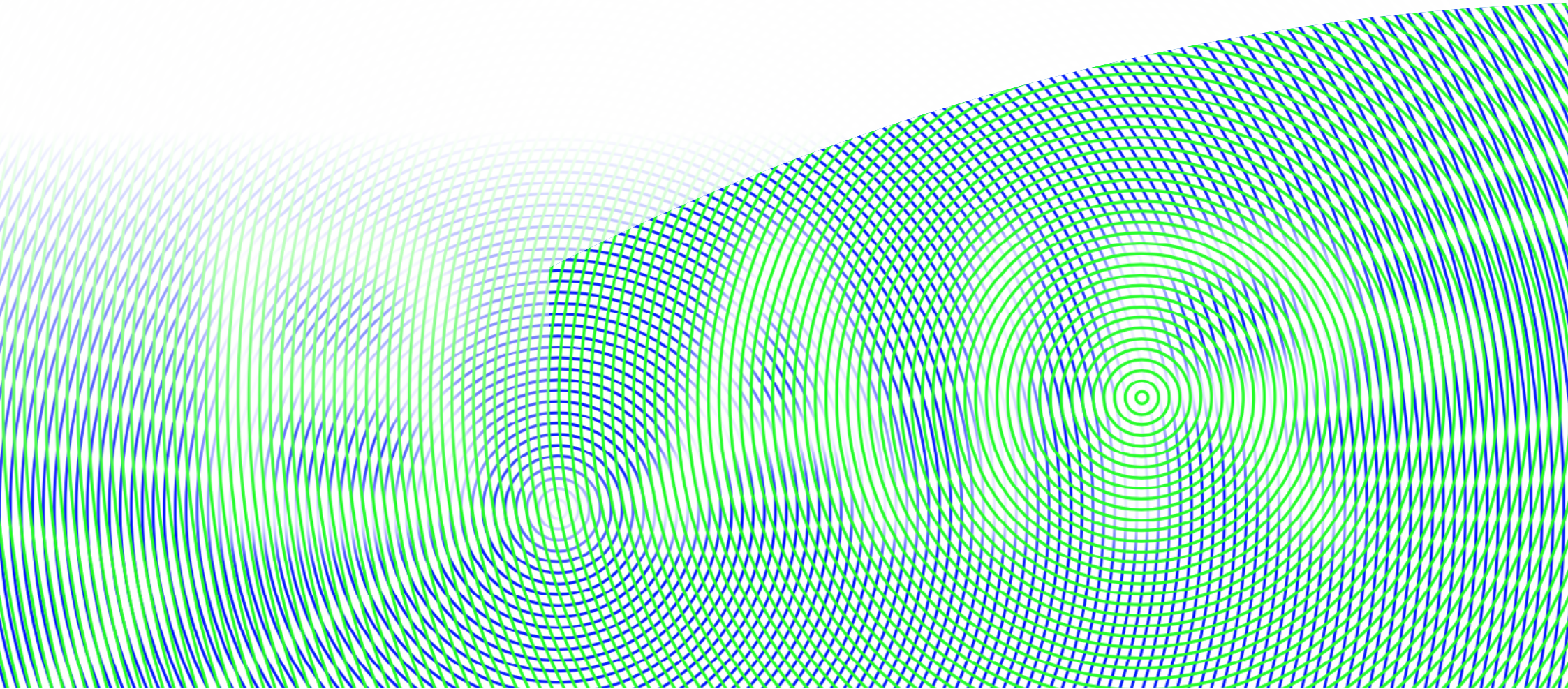




# **B-AIR** Art Infinity Radio

**Creating sound art for babies, toddlers and vulnerable groups**



Co-funded by the  
Creative Europe Programme  
of the European Union





# **B-AIR** Art Infinity Radio

**Creating sound art for babies, toddlers and vulnerable groups**

**Bosnia and Herzegovina | Croatia | Finland | France | Greece | Serbia | Slovenia**

Belgrade, Serbia, 2023



## B-AIR Partnership:



Radiotelevizija Slovenija / RTV SLO  
Radio and Television of Slovenia, Ljubljana, Slovenia



AAU\_CRESSON, Centre de recherche sur l'espace sonore et l'environnement urbain,  
ENSA de Grenoble, Université Grenoble Alpes  
AAU\_CRESSON, Centre for soundspace and urban environment studies, School of Architecture of Grenoble, University Grenoble Alpes, France



BAZAART Reprezentativno udruženje u kulturi  
BAZAART Representative Association in Culture, Belgrade, Serbia



Institut „Jožef Stefan“ / IJS  
Jožef Stefan Institute, Ljubljana, Slovenia



Internacionalni Burch Univerzitet / IBU  
International Burch University, Sarajevo, Bosnia and Herzegovina



Javni medijski servis Radio Televizija Srbije / RTS  
Public media institution Radio and Television of Serbia, Belgrade, Serbia



RadioTeatar Bajsic i prijatelji  
RadioTeatar Bajsic and Friends, Zagreb, Croatia



TWIXTlab AMKE, Athens, Greece



University of Eastern Finland / UEF  
ITA-SUOMEN YLIOPISTO, Kuopio, Finland





Illustration by Manca Kok



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Symphonic concert for babies  
and toddlers, RTV Slovenia  
Symphony Orchestra,  
conductor Steven Loy  
Photo by Adrian Pregelj

## About the project B-AIR

In the world dominated by fast visual overstimulation, the contemporary expressiveness in the medium of sound, equally in terms of radio and sound art creativity, faces serious challenges, especially when embracing modern technologies and obtaining new audiences.

The B-AIR project started as an initiative to revive sound-based creativity and communication with young and many other audiences through new knowledge, artistic content and technological formats.

In order to encourage innovative production, the project established a partnership forming a collaborative platform for experimental artistic, scientific and technological research, production and outreach to new audiences. The partner network includes national radio broadcasters, universities, research institutes, creative artists' associations, also collaborating with children's hospitals and nursing homes, cultural institutions and schools, thus connecting artists, experts, researchers, radio workers and other professionals from across the disciplines with beneficiaries and audiences.

Through the network, new models of research and production were created for babies, small children, the elderly, vulnerable groups as well as for general audiences, followed by innovative instruments

for assessing the real importance of scientific and artistic work in regard to social integration and inclusion, empowerment and education, support to families and individuals in the course of lifelong development.

### Radio and beyond

From first programs for children produced by Walter Benjamin in late 1920s, radio became a place par excellence for artistic creation, but also social cohesion and integration and global connecting, meetings, exchange and cooperation of people from many different places around the world.

The B-AIR project can be seen as an epitome of the same basic idea of connection and co-creation.

We did this in different ways. By removing geographical boundaries and barriers between aesthetic philosophies of different spaces; by connecting intriguing sound-based artistic and research practices; by abolishing the fence between 'artistic' and 'ordinary' practices; by moving high-quality sound art from concert venues to communities and implementing it in everyday life experience (from participatory sound artworks, created together with children or people in the community to narrative art stories); by involving often neglected groups of

listeners such as children and the elderly in the creation and mediation processes; by popularizing contemporary sound and introducing those who are not aware of these possibilities to the fact that they can all contribute; by focusing on the effects that sound-based artistic content has on cognitive, emotional and personal development of a person from an early age; by directing the process of music education in the direction of creative freedom and socialization that the art of sound can offer to everyone, not only those who possess certain cultural capital, or are recognized as 'artists'.

### From research to creation and beyond

The project combined two main principles: Research-to-create and Create-to-research.

Departing from the first principle, researchers examined various aspects of the effects that the sound can make on human life and its ecosystems. Scientific findings inspired creation across art fields, appearing in the myriad of single-media and multimedia artworks and events.

Along the second, complementary principle, intuitive artistic creation generated the material for researchers to explore processes, some of them insufficiently observed, such as

cultural formation, social integration and inclusion, healing, learning and numerous other phenomena enabled by the reception and creation of sound (and) art in a wide range of project target groups.

This interrelation of the research and creation principles resulted in the intensive dialogue of artists and scientists, often conducted in interdisciplinary tandems or groups embedded in most partners' project frameworks. Many new insights were born from this dynamic relationship, immensely raising the capacities of all who were involved in it, and opening the gates for art and science of tomorrow, which will undoubtedly be evolving in the endless area of cross-disciplinarity.

Another innovative and important step was to establish new ways of evaluating artistic creation, specifically through the prism of audiences. Based on the works produced within the project, researchers-consultants invented participatory, arts-based and game-based procedures for assessing the real impact of artistic experiences on personal and social development of audiences of all ages involved in project activities. Tested in relevant settings, the new evaluation method cultural, academic, research and practitioners' institutions, associations and platforms, as well as to the general public, on radio waves, in magazines, conferences, symposia, festivals, exhibitions... The newly created knowledge and experiences were thus passed on to the communities of creators, practitioners and researchers, as well as to the citizens of Europe, as part of the process of raising awareness about the power of sound to support human wellbeing.

## The change and beyond

One of the main theoretical and empirical findings of the project relates to the potential of sound to act as a social and cultural agent in societies. Connections through sound in human and more-than-human communication, and co-creation of meanings through dialogue, delineate the field for further research and artistic activism in projects to follow.

To assist families. To develop empathy. To facilitate humanistic education. To enhance care and openness. To build communities. To consolidate societies. To protect the world.

By speaking, singing, playing... and above all – by listening.

Because the ear – the hearing organ – is the first of our senses to develop; and the last one to cease when we die.



Dear Reader,

In this eBook we are proudly presenting the summarised experiences of nine partner organisations from across Europe, working together for three exciting years on developing the project „B-AIR Art Infinity Radio: Creating sound art for babies, toddlers and vulnerable groups”.

The purpose of the book is to convey the learning from the project, relevant for researchers, artists and practitioners wishing to explore and apply sound art in its many intersections with life and society.

Striving to meet many readers, the contributions in the book follow two main lines – ‘Research-to-Create’ and ‘Create-to-Research’ – which were the guiding principles in our project work. The content of the book is hence also twofold, comprising the theoretical and artistic reflections and creations.

The book is divided in eight sections corresponding to wider themes treated by one or more partners. Within the chapters, further distinctions have been made by specific topics.

From exploring sound art for/with children and vulnerable groups, to reimagining the radio of 21st century, numerous professionals from various scientific and artistic fields gave their contribution to the project and this publication in the following chapters:

- I Art of Sound and the Childhood:** This large section features presentations and examples of radiophonic, music and performative artworks dedicated to children of early age and their caregivers. Four partners, each from a specific angle, explored the significance of sound, music and radio art in the development of the youngest: Radio and Television of Slovenia, RadioTeatar from Croatia, the BAZAART Association from Serbia and Radio and Television of Serbia.
- II Audibility: Approaching Deaf Experience(s) with Sound Art:** Through scientific and self-reflexive perspective, the TWIXTlab researchers and creators from Greece outline the processes of fostering creative participation of Deaf and Hard-of-hearing persons in music and sound art.
- III Sonic Remembering:** Exploring the nature and the power of sonic memories through radio and sound art, four partners worked on interlocking past and present, aiming at attaining wellbeing of vulnerable groups – seniors and war victims – and wide audiences and building European heritage through sounds: the University of Eastern Finland, Radio and Television of Slovenia, Radio and Television of Serbia, and the International Burch University from Bosnia and Herzegovina.
- IV Sound Art and Medicine:** This section collects experiences of the work dedicated to studying therapeutic potentials of sound art, music and radio with hospitalised children, children with ASD and persons coping with Parkinson disease, carried out by the Radio and Television of Slovenia and the RadioTeatar from Croatia.
- V Sound Ambiances:** Researchers affiliated to the CRESSON research centre of the ENSAG, University Grenoble Alpes, France, explored the urban ambiances through sounds, using the concept of sonic effect both for description and creation. Activities ranging from seminars to artistic experimentation, also in exclusive contexts such as the French Pavilion at the 18<sup>th</sup> Venice International Architecture Biennale 2023, are presented. A segment about Soundwalks is contributed by the TWIXTlab and RadioTeatar.
- VI Documentaries Step Ahead:** Experimental documentary works joining scientists and artists with communities and subliming many project areas of interest, carried out by the Radio and Television of Slovenia teams, are introduced in this section.

**VII Evaluating Audio Works for the Young and the Vulnerable:** In this chapter we present the interactive approaches and practices developed by the Radio and Television of Slovenia, TWIXTlab from Greece and the RadioTeatar from Croatia, with an aim of establishing scientific and practical methodologies for evaluating artistic outcomes, specifically in sound art.

**VIII AIR Channel:** One of the initial elements of the B-AIR project – devising the radio of the 21st century – is thoroughly described by the Institute “Jožef Stefan” and the Radio and Television of Slovenia. This chapter closes the book, as a long-lasting statement of this project and a reminder of the significance of sound art.

Many papers on research and creative processes, methods, practices, and evaluations, artistic statements, illustrations as well as entire artworks and productions are included in this publication for you to explore.

For any further inquiries and interests you might develop through the course of reading, contact information, references, and external links to more detailed sources are provided.



“The Tree that Sang”, RadioTeatar, Zagreb, Croatia. Photo by Mia Cvitković



## ART OF SOUND AND THE CHILDHOOD





# HUMANITY AND ITS SOUNDS AND MUSICAL LANDSCAPES: RADIO FOR THE LITTLE ONES

*“We live in a world of waves. Our ears perceive waves of compression and expansion in the air: we call it ‘hearing’.” (Stewart, 2012, p. 131)*

Radio is a sound medium. After millennia of domination of the visual medium (with written text and images; cf. Berendt, 1988), it was radio that, more than a century ago in the Western world, revitalized and restored the experience of oral communication to the forefront of the common human experience of the world. The first mass electronic medium of modern times, radio has shaped completely new spatial and social contexts of the formation of human communities (see, e. g., Ong, 2012).

