise pollution: a modern plague. *South Med J*. 2007 March; 100(3):287-94.

119 Guelman, Laura, 2013. *Escuchar música alta puede afectar a memoria y aprendizaje*, entrevista publicada en 20minutos. Available at www.20minutos.es (December, 2014).

120 Miyara Federico. Violencia acústica: ¿Nuevo o viejo trastorno?. Available at <http://www.fceia.unr.edu.ar/acustical/biblio/viol-ac.htm> (December, 2014).

2. Prevention as an option

Every society attempts to stop and to prevent violence. One prevention project took place in Mexico last year with the project Sounds in the Classroom, a prevention program of social violence in early childhood education sponsored by the National Sound Archive, CONACULTA, and the Health Ministry of México. The project ran from March 2013 through November 2013. The idea was to explore the impact of noise in the classroom as a form of acoustic violence and to explore the use of sound archives in the classroom as education support for children.

The proposal began by taking into consideration the sounds humans experience during their first contact with the world. As humans, we begin to recognize sounds in the 24th week of gestation.¹²¹ If sound is one of the first forms of interaction with the world around us, the sense of hearing must be important in the early years of life. As humans, we have an innate musical sense linked to our sense of hearing. We have the capacity to listen and understand rhythmical patterns from an early age.

Music is an artistic creation and expression of societies. People often join together to play music and to listen to music in rituals, parties, and festivals — their daily existence is accompanied with music. Music is an expression of individual and collective emotions. Also music is a form of communication and interaction with children. In fact, lullabies are sung in many cultures of the world; they are thought to be universal.¹²² Lullabies can transmit emotional information and establish strong links between mother and baby. Lullabies are often more effective at reducing stress in children than words.¹²³ Children can recognize music from different backgrounds because they are able to recognize unfamiliar sounds. As children develop, education, culture, and society often play roles expanding or restricting this capacity.

The sound imagination begins forming in the early years of life with the voices, sounds, soundscapes, and music that a child hears. From the first year of life, children interact synchronously with music and express themselves with sounds. For example, a baby listening to music can move or react as sound stimuli are heard. The ability to perceive and understand music comes without instructions — our abilities are innate. Researchers¹²⁴ agree that music could be anterior to language.¹²⁵ In fact, our ability to speak is a result of a previous ability to perceive, understand, and produce musical sounds. Speech is a form of music.¹²⁶

Music education must take into consideration that children learn as scientists, experimenting, creating, and exploring.¹²⁷ Working with music in the early developmental years of children contributes to their ability to develop capabilities mentioned above. Furthermore, music education contributes to the development of higher sensitivity (human and aesthetic) and self-confidence. Schafer suggests music education should be developed in three areas: a) Encourage children's creative potential to make their own music; b) Introduce students to the sounds of the environment; and c) Discover a nexus or meeting place where all the arts can meet and develop together harmoniously.¹²⁸

121 Gómez, Ulises Reyes, Martha Patricia Hernández Rico, Diana Reyes Hernández, and Lidia Javier. "La música de Mozart en el periodo prenatal." *Ginecol Obstet Mex* 74 (2006): 424-8.

122 Trehub, Sandra. "Los bebés comprenden la música." Interview by Eduard Punset en *Radio Televisión Española*. Abril 2013. Available in: <http://www.rtve.es/television/20130415/bebes-comprenden-musica/640260.shtml> (Diciembre, 2014).

123 Trehub, Sandra. Op. Cit.

124 Ibid.

125 Ibid.

126 Anzieu, D. *El yo-piel*. Biblioteca Nueva, Madrid, 1987.

127 Gopnik, Alison. How babies think. Ted Global, 2011. Available in: http://www.ted.com/talks/alison_gopnik_what_do_babies_think (December, 2014).

128 Schafer; Murray. *El rinoceronte en el aula*. Ricordi, 1984.

One way to familiarize children with music is to use the music preserved in the vaults of sound archives. If children listen from the early months of their life to classical music, folk and traditional music, children's stories, poetry, literature, and soundscapes (among other recordings from our archives), their lives will be enriched.

3. Music at school in México

In this sense, during 2013, a multidisciplinary group of professors and researchers developed the project Sounds in the Classroom, a prevention program of social violence in early childhood education. The first stage was sponsored by the National Sound Archive, CONACULTA, and the Health Ministry of México. The project was developed in a kindergarten, located in an economically depressed area with high rates of violence in Mexico City. The kindergarten enrolls 164 children, whose ages range from two months to six years old. These 164 children are organized into 12 groups: four infant groups, two maternal groups, and six pre-school groups. The children attend school Monday through Friday, between six and twelve hours each day. Thus, kindergarten is a space in which children may stay for up to 50% of each day.

The reasons mothers and fathers need to leave their children at school for such a long duration are usually economic. These parents often take on very long commutes in order to earn enough money to support the family.