Television as a medium has created a completely new collective experience of communication, in which images, sounds and text intertwine. Yet, these types of media communication can never merge completely into one. This is also evident in modern online media, which, despite certain forms of crossing media practices (for example, when sending short messages and composing messages from images and text, and here and there from audio recordings as well), actually promote the separation between image and audio communication, while the text inscription works outside both.

Despite conflicting expectations and feelings, the media have so far not merged into some new communication medium. This also applies to digitality. Digital media are also accompanied by the same problem as analogue media. In fact, digital is only

a form of encoding information when it is transmitted and stored (on digital, see Manovich, 2002; Miller, 2020), while for users the way of receiving and transmitting information in any kind of media communication is still primarily sensual, if not entirely so.

As sentient beings, we perceive only (analogue) images, sounds and other objects of perception. That is why the sound is completely or at least sufficiently autonomous in online media to conjure up different community feelings from those dictated by print or image. As a purely sound medium, radio acts in the same registry as voice and music: in the physical-affective and cognitive, but at the same time each sound communication at the moment of happening directly connects the listeners. These connections are established by the medium synchronously, but also asynchronously, thus forming communities and social ties.

Radio is a medium that establishes specific forms of community. Its meaning is much deeper than we usually attribute it to it. It is not only an omnipresent and self-evident companion of modern everyday life (in the form of mobile phones), but remains a fundamental tool for the creation of any kind of modern community. Today's radio no longer works only synchronously, as it was until recently, but also asynchronously, with podcasts. There is

no need for fear that in the 21<sup>st</sup> century, radio as the first electronic mass medium will die due to the extreme prevalence of online media: every device connected to a wireless network is a radio. Today, radio is actually omnipresent. Therefore, the question of how to welcome and greet the little ones in this medium is somewhat late.

The radio of the present addresses all segments of listeners, except those who are just entering life, who are forgotten time and time again. Well, not entirely, of course. It depends on the age of the children. Parts of the radio program have always been intended for them as well. In Radio Slovenia, the famous radio theme music for the bedtime fairy-tale has been with us for several generations and it doesn't seem like anyone wants to update it. But among the youngest, however, there is an age group which is overlooked, which cannot yet listen to an evening fairy-tale because they have not yet entered the magical world of words. We are talking about babies and toddlers who are very receptive to sound and play, but we simply do not know how to address them in a purely sonorous medium.

Here are some thoughts and ideas for designing radio programmes and music-sound events specifically for babies and toddlers.

## The omnipresence of sound and the omniabsence of its serious treatment

From its very creation, human life happens among sounds and with sounds. The sound is physical and touches our body, partly infiltrating us. From the very birth, and already before it, sounds touch the babies' bodies. The sounds of music, marked by the very intention of becoming music (see Muršič, 1993), enter bodies and open them to meaning. Anthropologically speaking, and also biologically, sounds are an experiential constant. And so is the noise and silence while taking care of the babies in common rituals: noise drives away dangers, silence obtains tranquillity. Mastering the world of sound defines us as a species.

Adults can no longer put themselves in the shoes of babies – in fact, even toddlers can no longer do this once they speak, because the key step for joining human culture is marked by entering the symbolic field by speaking. But this step, which then extends to the whole learning life of each of us, is preceded by a relatively long period of different, non-symbolic communion between parents, other people and the youngest children. Parents work hard to identify their babies' needs ("Why is she crying? Is he hungry? Does something hurt her? Is he bored?"), babies are slowly learning the rhythmic routine of everyday life, because there is "no rhythm without repetition in time and space, without reprises, without returns, in short without 'measure' [*mesure*]" (Lefebvre, 2013, p. 16).

From very birth, with each newborn individually we learn to recognize their gestures and actions. This is a period of intense mutual learning that takes place through clearly routinized and repetitive actions (bathing, eating, sleeping...), but also

through the unpredictable surprises of everyday life (accepting a new toy, visits, walks in previously completely unfamiliar places...). By the time the child verbalizes their experience, mutual learning happens through improvisation and play and situational recognition.

The most important rhythm that a child learns with others is the change of day and night, the rhythm of being awake and asleep, which at first completely deviates from this rhythm of adults. Everyday rhythms are diverse and they connect together the whole of our lives: not only the steps when we walk, or heartbeats (that always make us sleepy), but also the rhythms of resting, eating and excretion. Together we co-create the rhythm of the entire living.

From the very beginning of our existence, sound directs us to experience space and time, and by moving through both, it inevitably confronts us with others who move in the space-time. Sound and light are just two among the multitude of communication media of the human being with the world, but they mark us more than air and its components, water and its features, objects we touch, and the space we move through.

Unlike light, the absence of which can be experienced, if we can hear, we cannot experience the absence of sound, no matter how deafening the silence at some moment may appear. Darkness can be a source of anxiety and fear in our daily experience, especially at an early age; while silence can be experienced as true bliss. We experience darkness in artificial, created, built spaces; it occurs every time we turn off the light. Silence is sought elsewhere and can be understood primarily or simply as the absence of disturbing sounds. Silence is natural, darkness is artificial. The night

in nature is never completely dark because of the stars, even when it is pitch black. A deaf night endows us with silence.

This is the environment in which we live, the space-time into which the youngest enter. What seems self-evident and natural to adults is new to the youngest, worth testing and curiosity – not-yet-shaped and not-yet-finalized. It is a shared space of communication that needs to be clearly distinguished from other spaces and environments. We do not know with certainty when and in what way human sound perception develops, but we do know that it begins already in the womb. At first a mechanical door of perception opens, affecting the whole being in the making. After the birth, we can observe in a newborn how spontaneously connections between distinct segments of perception are formed and how organically their synchronisation occurs in the entire system of perception, i.e. *ap*-perception. This does not just happen biologically and idiosyncratically.

From the first physical contacts during and after birth, a new form of communication begins for the newborn: with the first touches, looks and sounds, social communication begins and with it the inter-personal coordination of perception. First, a child aligns itself with the closest others, who are in this aspect the truly significant others, then with the rest of the others, and finally with the generalised others. With their later entry into symbolic communication, toddlers also begin to learn the experiences of those with whom they have not been and will never be in direct contact: with their ancestors and with everyone else who has ever been involved in human symbolic communication in any way, regardless of social, temporal and spatial distance from the newborn.

Once people speak, there is no turning back: the preverbal, pre-symbolic life closes forever. Symbolic communication, that is, verbal storytelling, with which a meaningful narrative can be conveyed to the child, never ends in life. And it is this part of the human experience, before the moment the little ones speak, that remains an almost completely unknown land for speakers, of which we no longer have any direct memory.

### Between lullabies and fairy tales

It is the stereotypical notion that we perform music for toddlers and babies only (or above all) to put them to sleep. Yes, of course, sound has an effect on the human body, its repetition even more. Lullabies are an extremely important part of the earliest encounter of newborns with songs and music, but they are far from the only type of music that accompanies toddlers and children into the social world. The social world is also the sound world. Whatever is social – other people we meet and face – makes noise. It touches us, even if we do not hear it.

Lullabies calm and put children to sleep, but not only that. Lullabies socialise them, along with any other thing other people do, from the very beginning of life. They integrate them into the entire sound environment of others, even if, at the first effect of falling asleep, they in fact exclude them from actual reality into the world of sleep. But even in sleep there is no silence: in sleep, everyday sounds and noise touch us. Lullabies unfold another important dimension: they introduce toddlers into the specific human sound environment of voice and omnipresent and targeted speech (see, for example, Clayton, 2008). The human environment is, above all, the environment of the human voice and the environment of the immediate household and its surroundings.

Nowadays, these sounds are joined by artificial sounds: from beeping devices in the maternity hospital to devices in everyday use, clocks and audio accessories in traffic. Today's newborns have also been accompanied from the very beginning by the sounds of media: radio, television and digital devices. Also in these media, the main ways of entering the human world remain speaking, singing and playing music. It is in this period of life that music is much more important than it seems.

For a baby, all sounds are important. Making meaning of them is neither a mandate of adults, nor of children, but everyone's doing. That is why it makes sense to prepare sound compositions for the youngest children. In the same way that we include them in our world by playing and performing a wide variety of music, by speaking which does not address them directly, and by activities in which they only passively participate (driving in a stroller or wearing clothes), we must also invite them into society through art. Since the infants openly accept any natural and environmental sounds, it is all the more challenging to put these natural, artificial and musical sounds into some meaningful form that will attract both their parents and the little ones. Making meaning of sounds leads us either to music or to words.

### Music and musical socialization

Music is much more than just another human practice among the diverse social practices in which we humans engage. Namely, music touches us (literally) on different levels of our very being. First, it touches us physically. We see this most clearly in toddlers, who spontaneously respond to repetition, rhythm and sound with their bodies: by moving, by dancing, with a very special enthusiasm, with which they show how they want to break out of their self-evident here and now.

But music also touches us experientially: emotionally and mentally. In short, we accept music both emotionally and rationally, affectively and cognitively.

On the third level, music reveals to us the dimensions of existence that are beyond our current apperception, i.e. the perception of sounds and monitoring their sequence. Music can lock and unlock the doors of perception and place us in spirituality: it introduces us to the greatest depths of the spiritual. We cannot exist without these dimensions.

We have no reason not to think the same way about the importance of music for babies and toddlers. Music touches them physically, affectively, cognitively and spiritually. But since their perception of sounds is still completely open, we can play with any sounds and any musical elements when preparing music and sound artworks for them: all possible musical expressions are acceptable for them. Music for the youngest can therefore include any type and form of musical expression to date: from folk to artificial music, from popular to the most experimental avant-garde music of any historical moment. What's more: their ears are completely open to any meaningfully composed pile of sounds: they are also completely open to sound art of any kind. This means that their ears are open to all possible combinations of sounds, speech, music playing and soundscape design. All sonority is open to them.

Musical creativity for babies and toddlers is limited to a certain extent only by the fundamental element of social experience of music – that of mother and child. Logically speaking, we should of course also talk about the element of father and child



and of the triad which includes, according to our understanding, the fundamental cell of society – mother, father and child. But anthropological facts speak differently. Already millions of years ago, in the time of our species' ancestors, women or females have manifested joint care for offspring (which was one of the key evolutionary advantages of our species), so that the earliest life of our distant relatives was significantly more social than that of other primates. In the birth of mammals, we see a common pattern: new-born children need a lot of help from the mother (see Hrdy, 2009). Humans, like other primates, and especially our related apes, are born with large brains, but for a much longer period of life we depend on mothers and other group members to provide for our physical and social needs.

Babies cannot move or feed themselves or communicate effectively: “To survive their first decade, humans are even more dependent on mothers and others than any other species” (Fuentes, 2022, p. 32). Women, even after their period of fertility, hence remain a fundamental factor in the development of human society, especially in the development of culture (Knight, 1991).

The second reason for emphasizing the unit of mother and child is structural and social, since this is the fundamental unit that enables the understanding of those initial interpersonal relationships that are formed as coexistence in a joint household, regardless of whether the household is composed in a simple way (mothers with children or nuclear families living in it) or a complex way (in extended and joint families and complex households of the polygynous type we also find relatively autonomous households of mothers and children connected with other units).

Among general human empirical and logical possibilities, the fundamental unit of human existence therefore appears to be the unit of mother and child (Fox, 1998), even if it never acts as the only one. Humans are social animals. Caring for offspring is common. Newborns therefore soon after birth pass from hand to hand (literally), thus becoming an integral part of society through touch and verbal and non-verbal communication. Talking, singing and rhythmic movement are such elementary ways of social integration of babies into the community that today we hardly treat them as special. But it is precisely this aspect of the disappearance of direct contact and community embrace that needs to be specifically addressed at this point.

We live in a time in which these direct community contacts are relatively few, and even those that were taken for granted a few decades ago, especially in the circles of relatives, neighbours and friends, are increasingly disappearing. In the economically and administratively developed part of humanity, we enter into direct, touch-based contacts less and less, which will undoubtedly bring many negative social consequences in the not-so-distant future of increasingly aging societies. That's why audio contacts are so much more important.

The ways of direct exposure to sounds and social contact with sounds have also changed. In addition to the direct encounter with everyday sounds and the sonority of human voices and work, today's babies and toddlers encounter artificially created and recorded sounds right after birth: by listening to the radio, television, modern information and communication technology devices and with a wide variety of sound phenomena coming through a range of everyday devices.

Parents today, with the habit of spontaneous singing becoming less common, increasingly play music recordings of lullabies or music that we believe,

or thereby test, will put the little ones to sleep. In this way, among others, children are introduced to the reception of mass electronic media.

### **Music for toddlers and babies on the radio, in music venues and in any environment**

The radio medium still shapes our everyday environment, which is why the radio plays have since the very beginnings of radio broadcasting been a self-evident part of the program of any public radio station which addresses the widest spectrum of listeners.

Random sounds that we encounter from day to day can be taken as a permanent sound background with its own rules and characteristics, i.e. compositional. Such repetitive spontaneous and only partially random sound environments that change through daily, seasonal and annual rhythms are a fundamental sound environment, but we neglect it because we take it for granted.

For babies, however, this is not the case. For them, each new sound is an integral part of the world, which they listen to carefully so that they can get involved in it and be in it together with other people. Otherwise, it doesn't matter when we confront them with music in the strict sense of the word, but the natural sounds that attract them, such as the sounds of birds, the murmur of wind or waves, the sound of various work tasks, play and social environments, will in some new, artificial context, attract their attention. For various reasons, their entire perceptual apparatus will pay more attention to compositionally arranged sound products than to the spontaneous sound of everyday life. Therefore, sound compositions, that is, a very special form of musical creativity, are even more appropriate in the earliest phase of life.

Sonic ambiances accompany babies, toddlers and children throughout their entry into the world, so it is amazing how little attention the creators of sound compositions have so far paid to those ears, for which this type of composition is practically written on their skin.

But this does not mean that to infants (and mothers and other caregivers of the youngest) music should not also be offered in all its variety. Parents and other guardians listen to their music anyway, this is, the music they like. This is an important early way of introducing the youngest to music, especially when parents (and other caregivers) are not even aware that the youngest are also listening to music with them.

However, since at that time the ears are literally open to all possible sounds, music and their variations, there are absolutely no rules or commandments about what and which music to offer to the youngest. With schooling and music education, things change completely in just a few years, and for a while, children mainly follow music intended for them. But in the earliest stage it is possible – and necessary – to act in accordance with John Cage's principle: everything is possible, everything is right, everything goes.

Italian composer Sergio Liberovici wrote several radio plays and operas for children. He also used recorded sounds [musique concrète] in his music for the radio. It is the use of recorded sounds that indicates a key approach in the preparation of radiophonic works for the youngest, as in their artificial environment listening to the radio receiver places them in the real world of sounds and in this way arouses curiosity and directs their attention.

In short, composing for babies and toddlers allows much greater creative freedom than composing for other target groups, as the sound spectrum of their listening is much wider and more open.

### Composing music for babies and toddlers

Open ears call for creation of open music. It can be music as a composer would anyway make; music that invites active sound participation and playing; or it may be composing that is designed entirely experimentally.

What is central: the youngest listeners, i.e. babies and toddlers should not be underestimated, but treated as full-blooded beings who are open to artistic experience (Juvanc, 2023). As an audience, of course, they will not respond in the same way as an educated audience. They will respond spontaneously, humanly, with wonder and stare, with great concentration and bodily response and instant participation, but also with complete ignorance in following their own momentary impulse.

In children's opera, it has been proven several times that the use of modern compositional approaches, i.e. also row and noises, is completely acceptable. The most effective are those productions in which children also actively participate. This is also a condition for the inclusion of the audience of parents and other caregivers and hence the success with the audience in general. Adults will be delighted when toddlers are delighted, and toddlers will show satisfaction when they see happy faces of their parents and others around them. Could it be that simple? Yes, it's probably true. This is precisely the charm: if the adult audience is ready for literally any sound in a chosen context, the little ones will follow them generously. And vice versa: precisely because they will experience

something new and completely different, because they will open their souls to obvious curiosity and wonder, even if this concentration dries up after a few minutes, openness of mind is the key element of such behaviour.

The only limitation in creating music for youngest children is its length, if its purpose is to attract the attention of toddlers. Short sound interventions that attract attention work best, while longer exposures probably lead to relaxation or even sleep (with repetitive lullabies).

Above all, when composing for toddlers, it is necessary to test the effects in concrete environments, together with them. The experience showed that a thoughtful rearrangement of the performance space is crucial for the performance.

### Open sonority...

Thanks to the attentive and sensitive ears of the youngest, which are completely open and not yet attuned to existing soundscapes, all and any kind of music can appear or act as music for toddlers and babies: from popular to avant-garde art music, from electronic music to sound compositions. Their ears are completely and equally open voice, soundings, musical instruments, animal calls, noises, all the way to artificial and constant and occasional sounds in the environment. Therefore, sound composition with recorded sounds from nature and the human everyday environment, and of course with electronic sounds and noises, and finally with all possible sounds that can be elicited from existing musical instruments, is more than an adequate approach when composing music for toddlers and babies. Words and music as we know it can only exceptionally be placed in this sound variety.

Until the period when the addressees can understand the words, it probably makes sense to use them in the same way as in everyday life or to use them as sound objects in a rich sound composition i.e. a created sound environment.

It's probably high time to put recorders in the hands of little ones and encourage them to record whatever they find interesting at that moment. From these sounds, we could then identify elementary sounds – by ourselves or in collaboration with the composer, and put them together as such into a composition which we then give back to the children. The little ones who would be invited to compose like this would probably have to be around two years old. But surely, with such sound playing, an extremely interesting musical production would develop.

### ... And openness of life

Sound identity defines us as people; it is our deepest essence from birth. Therefore, encountering through sounds is the most obvious, but also the most effective means of transcending one's own experience in harmonizing with others. It is the foundation of the social and the society.

Similar to the concerts for babies and toddlers, it will be necessary to consider special performances for vulnerable groups and how to provide an equal experience for different people with disabilities in the common event. In regard to music events, there is no reason to exclude the hearing impaired (Sacks, 1990). The same applies to various other groups of people excluded from society, not only mothers and fathers with babies, but also the homeless, refugees and in any other way discriminated, scattered vulnerable groups of the population.

The inclusion of vulnerable groups is therefore not a gesture of charity, but a moral duty of those who shape the image of future communities through the organization of public events and artistic creation.

And when we finally come back to the youngest, we must emphasize that the infants, children and especially young people, perhaps even more, create and encourage the creation of new communality, i.e. new social relations, which, precisely by testing the limits of existing experiences, expand new social landscapes.



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Radio Voćarska Festival of Radio Drama and Radio Theatre for Babies and Children, RadioTeatar, Zagreb, Croatia. Photo by Mia Cvitković

# **CREATING RADIO PLAYS FOR BABIES AND TODDLERS**



# SHALL WE LISTEN – CAN WE HEAR?

## Reflection on the B-AIR radio plays for babies, toddlers, and vulnerable groups

Speaking is preceded by listening. In the earliest period of human life, in infancy, hearing is the most developed of the senses. Artists – including music, sound, literature, and theatre ones – rarely think of babies and toddlers as potential recipients of their work. How do babies see, hear and feel the world? What do they even think about? And what dreams do they dream? Approaching these mysterious beings, who may still freely surrender to a time before speech (i.e. the time before they speak), is a challenging task that also requires adults to turn to their hearing, to revive and sharpen it. To listen. Listen deeply. And deeper, still. To process. To listen until they hear again. The complex then becomes simple, the ordinary miraculous, the casual meaningful. Isn't this the very alchemy that artists hope to reach?

The radio plays discussed below can be said to have arisen from the same source, the desire to nurture the child – whether it is the flesh and blood child living with us; or our inner child that has a permanent dwelling place within, no matter if we recognize it or not. The artists invited to the B-AIR project have accepted the call of freedom summoning them to travel with the wind, to peek beyond the forgetful horizon of adulthood – to listen to the needs and dreams of the most tender human beings. When the cheerful adults returned

with the current and gave the radio airwaves their story-song-play dedicated to the youngest ones, all manner of creations spilled out into the sphere. All committed to connecting and growing into the wholeness of a human being.

### Cousins

The plays “Chair”, “Ball” and “Door” share many commonalities with the “Musical Kitchen” and “Chitter-Chatter”, even if they might not seem alike at first glance. The former three paint objects with sound in a distinctly factual way, but in the “Musical Kitchen” cutlery is presented almost as beings with their own senses, whereas “Chitter-Chatter” leaves objects aside and fills the space with sounds from nature. And yet, all three radio plays (taking the short plays “Chair”, “Ball” and “Door” as a triptych) are rooted in the infant's and toddler's experience of reality, which they seek to deepen primarily through sound – each in its own way. None of the plays discover fantastic worlds or feature strange creatures full of miraculous powers; they rather dwell on the simple commonness of everyday life, where they discover inspiration for further play, humour and calm. “Chair”, “Ball” and “Door” with their brevity, the “Musical Kitchen” with its playfulness and “Chitter-Chatter” with its meditateness address different areas of the growing toddler, but

all in turn are created in the desire to connect: the material and the ethereal, the real and the imaginative, objects and nature, the music-sound and the verbal – and last but not least – children and their parents.

### “Chair”, “Ball”, “Door”: the voices of things

Each some three and a half minutes long, “Chair”, “Ball” and “Door” are radiophonic audio picture-books for toddlers, babies and their parents. They present the respective object in its real appearance, its reality. The sound representations thus do not personify, or in any way imaginatively transform their subjects, but rather recreate and expand the (auditory) experience of everyday things, of which the child already has its own experience.

The listening child has already sat in a chair and watched its close relatives sitting in chairs; it has eaten, played, drawn, observed sitting in a chair; it has already watched a ball, its hops and bounces, played with it, rolled it, chased it, handled it; it has gone through a door, felt the difference between a closed and an open space. Short plays enriched with sound and music illustrations breathe awareness into the child's experiences and build a bridge

to the world of words through simultaneous verbal explanations with illustrative auditory images.

The radio plays offer a set of cues for the active participation of adults in the listening, as each sound image can be used to repeat the heard/named action with an actual object in the child's presence – rattling a chair, bouncing a ball, opening or closing a door. The plays in this triptych do not in themselves convey stories, though they do evoke memories of the listener's own experiences (and thus potential stories). They are first, foremost and simply representations of things, by no means precluding further exploration of the objects but rather implicitly inviting to test what a particular object can tell us simply by being what it is.

Each of the plays is upgraded with sound and music. Their author, Tomaž Rauch, has thoughtfully chosen a small selection of instruments for each object to echo the soul of the item. The stability of the chair is recognised in the warm wooden sound of the xylophone and the wood scraper, the flexibility of the ball in the undulation of the strings and the vibrations of the Jew's harp, the transience of the door with the bells, triangle and the gong.

The sound environment of the plays animates the basic characteristics of the objects, but at the same time reminds us that things only 'come alive' in the relationship with the one who uses them. The sound representations are thus based on the interaction of a single object with a human being. The chair stands – silent and motionless. When someone is about to use it, the chair moves and groans; then turns still again. Now someone is sitting in it. The importance of the chair increases if someone needs it to help them in their activity. The ball is also still, waiting for someone to set it in motion. It is much more flexible than a chair and can do many things

with a little added energy; it's harder to control than a chair and gives the impression that it contains its own impulses to move in addition to our intentions – we can easily overlook the person playing with the ball and enjoy just watching its up-and-down flights, bounces, twists and rolls. The door is open or closed; it is the passage from space to space, from outside to inside and vice versa.

In the "Chair", the "Ball" and the "Door", we can trace an interesting twist of emphasis moving from objectivity to subjectivity. The listening focus of "Chair" and "Ball" is solely on the facts related to their material use, whether the attention is on our activity (as in the "Chair") or on the activity of things (as in the "Ball"). The "Door", on the other hand, literally opens the way for the listener into spaces of sensory concepts (e.g. warmth, width) and more abstract ideas (e.g. safety, freedom, liberty). Through music in combination with real sounds, the plays communicate to the children's intuition the sonic reflection of harder-to-grasp and intangible concepts. The expanse of the outdoor world is thus linked to the notions of freedom and boundlessness, which murmur in the rising sounds of nature; and the security of the indoors warmly rings with the cat's purring.

A trio of plays highlighting the different uses of simple everyday things helps babies and toddlers build a relationship between experience and speech, and reminds parents and elders to forego the self-evident, prodding them closer to the world of wonder in which their little ones are constantly, spontaneously immersing themselves, eager to discover.

### **"Musical Kitchen": a pot-full of puns**

For a child and its exploratory wonder, which is not yet encapsulated in commonly accepted behaviour, every scene can be a playground, and in

every new activity it sees the germ of play – not necessarily one that the toddler's parents are able to recognise and use (even if to their own advantage). In this sense, the "Musical Kitchen" is a handy listening tool for introducing a baby's new eating habits when moving to solid foods.

This radio play for little ones is designed to be highly interactive and encourages playing while listening. The authors of the work, the librettist and directress Tajda Lipicer and the composer Alenja Pivko Kneževič, have also prepared a visual score to accompany the play, which allows parents to become the conductors of the game played with their little ones. Listening can thus take place without the actual meal, with cutlery as play props to reinforce what is heard in the play with mock actions; or can also be done during feeding. Riding on the wave of inspiration that splashes from the artistic soup, improvised actions can be enjoyed combining play with the intention of eating.

The playful "Musical Kitchen" is a delicious sound dish, a bubbling musical broth spiced with sound effects, in which tasty-sounding words float beautifully sliced into pieces. The musical base, stirring with the linguistic interplay of words and their meanings, is conceptually close to the music that usually marks a children's program – bright-toned, lively, light, at times mysterious and telling a story of its own. In the play it is mostly not used as a duplication or illustration of the verbal narrative, but introduces it in its own way, creating or reinforcing the atmosphere and heightening anticipation before often retreating to make way for the sound and meaning of the words, emphasised here and there by the selected sounds.

The word template is based on the rhythmic power of speech, the repetition of individual words, elements or threads of words in different ways. By speeding up and slowing down, extending the vocals and consonants, syllabising, speaking less or more loudly (Maja Kunšič's text interpretation), the joyful unpredictability brought by the wordplay grows. Each word, syllable or sound thus becomes an auditory bite made savoury by interpretation, tempting us to loudly engage with its repetition.

Playing with the sonorities of language also leads to experimentation with words that may not yet be in the toddler's earliest vocabulary – e.g. wringing, pinching, tickling, poking – but are as welcome as any other new word. The text thus does not underestimate the child, but challenges it again and again with the captivating sound of untamed words, inviting it to explore the fascinating landscapes of language and naming.