If these children remain for so many hours each day in kindergarten, the soundscape there becomes a key factor in their development. Unfortunately, the kindergarten where this project was applied is a noisy space. It exceeds the 35 decibels recommended by the World Health Organization (WHO), and reaches in some areas 80 or 100 decibels. Noise is a serious problem in this school. Noise affects cognitive processes; it is responsible for some of the major health risks of teaching.¹²⁹ "The lack of acoustic comfort in classrooms, occasioned by the soundproofing of the spaces and the background noise of students affect school performance: more than 40 dB impede the activities of calculation, at 55 dB memory processes are affected, at 70 dB reading comprehension problems appear. These same reasons are responsible for one of the main teacher's health risks in Latin America related to diseases of the throat, such as pain, dryness, dysphonia, nodules, and ulcers. It is related to chronic fatigue, stress, and diseases of the throat and vocal cords."¹³⁰

Noise is also negatively associated with discipline. The presence of noise in the classroom and teachers' efforts, often useless, to control it by raising their voices, make the school a sort of battlefield and create hostile environments for all with adverse conditions for learning.¹³¹ Noise is an element of the noise pollution that is present in the classroom and, therefore, contributes to the generation of acoustic violence in school.

Therefore, the first phase of Sounds in the Classroom was to make a selection of 450 sound documents that children could hear during their stay in kindergarten. The selection included classical music, popular music (songs and nursery rhymes), traditional Mexican music, world music, literature, and historical sounds. These sound documents were to be used as support in educational tasks, to enrich humanistic and artistic education, and as elements to enrich the soundscape of the school. In this first phase, copies of the materials were on CD because the school does not have computers in the classrooms. To protect copyright the CDs were limited to use at the school and it was prohibited to make copies.

129 Echeverría, Belem. Niveles de ruido contaminante en primarias de México, por encima de los límites de la OMS. Entrevista en *Quadratin*. México, 2014. Available in: <http://www.quadratin.com.mx/educativas/Ruido-un-contaminante-en-las-escuelas-primarias/>.

130 Domínguez, Ana L. Violencia acústica y cuerpo social. El ruido en las ciudades latinoamericanas. *GT26 Sociología del cuerpo y de las emociones*. Chile, 2010.

131 Domínguez, Ana Lidia. Violencia acústica en la escuela. En *Sonidos en el Aula*. Programa de Prevención Social de la Violencia en la Educación Inicial. México, 2013.

Each document was accompanied by a listening guide, recording data, and recommendations for use, according to the areas of knowledge and the age of the children. The listening guide includes: name of the disc and the piece, author, appropriate grade level, suggested activities for use of the sound recording in the classroom, formative areas of knowledge, skills, expected learning outcomes, and cataloging data.

Below is an example listening guide:

SONIDOS EN EL AULA MÚSICA POPULAR GUÍA DE ESCUCHA

CANTOS Y RONDAS INFANTILES

Disco: Violoncello de Colores I

Título: Naranjas y limas

Autor: Pilar Gadea

Grupos escolares: Grupos de lactantes, maternal y preescolar.

Guía y referencias para la escucha: Esta obra es una canción tradicional para niños que puede ser utilizada para aproximar a los niños a la música y en especial al disfrute sonoro del violoncello.

Lactantes:

Ámbito 1. Vínculo e interacciones

Identifica sus emociones, sentimientos y necesidades.

Identifica intereses y gustos-

Ámbito 2. Descubrimiento del mundo

Disfruta compartir historias, canciones, rimas y juegos.

Experimenta con los sonidos.

Ámbito 3. Salud y bienestar

Avanza en el desarrollo de su bienestar emocional.

Expresa emociones y necesidades.

Maternal y lactantes

Campo formativo:

Expresión y apreciación artística.

Expresión y apreciación musical.

Competencia: Expresa su sensibilidad, imaginación e inventa al interpretar o crear canciones y melodías.

Aprendizajes esperados:

Sigue el ritmo de canciones utilizando las palmas, los pies o instrumentos musicales.

Inventa historias a partir de una melodía escuchada. SONIDOS EN EL AULA

FICHA CATALOGRÁFICA

Título del soporte: Violoncello de Colores I. Método de iniciación a la música para niños

Título de la obra seleccionada: Naranjas y limas

Productor: CONACULTA

Intérpretes: Bozena Slawinska, violoncello; Carlos López, piano;

Marlén González, arpa y

Ángel Álvarez; Guitarra.

Año: 2012

Lugar: México

Temas: Cantos y rondas infantiles, música para niños, violoncello.

For teachers this selection was an invitation to use the sound documents as a tool in the classroom and to explore their possibilities in the classroom. It was also a way to access a diversity of music that was not otherwise available to the teachers.

As part of the project, workshops were prepared for teachers, parents, and workers. The courses covered sound education, acoustic ecology, noise and violence, music in the classroom, and the sound archives at the school. Through the workshops, teachers, workers and parents became aware of the importance of sound in their lives, how noise is a harmful agent that causes noise violence and how the sound document is a fundamental tool in teaching. As a result of this project, teachers developed actions to reduce the noise levels in their classrooms.

For example, this school used loudspeakers to communicate messages to teachers and to call the children when their parents came to get them. After the Sounds in the Classroom project, the teachers realized that this communication system constantly interrupted attention in class, distracted children, and generated noise. Therefore, they decided to eliminate this communication system.

The teachers began to take the children on sound walks, an activity they learned during the workshop. The sound walk is an activity in which students walk in silence in order to hear and identify sounds in the environment. The teachers noted that after the children began to engage in sound walks, the noise level decreased and school children learned to listen and the noises children produced in the classroom decreased. During this first phase of Sounds in the Classroom, the study group began to realize the potential of sound education, acoustic ecology, and of the use of sound archives in the classroom as a method to mitigate acoustic violence and to enrich the education of children.

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