The simple 'peek-a-boo' is the favourite game of the vast majority of toddlers at some point in their development, and the "Musical Kitchen" contains enough small but surprising twists to appeal to children in particular. Humans love humour and good-natured teasing – and the radio play awakens a relaxed disposition to enjoy small pleasures such as jocular wringing, pinching, tickling and poking. Who will trick whom first? The parent or the child?

For a young child, feeding is one of the rituals that build secure predictability into its daily routine. No wonder children often reject the innovations gradually introduced by the parents in feeding – and food flies everywhere! – or they paw at food playfully, exploring in their own way what they can do with it ... ("Perhaps this orange pumpkin soup is great for drawing, if not particularly tasty?") The joy-

ly "Musical Kitchen" can take away at least some of the seriousness and frustration from parents as it brings back memories of the fantastic possibilities of an eating adventure, too often accepted as a mere habit. It can free children from feelings of compulsion with its sonority, promising the light-hearted joy of unknown pleasures as they dig into each mouthful, confident it will reveal a delicious new secret about the world. All the same if they're curiously biting into food, sounds, or words.

### **"Chitter-Chatter": from nature back to nature**

The wealth of sounds carried by nature's wings is vast. The steady chirp of crickets, the lively croak of frogs, the gentle rustle of treetops and surprising songs of birds are deeply harmonious. Produced in sincere simplicity and absence of any volition, they also secretly urge man to let go of overstrained control and dive more trustingly into the flow of life.

The melodiousness of nature is generous, but in the modern world it is by no means self-evident. Although birds sing and trees rustle even in the cities, their discrete presence is drowned out by the rumbling noise of the river of traffic, the rush of people, the beeping of telephones and the thousand-and-one sounds of human activity. The multitude of unpleasant or even aggressive sounds leads many to close their ears to their surroundings – using headphones that allow the individual to traverse the city in a private sound bubble.

In the radio play "Chitter-Chatter", the author of the text Irena Pivka and the author of the musical composition Brane Zorman pursue the ancient idea of communication between young children and animals, and on this basis create a sound score woven from recordings of nature's voices. The radio play is intended to be played and listened to in

nature – e.g. in a park or in a home garden, although it can of course also be listened to indoors – and an important aspect of this listening is the strengthening of the bond between child and parent. (The question arises here, with an otherwise thoughtfully composed radio play: why listen to recorded sounds of nature in the open air, is it not an unnecessary duplication? Why not just listen to what actually surrounds us – especially when we are in nature and with our little ones – and use the radio play gratefully during those moments when the proximity of nature's sounds is unattainable, but at the same time much needed?)

Together with the softly weaving songs of crickets, frogs and birds, the rustling of leaves, grasses and water, the narration (voice by Nada Vodušek) flows calmly, guiding sooner the parent's attention than the baby's. The parent can further communicate to the toddler what they are hearing, using objects or physical interpretation. The narrator's voice initially sounds from a distance, carrying the listener off to another, parallel world, away from the noise of traffic and the clamour of thoughts. Even though the play is filled with recorded sounds from nature, the text directs audiences to also catch the sounds of the surroundings where they are currently situated; the narrator, with clear articulation and a sense of presence, compels the listener to slow down and quiet the worry-filled mind. "Chitter-Chatter" thus acts as a meditation, focusing the listener on the here and now, opening them to sounds that would otherwise quite possibly be overheard. In this respect, the radio play seems to address parents more so than babies – babies in their openness are attracted to new sounds in their own right – but the older we get, the more consciousness it requires of us to relinquish our rushing, shouting thoughts and seek out spaces of silence and listening.



Using recordings of human voices, “Chitter-Chat-ter” illuminates the sonic horizon of the play with new colours. First, the subtly arranged plurality of natural voices includes the babbling, chit-ter-chattering, chirping and laughing of little ones whose world is already filling up with words, but whose speech has not yet been shaped into the human language of their surroundings. Peer encouragement being an important factor for further exploration of the new at all stages of childhood and adolescence – even adulthood –, could anything encourage an infant to babble more than the sounds of its peers? The recorded voices of babies and toddlers spontaneously trying out their own speech provide an additional mild stimulus for the youngest listeners to respond to what they hear with their own voices and engage in a dialogue of sorts with the recorded voices, and the voices of their parents’ possible chattering.

The journey through the sounds of nature is curiously deepened by a song. The repetitive syllables with no particular meaning are embodied by a young female voice (Naomi Uma Zorman), merging with rippling water and the chirping of crickets. Backed by a drone line, the voice is further layered by the simultaneous reverberation echoing five melodic patterns. The sonic content thickens and ebbs, and for a few minutes calls us to eavesdrop on our inner flows rather than to the babbling – until the voice of the song fades, leaving us to its echoes as we return to the soundscapes of nature.

This radio play is rich in vocabulary. The verbs describing nature and animal sounds are charged with meaning in their sonority – rustling, chirping, cackling, squeaking, growling – the very words create sounds similar to those heard. Thus, little by little, pieces of the mysterious language of the mother tongue are being put together in the

child. A child endowed with the gifts of the mother tongue receives many intuitive insights, because naming things and their properties secretly brings us closer to their essence – as recognised by our ancestors and passed down to us through a long chain of generations.

“Chitter-Chat-ter” invites us to dive into the world of hearing, potentially the first step to reopening other, unfortunately often numbed senses. It offers an exercise in listening, which leads to hearing along two paths: the path of free openness, diving into a sound bath without filters and letting the sounds fill us up (absorption), or the path of deeply immersed listening and focusing on a particular sound line (awareness). The two paths are easily traversable and well complementary, re-grounding listeners in the wonder of reality and challenging them to approach life creatively.

### Brother and sister

The radio plays “Sea” and “Hearing the Sea” are siblings, children of the same parents, and the similarity of their genetic material is obvious – the verbal and musical material even shows some identical traits. And yet the two plays are worlds unto themselves. “Hearing the Sea”, a play primarily aimed at children over the age of three, is the older brother of baby “Sea”, a play aimed at the very youngest (and their caregivers).

The mother’s body is a mysterious universe of sounds that remain unfamiliar even to her, while the baby in the womb listens to the symphony of heartbeat, rustling, sloshing and rumbling. The interplay of music and sound lulls the little girl “Sea” into the familiarity of the period before her decisive departure into the world, and she is still able to accept the beauty of what she hears without analyti-

cal judgements, emerging questions and her own need to affect. The play unfolds for the listener to surrender to it. Her older brother “Hearing the Sea” has forgotten the song of the sea in a few years of exploring the world and accumulating new knowledge. His growing independence drives him to an exciting exploration of a thousand creative possibilities, and the song of the sea, whose resonance secretly yet resides within, calls him back from his preoccupation with singularities to the embrace of complex interconnectedness. In keeping with its evolutionary emergence, the poem now also addresses him through the paths of reason. In attentive participation and a keen following of the unfolding story, he unwittingly ventures into the wonder of empowerment.

### “Hearing the Sea”: Joining the marine community

Children are looking for their place in family and in society. They instinctively feel it belongs to them, because they are here, alive and ready to live. With open senses they absorb what the world has to offer: sights, sounds, smells, tastes and touches, unconsciously weaving it all into a dense web of experience that gives them guidance for their next steps. When they speak, they conquer the world; they create their own order out of chaos, choosing specifics out of the multitude, opening themselves to a new way of connecting with their close ones.

The radio play “Hearing the Sea” (written and directed by Saška Rakef) addresses toddlers from around three years old. After a musical and poetic introduction, the story begins to unfold in the narrator’s speech, which gradually and patiently pulls back the curtain on the unfamiliar world of the sea. It turns out that not everything in the sea is as it should be,

and that someone is being sought who is able to connect the disconnected, someone able to accept and appreciate the mystery of the sea. “Is that you?”

At the outset already, the narrator addresses the listener directly, inviting them to join the adventure. Each little one (or each listener) thus becomes a key link, the one who will listen to the songs of the sea and hear the whole, the one who discovers the mystery and fulfils the task ahead, the one without whom the outcome of the story will not be the same. The sonic layering of the sea shimmers invitingly with the richness of what is heard, making the listener long to delve into its mysteries, to get away from the noise, to listen to it and sing with it.

Gradually, a community of sea creatures is presented, diverse but living in harmony. First we meet the garfish, then the morays and a trio of seahorses – the dynamics of their dialogues pave the way for the listener to approach the responsibility of the Guardian of the Sea, announced by its inhabitants from the very beginning. They observe the listener from a distance, commenting but also addressing directly, until the awareness of being able to face the task is instilled, entrusted. At times the rhythmic pronunciation of phrases creates echoes and the short, repetitive musical patterns invite the toddler to sing along and reproduce what it hears – or to respond to the music in its own way, with idiosyncratic vocal invention.

Playfulness in the voices of the actors (Lena Hribar, Anja Novak, Jožica Avbelj, Primož Pernat, etc.) brings out unexpected nuances, alongside words flipped and transformed, sometimes even shed of their meaning, breaking the self-evident single-meaningness of language. With humour and laughter, the sea inhabitants accompany the

toddler on a journey to overcome the noise, a journey to the depths. In the far layers of the sea, the adventurous listener encounters a solitary crab, a jellyfish, an octopus, thus taking the place of the single rational interlocutor who can preserve the marine landscape and its community by adding their own voice to the song of the sea.

“Hearing the Sea” reveals the unique movements and voices of the colourful marine milieu living beneath the surface. For the little one on the journey, the importance of the connection between different members of the same world, and the meaning of community is revealed on a level more subtle than the narrative – through sound and music. Each member of the underwater community is accompanied by a sound or musical motif, which slowly build up, merge, fuse, overlap and intertwine until, at the end of the eavesdropping journey, they are united in one and the same, inseparable song of the sea, woven from many threads of sound.

This rich sound composition is not hermetically sealed, on the contrary – both with literal addresses of sea creatures and repetitive address of musical motives, it invites the listener to participate. The play, aimed at preschool children but also at children in the first trimester of primary school, thus conveys an important message: every voice is needed and important, everyone can contribute to the wellbeing of the community with their unique input. Young listeners learn to accept their share of responsibility, to trust in their own abilities, to contribute to solving difficult situations. In the safe environment of “Hearing the Sea”, the child can expand the spheres of its own sovereignty, which in turn yearns for further confirmation. Within “Hearing the Sea” it is received in the gloriously simple calming and attunement of the reconnected world. Children’s heartfelt responsiveness to the big and

small trials of life’s adventure beyond play will grow with the support of sentient adults, who can hear children and the complex interplay of their songs – and subtly add their own voice to it.

### “Sea”: the fragile-powerful song of the sea

Existence is undulation, an endless series of highs and lows, of peaking and sliding into the depths. Life is the force that drives these waves – now exciting, now calming. The interplay of waves is a familiar state to man, the calm surface of the emotional sea a mere moment of equilibrium achieved, but soon to be stirred up by a new unexpected breath, fresh wind or storm from who knows where.

The author of the text and directress Saška Rakef, and the author of the original music Bojana Šaljić Podešva open the door to the cathedral of sound with a precise rhythmic fusion of words and music. The two dominant voices, the voice of the song (whose leading force is soprano Rebeka Pregelj, alongside the voices of Zala Ana Štiglic and Asja Kahrimanović Babič) and the voice of the narrative (embodied by Vesna Jevnikar), blend into one a rich array of murmuring, rippling, sloshing, dripping, bubbling. The brightness of the singer’s voice and its resonance, alongside the gentle lapping of the sea, build a harmonious soundscape full of beauty from the very beginning, radiating peace and the promise of home.

The radio play “Sea” was created with babies and their loved ones in mind – mothers and fathers, grandmothers and grandfathers, caregivers and guardians. Every newborn is a mystery. Who is she, he? What do they think, feel, how do they emot? How do they perceive the outside world that seeps in and what colours and shapes are their

dreams? The presence of the primordial human mystery in the infant knocks on the door of the mystery of being in the adult, and a vast sea of unconscious memories rolls in. Whoever wishes to truly connect with the tiny being cannot remain alone behind a firmly closed door, but must open up to it, take it in the arms, cradle it – and be cradled by it in turn. The mysterious, unknown world of the baby can only be approached by gazing reverently into the mystery. The play “Se”a, with its sumptuous soundscapes, beckons us to do just that.

Time flows, in, out, by. The repetitive patterns in both the poem and the narrative lull us into timelessness and invite us to deeper reflection, to think without thinking, to meditate. Small changes in the patterns, trying out different accents, illuminate each spoken thought from different angles and make it multidimensional. Each repetition is a swing into the depths, a widening of the tunnel and a growing beam of light penetrating into the depths of our intimate experiences.

The rocking and rolling of the Sea can act as a lullaby and a wake-up call at the same time, calming the restless, unwinding the anxious, and awakening a sentient sensitivity to a self (and the little creature in our arms). In surrendering to the power of the sound tide, an instinctive knowledge of the value of each life is strengthened. The awakened instinct confirms that the moment is right to descend into the depths, to ascend into the heights. With the “Sea” we can detach ourselves from the everyday, break free from the grip of worries and fears, distance ourselves from pain and uncertainty – we are comforted, consoled, loved. When our worries turn silent, we listen. And when we listen, we intuitively let go of the overstretched reins of control. The masks begin to dissolve.

A newly awakened sensitivity gives way to empathy, feeling, admiration and wonder. How to stay close in spite of distance, and know how make room even when we are close? How to remain whole in fusion and how to stay connected in separation? How to know someone to the core and yet be humble enough to admit that they will be an eternal enigma to you? ... Instead of answers, there is freedom: of saying, crying, singing, dancing, swaying – in the safe embrace of the song of the sea.

The simplicity and grandeur of the sound cathedral of the “Sea” makes us feel our own smallness and greatness, the transience and eternity that meet within us. The heart beats, without our conscious input. Life is given. The heart beats, the end meets the beginning, the story concludes, the song echoes. Seeds of gratitude are sown within for the joy of being part of the mysterious whole of life. And the promise announces and rings: “All is connected. All is connected. All is connected.”

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The chirping of birds, the sway of the sea, the rattle of a chair, the bounce of a ball, the popping of bubbles, the sound of locusts, the slicing of oars through water, the creak of a door – all this accompanied by human voices speaking, caressing, testing, playing, singing. Sounds and words complement each other, telling the same story. The narrative roots are strengthened by the music; and the music also grows its branches, reaching up to the sky. Music is the juice that feeds the narrative, which would be dry and withered without it, and the narrative gives the music form, grounding it structurally.

The present range of radio plays for babies and toddlers is as varied as possible. “Chair”, “Ball” and “Door” sonically bring to life objects from the

baby’s home environment, while the “Musical Kitchen” focuses on their daily feeding ritual. “Chitter-Chatter” leads listeners out of the house, into the familiar embrace of nature. The “Sea” brings the individual closer to their own feelings and emotions, while “Hearing the Sea” calls them to active participation, to inclusion in the community of the world. Despite their diverse appearances and themes, these works also share a common foundation: building connections. Each in its own way, they encourage the strengthening of bonds between what is already experienced and what is being heard, the word and its meaning, sound and its response, music and its experience, play and its revelation, the adult and the little being.

Radio plays for babies and toddlers, created under the auspices of the B-AIR project, lead us directly, playfully, exploratively and deeply on a journey of beauty, opening us up to the harmony of life. The more we are willing to listen, the more opportunities we have to hear, witness and reflect the needs of the helpless newborn and our own. Listening attentively, we both learn to identify and articulate ever more clearly those longings whose fulfilment requires the presence of another, or the recognition of the incomprehensible forces of Life.

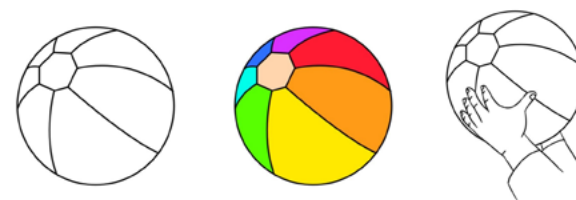


Illustration by Alojzij Gričnik



## THE ART OF BUILDING THE RELATIONSHIP: ARTISTIC RADIO PLAYS FOR BABIES

Radio plays for babies and their caregivers are a novelty in the radiophonic world, opening up a whole new field of contemplating the listening activity – shared, mutual listening. They address the most tender bond at the foundation of human development, which is decisive for the formation of a healthy, rich, and emotionally diverse human inner world. This is why artistic creation intended for this first and most important relationship is a demanding and responsible task.

A child's development in the first year of life is particularly rapid and holistic. The main motor behind it is, naturally, the relationship between the child and their primary caregiver (for the sake of reading ease, the article refers to the mother as the most common primary caregiver). The experiences absorbed by the newborn in the first months and years profoundly shape the development of its brain structure, which continues to have a life-long impact. The contact between the child and the mother is a two-way process that includes both the ability of the adult to perceive, accept and adapt to the child, and the ability of the child, who seeks contact with the mother, to communicate its needs, feelings and conditions. Stimuli, especially the sound stimuli surrounding them, are very im-

portant in this context as they create the emotional backdrop of their relationship.

On the organic level, this means that the mother, with her reactions, mood and emoting, thinking and regulation of emotional states, as well as her behaviour towards the child, represents a developmental space in which the child will be able to learn and shape their actions in such a way as to best adapt and orient within the environment. This adaptation is observable in the frequency of crying, body movements, head turning, development of eye contact, in short on all levels of the child's behaviour.

In the micro-regulation of each other's reaction and perception, the foundation of the relationship between mother and child is shaped and the main response mechanisms of the child's brain are thus formed. In his works, A. Schore describes in detail the attunement between child and mother as a non-verbal, emotional and intuitive attunement between the D hemisphere of the child and the D hemisphere of the mother (Schore, 2019). With emotional attunement, the child develops with the mother, and the mother deepens her sensitivity to its needs and gains the quickness and depth of emotional processing and awareness.

A fundamental role in this process is played by the various emotional states that affect both mother and child, where the mother is of course the only one who can properly regulate these states and thereby enable the baby to gradually develop secure attachment, and with it also the self-regulation ability.

This is therefore the contact that shapes the foundation of the entire structure of the infant's response to the world. Every acquired pattern of this dialogue between mother and child opens up the child's access to ever-new experiences and developmental possibilities.

Developmental science (Lerner et al., 2015; Stern, 2004; Siegel, 2021) makes it possible to distinguish several fundamental periods, which are not only temporal but also specific in the sense that each emphasizes a certain spectrum of attunement between child and mother, to be further expanded and upgraded in the following ones. In the beginning, it is very important to recognize and also address the mother's sadness, caused by the feeling of helplessness and physical exhaustion or uncertainty in the new role. The next set of emotions is

awakened by the development of the child's initiative and the establishment of rhythm and contact through the daily routine, and the third by the establishment of contact with the outside world, interest in the outside world and the search for captivating moments that satisfy the child's curiosity and the need of their brain to learn about the surrounding world.

When discussing what is useful for a child's holistic development, we must first look at what can be developed in a certain period of time, enabling later the acceptance and learning of new things. In general, we could say that the basis of development are first rhythmicity, then musicality, and finally emotional regulation and a strong and safe bond with caregivers.

### How rhythm develops: From birth to two and a half months

During this period, the main events in the relationship between mother and baby are feeding, sleeping and comforting. The mother's task is to sense when the child is hungry, when tired, and when in pain or lonely. In other words – getting to know and regulating the rhythm of its life.

The mother's key decision here is related to whether she trusts herself or the clock to a greater extent when it comes to feeding decisions, and whether she trusts the baby to sleep when it is tired or rather the external day-night rhythm when deciding the baby's sleeping schedule, and by extension whether to let it sleep when tired or to wake it up in order to, as she believes, get it accustomed to the day-night circadian rhythm. The third major decision is whether to maintain lasting contact with the child by constantly holding it in her lap and watching, guarding and keeping it by her side, or wheth-

er to believe she needs to accustom her child to the outside world as soon as possible so that it can manage being alone, in a stroller or in the crib. With these decisions, a system of emotional regulation begins to arise in the child and the mother, meaning the way how the mother and the child will be connected in response to the child's emotional and physical needs. This refers to whether the child is accepted with its specific needs or not, and how quickly and how appropriately the mother is able to respond to them. On the other hand, we see that during this period, the mother requires a great deal of emotional space and security, so that she may be sensitive to the current needs of the child, get to know it, and bond with it properly. The first months are thus dedicated exclusively to building a relationship with the newborn through rhythm, emotional tuning and micro-regulation, externally manifested through feeding/breastfeeding, regulation of sleep and wakefulness, and the development of an attachment relationship.

For the child during this period, the focus is on the development of the ability for social and emotional exchange, the parents' smile, and the 'speech' communication of the child (Stern, 2004). In this time interval, as stated, the relationship is established through the rhythm of feeding and sleeping, and the sympathy of the mother towards the child and vice versa. Stern emphasizes especially the mother's ability to tune into the child's need for food: whether she is attuned to its hunger or perhaps forcing it to eat, and whether she can distinguish between the child being sated or just taking a pause. The same occurs with sleep: does the mother know how to calm the baby before sleep, can she attain the right rhythm with it, is she able to calm herself down during these events, or is the process too overwhelming and she perhaps even reacts to the child with dissatisfaction, inadequate

emotion, or disapproving facial expressions? (Stern, 1985/1998, p. 300). Since the processes of feeding and sleeping are often interrupted and the baby cries, it takes many attempts to re-establish the routine. During this period, it is very important how the parents manage to comfort and calm the child, and how they react to its crying. Does it distress them, upset them, makes them feel apathetic, causes them to respond with excessive concern or to ignore the child, leaving it unattended to cry for hours for example; in short, whether they can respond to its needs sensitively, spontaneously, creatively and flexibly (Stern, 1985/1998).

Daniel Stern describes the sensation of hunger in the baby and emphasizes quite vividly its intensity as well as its rhythmic course:

In this period, hunger is a very strong experience, motivation, drive for the infant. It travels through the child's nervous system like a storm, like a disorganization of everything that has been happening, it disorganizes behaviour and experiences. It brings chaos into their wellbeing. In the infant, hunger creates its own patterns of action and feelings, its own rhythm. The sensation of hunger starts weakly and grows rapidly. During this disorganized phase, as hunger increases, the child experiences the world as disjointed and fragmented.

Babies perceive the surrounding world momentarily. As hunger disturbs their condition, they scream, extending their arms and legs. The most disorganized change affects breathing, which is faster, stronger and more irregular. Soon the voice is activated – crying, but there is no integration between the individual elements at this time. The movements are not synchronized either, it is all just a confused mixed feeling with no real focus. However, as

the hunger grows, things begin to localize. Gradually, a clear sensation of hunger emerges from the background of irritation. The cry is no longer disorganized, it becomes strong and organized, and this helps the baby cope with hunger. With this cry it can alert the parents to its stress so that they can respond. At the same time, this strong and clear cry helps it channel the intense feeling of hunger. Hunger thus forms two things in the infant: reaching out to the outside world, and dealing with the inner one. (1985/1998)

When the mother hears the child's cry, she gently picks it up, brings it to the breast/bottle, speaks softly to it; the child at first sucks voraciously then more gently, while looking at the mother's face. Before she has even prepared for breastfeeding, she has brought four new elements and a new position into the child's world. The first element is talking, which calms the child initially. Mothers usually talk to calm the baby while preparing to breastfeed, where the words are not important, only their melodiousness and sound. Mothers instinctively know that they need to calm the baby down first, or it will be too upset and unable to eat. The next element she brings into its world is touch when she takes the baby in her arms. The third is changing the position, when she lifts the child in her arms and puts it to her shoulder, face to face. This is one of the most powerful and effective ways to calm the infant. Even later in life, when a person is under stress, they might need such a hug as it promotes two powerful messages: there is a physiological calming component that is brought to the nervous system by face-to-face contact, a feeling of security and warmth, and also a mental calming component engaging the individual to be attentive to what they see and hear at the same time. In infants, the combination of physical contact and the upright position gives them opportunity to feel as if

everything is working out, so its inner world begins to settle down. The fourth element that surrounds the baby's world is movement. Walking while carrying the infant weakens the power of crying. Therefore, already in this first period, in stressful situations, the baby learns how to manage stress: by leaning on the person who will take care of them, attentively perceiving, finding a rhythm... All this builds a fundamental trust within the baby, so that when it is under stress it can rely on the mother to provide relief (Stern, 1985/1998). Only then can it begin to form more focused expectations. From repeated patterns of hunger and its mother's response to this stress, the infant learns that this stressful situation will end with feeding.

This anticipation of what will happen when a similar stress is felt again develops even more during the third month period. Sucking itself is a reflex. All babies have a similar sucking pattern. At first they suck faster, then slower, followed by a pause, then faster again when the mother moves them to the other side, then another pause... Each baby has its own version of this rhythm, unique to it just like the fingerprint. Initially they drink quickly to calm the pressing hunger, until the brain gets the message that food has arrived and so the second part of feeding has more ease, with less attention to the feeding process. In this second stage, the baby becomes aware of the world around it. Now it can drink, watch and listen. Earlier, in the first stage, it could only drink. Parents feel this part intuitively. They have to recognize how much they should encourage the child to eat so it will be sated before playing, or they might play in between if the child invites them to interact, but this way it might not finish its meal (Stern, 1985/98; Siegel, 2021).

During this period, children have different states of consciousness such as sleep, napping, inactiv-

ity, wakeful activity, crying or acute hunger. These states are separate and pass from one to another in jumps, not gradually. Each state is like a step on a ladder.

After it is fed, the baby is immediately back in its own world, looking at the mother whose face is just far enough to be clearly seen (20–30 cm). A human face has all the ideal elements encompassing everything a baby likes to look at.

The baby is in a state of harmony between its inner satisfaction and the presence of its mother's face. Its inner satisfaction depends on the mother's face, while its response to the mother's face at the same time has an animating effect on the mother, bringing even more life to her expression.

The connection between the cycle of satisfaction-comfort-reanimation and the mother's presence, face and actions takes place in the present, and at the same time, it is this present that builds the foundations for future expectations, longings and hopes in the child and mother. The baby already begins to form mental models or representations of its mother (Schore, 2019; Bell et al., 2007). The mother model later consists of many different pieces of their relationship, one of which is feeding. The model of contact and sympathy formed by the child with the mother during such basic functions as going to sleep, walking, caring, or feeding, later acts as a prototype for what to expect in relationships with other loved ones in life. In other words, it builds the fundamental characteristics of the attachment mechanism (Bowlby, 1988).

During this period, therefore, by regulating hunger and satiety, wakefulness and sleep, paying attention to the outside world and listening especially to the



mother's voice, the baby tunes into the rhythm and melody of its environment and builds all other abilities on this. Babies are very open at birth. Despite the genetic record, the baby will only develop in the direction that is enabled by the adult environment around it. A baby thus cannot develop alone, but only in a relationship with adults (Bornstein & Lamb, 2015).

### Harmony in the play of faces: Between the second and the fourth month

A very important shift in this life period is the child's own vocalization. Stern (1985/1998) notes that between 8 and 12 weeks, the baby makes a dramatic leap in development. Namely, the capacity for social interaction flourishes: the social smile appears, the baby begins to form the first syllables and is able to seek eye contact. It becomes truly social almost overnight, although social skills are limited to face-to-face and here-and-now contact. The search for such contact thus remains present until the sixth month and stays the dominant way of establishing and maintaining a relationship with others, with vocalization and 'dialogue' becoming even more involved in this search. Later, throughout adult life, the recognition of social cues is based on this ability as well. To the baby, the human face is the most attractive phenomenon. It has its own special rules and a particular influence or power the baby learns and internalizes in the period up to six months. What it learns about faces and their expressions by then will be retained and recognized in adulthood as well. The feelings and intentions of an individual are namely easiest to determine through the face even as a grownup, and humans are real experts at this, having learned it from birth. Looking at a face satisfies infants more than looking at anything else (Stern, 1985/1998).

The mother's face is designed to attract the child's attention: for example, the child prefers curved rather than straight lines (eyebrows and cheeks), it likes light-dark contrasts (eye), it prefers sharp angles to obtuse ones (eye corners), it is fascinated by vertical symmetry (left and right side of the face). At this age, compared to at six weeks, it is also preoccupied with movement and listening (lips while speaking). What is more, the parent's face is not only alive, it also responds to what the baby is doing from moment to moment, so that it can feel a special connection between itself and someone else. In addition, the face gains a special power for the baby after the age of two or three months, acting as a trigger for social smiling and vocalization (Stern, 1985/1998). Gradually, the contact between a parent and a baby is also established through the voice.

Another major aspect that a baby can already use at this period is the gaze, which can be controlled to a great degree now. With this ability, it can start and end face-to-face interaction, as these interactions are built on the mutual gaze (Stern, 1985/1998). This can also be called gaze control, smile response, and vocalization. Schematically speaking, a child at this age already knows the range of facial expressions, their meaning, and adapts to these expressions with its behaviour. Therefore, during this period, the mechanism of regulating the affect is more deeply established and acquires more concrete characteristics (Bell et al., 2007). When regulating facial interaction, the child quickly takes the initiative in relation to the adult. It may invite adults to interact with a big smile, or it may reject them by decisively looking away (Stern, 1985/1998). Stern calls this way of communication the face game (Stern, 1985/1998, p. 57). The child and mother look at each other a lot during this period.

Sometimes the mother's gaze is absent, there is no life in it; the child feels lost, afraid, it looks for a point where there is life and where it might seek comfort, finding it in the eyes which are the softest and also the most solid point in the world. By staring there, life gradually returns to the mother's face. They might start playing with different facial expressions. The child then starts to make different faces and laugh when the mother mirrors this behaviour. It calls her, she answers. They call one another, guide and follow each other. The mother approaches the baby with her nose, it blinks and is delighted. But if the mother is not too enthusiastic about this activity, the child is confused between joy and apprehension, it begins to tremble and rebel. The mother usually notices this and stops the game. She can calm the baby down with a gentle smile (Stern, 1985/1998).

By the time a baby is three months old, it knows what to expect in face-to-face interaction with its mother.

### The start of the social world: Four months and a half – the social world

Babies experience the eyes as a window to the soul, something that is highly evident in the peek-a-boo game. A baby is only really happy with an adult when it sees their eyes. For it, this means that 'if you can't see my eyes, you can't see me'. If he can't see its mother's eyes, there is no mother. The reason babies love this game so much is because the mother keeps reappearing. To see means to look into the eyes of another. The eyes are the centre of contact for both the baby and the adult. As if it were absorbing its development and understanding of the world from eye contact.

The only goal for the child during this period is to maintain the experience that its gaze can attract and direct the gaze of the mother. Later in life, this underlies the experiences of romantic love and the 'wordless understanding' celebrated in love poetry, and it stems from the earliest experience of shaping the world with one's gaze.

Not only is the baby very interested in the gaze, but it is actually limited to social events 'here and now, between us'. Even if it were interested in things outside of this relationship, it cannot do anything in that direction. Until the fifth or sixth month, it is literally trapped in a non-verbal interpersonal world, as it cannot yet move, even sit independently...

Only afterwards can babies find an object and become agents in the world. If they move their head, the scene changes; if they blink, the world is dark; if they move their arm, they feel a muscle and a new position in space. Through this, they realize that they are agents in the events, and they also realize that they are psychologically separated from their mother – they are no longer one with her. They understand that they have separate actions and feelings.

A baby can gradually capture more of the world if it has the opportunity to see how adults manage stress and discomfort. Slowly, it begins to recognize the most common gestures and stores them as images. It can be a mother smiling when she comes into the room as it is crying, or maybe her image shows a hostile and unpleasant face. The child begins to recognize whether the arrival of the mother brings comfort or pain. Early experiences develop mainly in two directions, either to push people away or to get them close. These images become permanent expectations about the emotional world in which the infant lives. During

this period, they already help it anticipate what will happen and how best to react.

### **The melody of the emotional world, a relationship is also built with the voice: From the fifth month and a half to the ninth month**

At six months, the child already knows all the emotions that are 'allowed', understood and assuaged in its family. It can already express anger, sadness, fear, joy, excitement, disgust and anxiety very clearly. At the same time, expressing itself, the baby has already learned how the surroundings react to these feelings. Intense emotions are very tiring for the human body, especially for a child, and represent a high level of stress. Therefore, the way the father and mother help the child handle emotional states is crucial for the development of the child's ability to regulate stress, the ability to control its emotions.

During the first six months, the baby has learned the feelings as they were forming, and, based on the reactions of the parents, developed mechanisms for coping with stress, which will accompany it throughout its life. A child that was soothed by its parents as soon as it started crying, who was responded to as soon as it needed something, and who was watched and taken seriously in its needs, will already be very 'mature' at six months, able to show and express with its face a very wide range of experiences. It will also already show the first signs of 'patience': since it can trust its parents to take care of it, the baby will begin to express its needs with less 'urgent' signs. It will smile more, it will be able to show what it wants faster with gestures, it will start using yelps and calls and will cry less (Bell et al., 2007; Schore, 2019; Erdman & Caffery, 2003).

During the first six months, the child becomes a true master of correcting misunderstandings and inconsistencies between it and the adult. With its whole body, the child communicates to the world its inner state, its needs and how people can approach it, reach out into its world and invite it into theirs. In this way, connection and fundamental trust are built, as well as an understanding of what kind of world it was born into. In the first six months, we already teach the child about the world of relationships it was born into and about the feelings it will be allowed to bring into this world; to what extent it will be able to co-create the world. In this period, the baby is particularly enthusiastic about sounds and singing and already responds to the mother's incentives with its voice.

At this age, the child slowly learns to distinguish what comes from the outside and what comes from the inside, and it is this distinction that is the basis for the later development of a sense of responsibility, self-confidence and control. Through sensitive parenting, which helps the child recognize distress and comfort it, the child will soon be able to cope with the challenging task of simultaneously managing its feelings and maintaining contact with adults, as well as the ability to control objects in its environment (Bell et al., 2007).

All these skills are most easily developed in the play between a child and an adult. This period is therefore very much marked by the child playing with its parents. During play, adults can be creative and use their whole personality. This is important, because only in creativity can an individual explore themselves – their inner Self (Winnicott, 2017).

## Play:

- promotes growth and development,
- comes naturally,
- is characterized by a certain spontaneity, creativity, it is something pleasant, it brings satisfaction,
- leads to a social relationship.

In the mother-child relationship, the overlapping of the two spheres of play, the mother's and the child's, must be allowed and enjoyed (Winnicott, 2017).

Stern would add that particularly important is the regulation of the game, the interweaving of these two worlds. A mother playing with a child takes care to adopt to the child's play activities. Sooner or later, she introduces her own gameplay into the game, as she realizes that the child's gameplay is different from hers. The child may like this, or it may find the introduction of somebody else's ideas unnecessary, yet, in case the mother does not adapt, it accepts it regardless (has to accept) (Winnicott, 2017).

This age period is characterized by mutual play, when mother and child play with objects together. The child has already acquired sufficient coordination skills in terms of mastering eye-hand and hand-hand activities and begins to be visibly interested in the world around it. What matters is how parents and children tune into the direction, time, space, focus, execution, development, changes and interruption of play. All this brings to the fore the same themes that could be observed already months ago, namely in the period of feeding and face-to-face play (Stern, 1985/1998), but in a completely new quality and potential.

This period is also the one that is the biggest test for mothers, because the child expects from them spontaneity, relaxation and creativity when playing, which can be quite a challenge for an adult burdened with their own rhythm of responsibilities. Help in this creative game and co-creation of a colourful and open world is therefore very welcome, providing of course it includes those elements that actually strengthen the developmental changes. Musical art for babies – a game that includes the mother's face and her participation, rhythmic and melodic patterns and surprises that delight the baby, can bring to everyday life a support that strengthens the most tender and deepest bonds, reducing the distress and uncertainty of the adult.

The radio plays made specifically for babies: "Sea", "Chitter-Chatter" and "Musical Kitchen", open up the space of the relationship between mother and child by addressing these very deepest emotional states at different moments of the day. "Sea" opens up space for weariness, melancholy, calming, dreaminess and longing, breastfeeding, or simply resting together in a rich sound environment that provides the mother and the child with security and a flow that reflects the emotions they both know. "Chitter-Chatter" supports the contact between mother and child in activity, directing attention to the deeper meaning of nature, contact with it, bringing a relaxed and free rhythm for the time of walks, games and interesting activities that would feed the child's curiosity. The "Musical Kitchen" gives a rhythm to the daily routine and provides a model of playful acceptance of the routine, which is the best form of learning for babies 6 months of age. Of course, this play is possible precisely on the basis of the already formed, positive and mutually established relationship between the child and the mother during feeding and interaction, and it can help them to expand this safe

relationship with a new playful dialogue. It is not that these radio plays are meant to be used only at certain times, but they are meant to be listened to together at any time, with the aim of expanding the mother's set of ideas for deepening the contact with the baby and providing the baby with a safe and interesting experience, one that internally nourishes and connects with the mother.

The music thus approaches the child through the mother's relaxed activity and from the background, as part of the ambience, and at the same time introduces into their everyday life the play and learning about objects that the child already has a good command of, and whose role in life it understands, enabling new learning in a structured and emotionally balanced way.



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Čorić facilitating the  
“Musical Kitchen” at  
the Radio Voćarska  
Festival of Radio  
Drama and Radio  
Theatre for Babies  
and Children,  
RadioTeatar, Zagreb,  
Croatia. Photo by  
Mia Cvitković

# MUSICAL KITCHEN

## Libretto

*(Musical theme - intro.)*

1, 2, 3, *(a sound of banging with a spoon)*,  
1, 2, 3, *(a sound of banging with a spoon)*,  
1, *(a sound of banging with a spoon)*,  
1, *(a sound of banging with a spoon)*,  
1, 2, 3, *(a sound of banging with a spoon)*.

sshhhhhhhhhhhhhh.

ssssssssssssssshhhhhhhhh.

Cold,  
(iiiiiiiiii),  
curvy,  
smooth,  
(ssssshhh),  
shiny.

Cold, curvy,  
smooth, shiny.

Cooooooooold,  
cuuuuuuuurvy,  
smoooooooooth,  
shiiiiiiiiiiiny.

Cold,  
curvy,  
smooth,  
shiny.

*(3x, each time faster):*

Cold, curvy,  
smooth, shiny.

Spoon.

*(4x):*

ssssshhh.

*(5x):*

Spoon.

Spoo—oon.

spoo-spool-spool-spool.

Spoo-oo, oo, oo, oo, oo, oo, oo, oo, oo, oo, -nnnn.

One spoon,  
another spoon,  
one spoon,  
another spoon.

One for you,  
another for me.

One spoon,  
another spoon,  
one for me,  
another for you.

*(Blowing sound.)*

Whoosh, whoosh,  
the little spoon gets in the soup.

Whoosh, whoosh,  
the little spoon swims in the soup.

Five crumbs swimming  
in the soup,  
Eeny, meeny,  
miny, moe.

Five crumbs swimming  
in the soup,  
Eeny, meeny,  
miny, moe.

*(Faster and faster):*

Whoosh, whoosh,  
the little spoon gets in the soup.

Whoosh, whoosh,  
the little spoon swims in the soup.

Five crumbs swimming  
with the flow,  
Eeny, meeny,  
mini, moe.

*(Plonk.)*

*(A sound of surprise.)*

O-o.

The spoon sinks.

O-o.  
Oh, no.

The spoon is whining,  
the soup is frightening.

The soup is fiery, flaming, burning,  
fiery, fiery,  
flaming, burning,



writhing, pinching,  
tickling, stinging.

Wriiiiithing,  
pinch-ing,  
tick-ling,  
sting-ing.

Writhing, pinching,  
tickling, stinging.

Burning,  
burning-burn-ing-ing-ing-ing,  
fiery, flaming,  
writhing, pinching,  
tickling, stinging.

Writhing, pinching,  
tickling, stinging.  
Writhing, pinching,  
tickling, stinging.

*(Blowing sound.)*

*(Slurping sound.)*

Mmmm.  
Hm!

Warm soup,  
tasy soup,  
good soup,  
healthy soup.

*(A song follows):*

Whoosh, whoosh,  
the little spoon gets in the soup.

Whoosh, whoosh,  
the little spoon swims in the soup.

Five crumbs are swimming  
in the soup,  
Eeny, meeny,  
miny, moe.

Five crumbs are swimming  
in the soup,  
Eeny, meeny,  
miny, moe.

Five crumbs are swimming  
in the soup,  
Eeny, meeny,  
miny, moe.

Five crumbs are swimming  
in the soup,  
Eeny, meeny,  
miny, moe.

Eeny, meeny,  
for, for, for.  
for, for, for, for,  
for, for, for,  
for, for, for, for,

for, for, for.

Fork.  
On the table.  
In the hand.

The fork is in the hand.  
On the table.

Fiiuuuuuu — *(a sound of a spoon falling on the floor.)*

*(A sound of surprise.)*  
Ouucchhhh!

Slides off the table,  
sliding, falling.  
On the head.  
On the legs.  
On its sturdy tips.

*(Knocking sound.)*

Under the table?  
Under the table.  
At the table?  
At the table.

Above the table?  
Above the table.  
Next to the table?  
Next to the table.

*(Faster and faster):*

Under-the-table.  
Next-to-the-table.  
At-the-table.  
Above-the-table.

Under-the-table.  
Next-to-the-table.  
Under-the-table.  
At-the-table.

Above-the-table.  
Under-the-table.  
Next-to-the-table.  
At-the-table!

And now — give me a bite!  
Another one.  
another bite.  
Another one.  
another bite.  
Come on.  
And now give me another bite.  
Come on.  
Now.  
Another bite.

A piece of banana — yum, yum, yum!  
Some soup — yum, yum, yum!  
A piece of cake — yum, yum, yum!  
A piece of ... a sock — Eeeuuuuuwww!

Eeeuw, eeeuw,  
eeeuw, eeeuw-eeeuw.

Yum, yum, yum,  
yum, yum, yum.

Eeeuw, eeeuw,  
eeeuw.

And — splash into the sink!

*(Repeat musical theme from intro.)*



Music pedagogue Olivera Milojević facilitating the “Musical Kitchen” at the Festival of Radio and Sound Art for Children and Youth, BAZAART and RTS, Belgrade, Serbia, June 2023.  
Photo by Sunčica Milosavljević

## Credits

### Author of the text and Director:

Tajda Lipicer

### Composer and Author of original music:

Alenja Pivko Knežević

### Interpreter:

Maja Kunšič

### Expert advisors:

Saška Rakef,  
Katarina Zadnik, Ph.D.  
Katarina Habe, Ph.D.  
Lia Katarina Kompan Erzar, Ph.D.

### Sound Engineer:

Urban Gruden

### External Collaborator:

Žiga Hren

### Production:

Radio Slovenia 3<sup>rd</sup> Program – Program “ARS”



To listen to “Musical Kitchen”:

# MUSICAL KITCHEN

## Suggestions for your musical creations while listening to a radio play

Graphic notation is offering suggestions to assist one in the process of making one's own sound creations while listening to the radio play; it's open to imagination and allows one to research sound as well as improvised rhythmic and melodic structures. One can also follow it randomly; or, while listening, one can include other, random forms of inclusion.


Listing with the help of this graphic notation is based on parents', or any other adult's engagement, who's modeling to the child how to use different objects and how to interact with one's environment.


Prepare the following props and put them on the table:


- a spoon (one for you and one for the child)
- a bowl with a lid that fits and can be fixed to the bowl
- rice or dry beans
- a fork

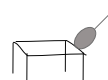
We're sitting at a table.  
While listening, follow the icons, described in the list of symbols.


### THE LIST OF SYMBOLS


 - listening


 - sound signal - the bang of a spoon in the recording

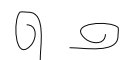
 - a spoon banging on the edge of the bowl


 - a spoon banging on the edge of the table


 - your voice goes up and down (vocal glissandos); vocal intensity correlates with line's thickness (thicker - forte; thinner - piano)

 - the sound of a spoon mixing the rice in a bowl (when icons are closer together, mixing gets faster)

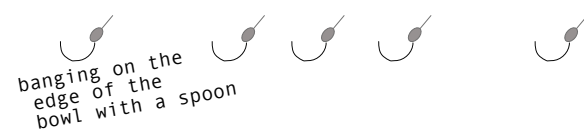
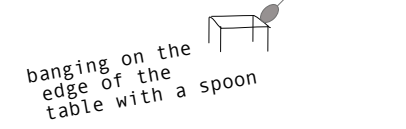

 - continue performing sound elements (motif repetition)


 - we reach into the bowl with our hand; we're making sounds with the help of scratching, mixing and scraping


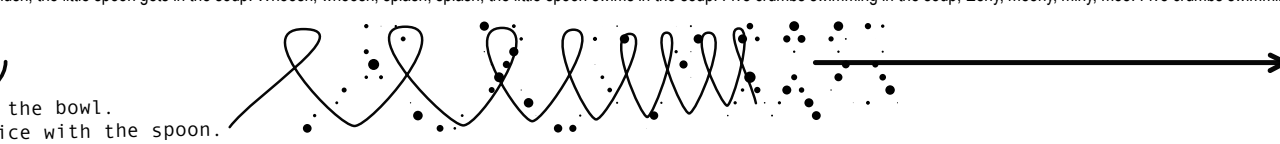
Pi-i-ha-a  
 - the position of dots implies how high the notes are

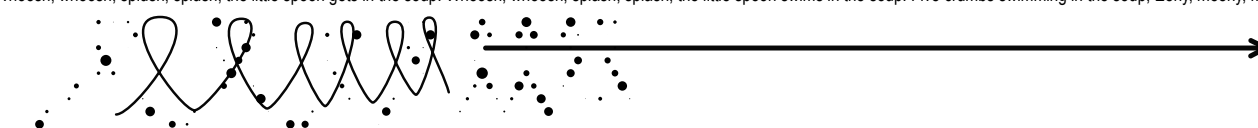
 - improvised playing using the rattle

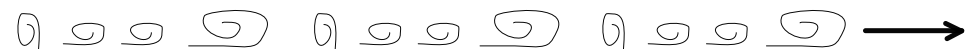


<p>🔊</p> <p>One, two, three, One, two, three, one, one, one, two, three</p>	<p><b>Voice:</b> One, two, three, One, two, three, one one One, two, three,</p> <p><b>Participants (an adult, a child):</b></p>  <p>banging on the edge of the bowl with a spoon</p>	<p>🔊</p> <p>Cold, curvy, smooth, <b>shiny</b></p>  <p>banging on the edge of the table with a spoon</p>	<p>Spoon 🔊</p> <p>Spoo—oon. spoo-spoo-spoo-spoo-spoo. Spoo-oo, oo, oo, oo, oo, oo, oo, oo, oo, oo,-nnnn.</p> 
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<p><b>Voice:</b> One spoon, another spoon, one spoon, another spoon. One for you, another for me. One spoon, another spoon, one for me, another for you.</p> <p><b>Participant:</b></p> <p>Our voice follows the line.</p>	<p>zzzz, iiiii, zzzz, spoon?, zzzz, mmm, zzzz, iiiii, mmm .</p> 
--	---

<p><b>Voice:</b> Whoosh, whoosh, splush, splush, the little spoon gets in the soup. Whoosh, whoosh, splash, splash, the little spoon swims in the soup. Five crumbs swimming in the soup, Eeny, meeny, miny, moe. Five crumbs swimming in the soup, Eeny, meeny, miny, moe.</p> <p><b>Participant:</b></p>	 <p>We put some rice into the bowl. We start mixing the rice with the spoon.</p> 
--	--

<p><b>Voice:</b> Whoosh, whoosh, splush, splush, the little spoon gets in the soup. Whoosh, whoosh, splash, splash, the little spoon swims in the soup. Five crumbs swimming in the soup, Eeny, meeny, miny, moe. Five crumbs swimming in the soup, Eeny, meeny, miny, moe.. ČOF!</p> <p><b>Participant:</b></p>	 <p>Put the spoon in the rice.</p>
--	---

<p>O-o 🔊</p> <p>The spoon sinks. O-o Oh, no. The spoon is whining, it won't get in the soup.</p>	<p><b>Voice:</b> The soup is fiery, flaming, burning, fiery, fiery, flaming, burning, writhing, pinching, tickling, stinging. Wriiiiithing, pinch-ing, tick-ling, sting-ing. Writhing, pinching, tickling, stinging.</p> <p><b>Participant:</b></p>  <p>Put your hand in the rice. Make sounds with the help of scratching, mixing, scraping.</p>
--	---

**Voice:** Burning, burning-burn-ing-ing-ing-ing, fiery, flaming, writhing, pinching, tickling, stinging. Writhing, pinching, tickling, stinging. Writhing, pinching, tickling, stinging.

**Participant:** 

**Voice:** Mmmm. Hm! Warm soup, nice soup, tasty soup, healthy soup.

**Participant:** Take the spoon out of the soup. Put the lid on the bowl and close it. (use the bowl as a rattle)



(Who-osh, who-osh, sp-lush, sp-lush, the li-ttle spo-on g-ets in the so-up.

Pi-i-ha-a, pu-u-ha-a, štri-i-fi-i, štro-o-fi, žli- či- ca v ju- ho sto- pi.

Shaking (with) the rattle.



Who-osh, who-osh, sp-lush, sp-lush, the li-ttle spo-on sw-ims in the so-up.)

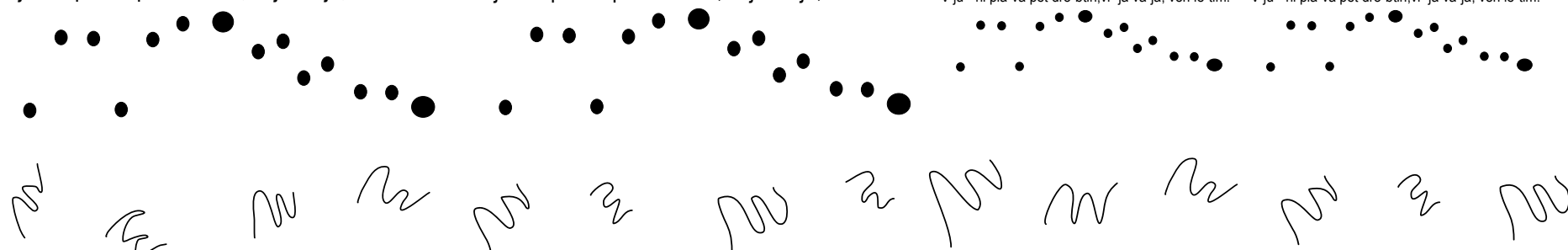
Pi-i-ha-a, pu-u-ha-a, štri-i-fa-a, štra-a-fa, žli- či- ca v ju- hi pla- va.

(Five crumbs are swimming in the soup, Eeny, meeny, miny, moe. Five crumbs are swimming in the soup, Eeny, meeny, miny, moe.) (Five crumbs are swimming in the soup, Eeny, meeny, miny, moe. Five crumbs are swimming in the soup, Eeny, meeny, miny, moe.)

V ju- hi pla-va pet dro-btin,vi- ja va-ja, ven le-tim. V ju- hi pla-va pet dro-btin,vi- ja va-ja, ven le-tim.

V ju- hi pla-va pet dro-btin,vi- ja va-ja, ven le-tim.

V ju- hi pla-va pet dro-btin,vi- ja va-ja, ven le-tim.



[illegible]

**Participant:**

Put the rattle away.



Take the  
fork in  
your hand.

Put the  
fork on  
the table.

Put the fork on the floor (under the table).

*Slides off the table,  
sliding, falling.  
On the head.  
On the legs.  
On its sturdy tips*

**Voice.** Under the table? Under the table. At the table? At the table. Above the table? Above the table. Next to the table? Next to the table. Under-the-table. Next-to-the-table. At-the-table.

Above-the-table. Under-the-table. Next-to-the-table. Under-the-table. At-the-table. Above-the-table. Under-the-table. Next-to-the-table. At-the-table!

**Participant:** peek under the table.

Sit straight  
at the table. Look up.



Take the fork  
and put it on the table.

**Voice.** And now — give me (another) a bite! Another one. And another bite. Another one. And another bite. Give me, give me. And now give me another bite. Give me. Now. Another bite.

**Participant:**

mmmm

mmmmmm

mmmmmm

mmmm mmmm

mmmmm

mmmmmm



**Voice.** A piece of banana — yum, yum, yum! Some soup — yum, yum, yum! A piece of cake — yum, yum, yum! A piece of ... a sock — Eeeeeuuuwww!

**Participant:**

it:  
Bang at the edge  
of the bowl with  
the spoon and the fork.



🎧 Eeeuuw, eeeuuw,  
 eeeuuw, eeeuuw-eeuuw.  
 Yum, yum,  
 yum, yum.  
 Eeeuuw, eeeuuw,  
 eeeuuw.

**Voice:** And — splash into the sink! *music*

**Participant:**

Put the content from the bowl back in the box. Put the spoon and the fork back in the drawer.



# INTERPRETATIVE AND DIDACTIC POTENTIALS OF THE RADIO PLAY FOR BABIES AND TODDLERS “MUSICAL KITCHEN”

*When a spoon becomes the first instrument.  
And home kitchen a concert stage.*

The radio play “Musical Kitchen” by Tajda Lipicer and Alenja Pivko Knežević is intended for babies between 6 and 18 months of age, and toddlers. It is presented in the form of a soundtrack and in the form of a graphic score. The sound recording puts to the fore the activity of listening and auditory perception of speech, sound and music events, while the graphic score opens up the limitless possibilities of speech, voice and singing interpretations of the authorial text. We will hereby present the didactic aspects and approaches of listening to radio work and the possibilities of parental interpretation of the text or its individual parts to the child, in the form of an independent speech-music performance. The soundtrack of the radio play “Musical Kitchen” highlights the sound world of what is happening in the kitchen. The kitchen is presented as a place for preparing meals and eating with kitchen utensils. The principal audio event places the spoon, bowl and fork at the centre, as the main eating utensils for a baby and a toddler.

Radio play for babies and toddlers “Musical Kitchen” encourages independent listening to samples of sound, or listening to a musical art work in interconnection of a parent and a baby or toddler. Babies and toddlers obtain the artistic experience through a holistic approach of re-

corded speech, voice, sound and music parts. An integrated sound-musical experience, presenting events in the kitchen during mealtime, reminds the youngest of the already familiar sound environment from everyday life. Rich and charming sound associations that provide an aesthetic experience of an art work are appropriate for the development of auditory sensitivity and perception in the youngest. The attractive sound and musical elements, and the emotional and expressive verbal narration by a female voice with excellent speech articulation and intonation in the higher frequency range, will draw the attention of babies and toddlers. Although a baby cannot understand the text on the cognitive level, the “Musical Kitchen” is creatively designed with sound and speech in such a way that the baby will recognize the sounds and intuitively connect them to the events and the meal in the kitchen. Little ones will deepen their experience of speech, sound and musical elements precisely by grasping the content of the text, sonority and sounding of meaningless words. Playing with syllables and words interpreted in a female voice, well-complemented with sound and music, will arouse their attention, enthusiasm and the wish to imitate what they’ve heard.

From the point of view of didactic approaches, the radio play “Musical Kitchen” can be offered to babies and toddlers for independent listening, and the listening effect will be even greater in parent-baby or parent-toddler interaction. In this case, in the introduction, parents should motivate a baby to listen to the radio play, with an exciting message about what will be listened to. During the first listening, it is recommended to observe the child and his reactions to speech, sound and musical elements, and at the end to remind the child of those parts he reacted to. Parents can repeat those parts immediately after listening, as a kind of game with the child, but this game can also occur before or after the meal, when props – utensils, bowls, spoons and forks, are also available. It is recommended to listen to the “Musical Kitchen” several times, as children love repetition which triggers deeper aesthetic experiences in them, and encourages the development of auditory sensitivity, attention and memorization. An introductory speech and preparation for listening can be added to the repeated listening, as well as the comments from an adult during the listening.

In the course of listening, parents can also pause the recording, interpret the parts that have already been

heard and encourage babies and toddlers to express themselves vocally. Listening to the radio play should be in a family environment during the child's play-time, when the child is ready and awake for it. The presence of one of the parents is recommended during listening. Joint listening can take place in close physical contact, when the baby and toddler are in parent's arms, which creates a safe space for them to express their imagination and creative impulses. Before listening to such works of art, it is necessary to prepare a physical space that should be comfortable for the child, and also an acoustic space free from external sound disturbances. For the listening, a sound-quality recording and a suitable sound player should be used. Sound recordings should be played at an appropriate volume, by no means too loud.

In addition to their radiophonic artwork intended for listening, authors Tajda Lipicer and Alenja Pivko Knežević also created a graphic score which can serve to a listener as a template for creative sound improvisation while listening to a radio play. With the legend of symbols, the graphic score encourages the creation of sounds even independently from the radio play soundtrack. In this type of performance, the adult becomes the creator of the sound elements and sonority of what is happening in the kitchen and during the feeding. For sound exploration and improvisation of their own 'musical kitchen', the authors propose a group of kitchen objects (spoon, fork, bowl, kitchen table, rice or dry beans), a rumbling musical instrument and a human voice (vocal *glissandi* in upward and downward direction, blowing at different heights). The text, accompanied by symbolic language in the graphic score, encourages the search for their own creative approaches in making sound images and sound-musical elements, with which an adult will improvise and create the sound of kitchen events while preparing a meal and while feeding or eating.



Multiinstrumentalist  
Andrej Fon facilitating  
the "Musical Kitchen" at  
the Audiofestival, RTV  
SLO, October 2022,  
Ljubljana, Slovenia.  
Photo by Adrian Pregelj

An adult should try and explore the possibilities of creating different sounds and sound colours using the objects defined in the legend of the score, and can then upgrade the selected sounds by creating interesting rhythmic and/or melodic patterns and by performing them at different speeds (tempos) and dynamics. The use of the human voice should also be imaginative, using different vowels and pitches of phonemes or syllables and sounding words when uttering them. The human voice supports pronouncing syllables and words or singing in different registers (higher, lower), voice colours (bright, dark), whispering, in different dynamics (quiet, loud, rising, falling), tempos (slow, moderate, fast, acceleration, slowing down) and rhythmic and melodic patterns.

The graphic score precisely defines the selection of sounds and the method of performance in connection with the verbal content, permitting at the

same time an open space for the imagination of the adult in search for new possibilities of including and improvising with kitchen objects and voice and speech-singing capabilities, in a unique and original way. Like this, the sound of what is happening in the kitchen will always be performed live by the parents in an innovative and unique way, which will encourage and hold the child's attention to sound and sound events, prolong his attention and concentration, and support him to test his own vocal capabilities, the sound of objects and his movements. Parents often feel reserved about finding their own expressive voice-singing abilities and improvisation. The artwork "Musical Kitchen" with its soundtrack exemplifies performance possibilities that parents can imitate, while the graphic score supports them to independently explore sounds and improvise with them in the home environment.



During the development period of the baby, the role of the parents as the main actors is crucial in the creation and improvisation of sound elements. Here, we advise that creation and improvisation, with or without a sound template, take place in the kitchen environment. The first option is for the baby to follow the parent's sound performance in the kitchen while eating in the parent's arms; the second option is for the baby to sit independently and watch the sound-music improvisation as a musical performance on the 'kitchen stage'. Another recommendation is to do the performing – with an emphasis on the pronunciation of the text – in such a way that the baby lies on the changing table, and the adult, leaning over the baby, talks to the baby creatively with expressive voice, speech and singing improvisation. Such an approach enables eye contact and direct proximity, which represents a safe environment, while at the same time, the baby observes the pronunciation of syllables and words, and the articulation of the mouth, and listens to the voice and speech-singing expression of the adult. At first, the baby will listen and observe the parent's activity, but soon they will start to respond, get involved and communicate, and imitate the parent in their own way, through vocalizations and babbling. The responses will be richer and more expressive when parents are creative in saying the text, when they articulate and pronounce it clearly and distinctly. The effects in the baby will be manifested in a gradual increase in movement and vocal responses, which will encourage movement, speech and singing development. On an emotional level, the experienced performances of the parents will bring the child great joy, enthusiasm and the desire for repetitions.

Even during the development period of the toddler, the parents' role in performing, creating and improvising on the graphic score template is crucial. At first, the toddler will observe the exploratory,

creative and performing approaches of the adult. The observation will be followed by imitating the activities of an adult and later independent exploration of sound-musical abilities using the props and speaking-singing voice. It is recommended that parents encourage and participate in the sound-musical activity of the child and observe their creative impulses, which should be adopted and used to support the creative activity of the toddler, especially when spontaneous creation of similar or different sound-musical elements occurs. These deviations from the original sound-musical template are extremely important and also completely natural in early childhood. Stimulation of exploration, improvisation and creation with new sound and musical elements is closely related to developmental characteristics, most often manifested in chattering or singing improvisations.

In order to avoid the stereotype of learning popular texts or songs already in infancy, the radio play is a very good lever for stimulating and fostering the typical child's need to explore the world of sound and music by creating sound-musical patterns using various props, objects and musical instruments, as well as speech-musical patterns with their own voice. Care must be taken when choosing props which will support the creative activity of exploring sound making and various colours of sound, that they are not sharp and dangerous to use and cause physical injuries. The interaction of the toddler with parents in designing the sound-musical landscape will be a space of safety and closeness that will support the limitless possibilities of creative approaches. It is recommended that at some point the adult steps away from direct stimuli during the time of research and creation, and just monitors the activity of the toddler. The observation should be aimed at identifying which props, sound and musical elements excite them.

In this way, during repetitions, we can offer a stimulating environment with only the exciting props, and later enrich it with additional props, or we can replace them with new ones.

The radio play "Musical Kitchen" by Tajda Lipicer and Alenje Pivko Kneževič, intended for babies and toddlers, from the point of view of two conceptual proposals, encourages the development of auditory perceptions, sensitivity and attention to sound by actively listening to a piece of music as well as exploring, creating and improvising with the graphic score. Thus, the authors, with knowledge of the musical-developmental characteristics of an infant at the level of sensorimotor development and a toddler at the level of the pre-operative period, encourage their musical and holistic development with appropriate voice, sound and musical elements. The audio recording is a very good starting point for further creative approaches by parents as important adults, in acting out what is happening in the kitchen. The performative role of parents in offering an aesthetic artistic experience to the child is an important incentive for the exploration of sound and the children's own creation. The radio game "Musical Kitchen", which supports the developmental characteristics of babies and toddlers with sound and musical subtlety and sensitivity, is recommended for listening and creating in a family environment. Radio work for babies and toddlers significantly fills the gap in the field of missing radio and music works in the Slovenian space and beyond.



# RADIOPHONIC PLAYS AS A SOUND ENVIRONMENT TO STIMULATE INFANTS' AND TODDLERS' PSYCHOLOGICAL FLOW:

## A motivational aspect of listening to radiophonic plays for young children

Many people might think that creating for young children is easy, but this is far from the truth. To engage the youngest, we need to enter their world, understand it, feel it and, departing from there, translate it into a work of art. Even more difficult than getting their attention is keeping it, because the attention span of babies and toddlers is very short and very open. Creators for the little ones need to have a lively inner child who is curious, playful, mischievous, spontaneous, genuine and open.

Creating a radiophonic work for the very young is particularly challenging. Today's world is highly visual, full of attractive colourful stimuli and attractive images, so the question arises how the world of sound can compete with this? How to create a sound world that is familiar to the child, which at the same time evokes feelings of security and a desire to explore new things, which appeals to the child, and stimulates them to listen?

Observing how babies and toddlers experience and react to the sound world shows that they are extremely sensitive to their surroundings. They react to it on all levels, physical, emotional and cognitive. Their primary response is physical, as they physiologically 'tune in' to the features of the sound

environment around them. The physical response towards activation or relaxation is reflected in the depth of their breathing, in their muscle tone, in their heart rate, in their hormone secretion. In the earliest years, the emotional response is mainly one of pleasure or discomfort; it is only later that responses develop in the form of a variety of emotions, first primary ones such as joy and sadness, and later more complex ones. Primary emotional responses are mainly linked to the intensity and quality of the sound, which can trigger feelings of fear if it is too loud, too forceful, too saturated. The sound environment can therefore evoke either feelings of fear or feelings of security in the child. Sound also opens young children up to the world of social relationships, to the world of belonging and love offered to them through musical communication by their primary caregivers, usually their mothers. Interesting sound stimuli attract the child's attention on a cognitive level and become imprinted in the youngest children's memories.

Poćwierz-Marciniak and Harciarek (2021) summarise the findings of a number of studies that state that a child is born into this world with a fully formed hearing apparatus. The new-born is already able to discriminate the melodic and rhythmic aspects of

auditory stimuli, and responds to them motorically and emotionally. Already in the prenatal period, musical memory develops, whereas the new-born can easily remember new musical fragments. Babies learn to experience music emotionally, especially through their relationship with their mother. Optimal musical stimulation is very important for the youngest babies, with the focus on satisfying the need for safety that the mother creates by singing to the baby.

Music can be considered as a tool that can be used to promote holistic well-being of the very young, which is reflected in the quality of their development. The sound-music environment therefore has an important influence on how babies and toddlers experience and respond to the world.

### Listening and the flow

One convincing reason for listening is the stimulation of 'flow' (a sensation of total involvement) – an optimal experience that inspires pleasure, curiosity and interest in the listener.

'Flow' is a holistic feeling that people experience when they are

completely engaged and intrinsically motivated to perform an activity (Csikszentmihalyi, 1975). It is a feeling that emphasises the pleasure of performing an activity (Privette, 1983). In a state of flow, there is no fear of failure; the individual feels that he or she is in control of what he or she is doing and acts automatically and unmistakably (Musek, 2015). When immersed in what they do, i.e. in the state of flow, people experience deep joy, creativity and full engagement in life. This kind of experience is also called 'optimal experience' (Csikszentmihalyi et al., 2004).

Being involved beyond self-consciousness – or being in a flow – is a natural state for children. Csikszentmihalyi (1993) states that children are in the flow most of the time. Being absorbed in an activity, usually a game, to the point of forgetting about space and time, is quite normal and spontaneous for children.

Few studies have been carried out on the connection between the feeling of flow and music listening. Lamont (2011) found that listening flow is associated with immersion in music and a loss of sense of what is going on around us. The respondents also reported that they experienced more listening flow when they were fully concentrated on the music. Diaz (2013) concluded that if we listen to music with too much cognitive engagement, this can lead to a decrease in the feeling of flow, which is more affectively coloured. Hence, the prerequisites for experiencing the sense of flow when listening to music are full attention and immersion in the music, with the analytical mind silenced and our holistic, intuitive mind addressed first and foremost. Of course, there are differences between musicians and non-musicians in this respect. Musicians are captivated by more complex musical material and their concentration is

at its optimum, so a slightly more complex piece of music, which may be more attention-grabbing, may evoke a greater emotional response in musicians (Ruth et al., 2016). Bernardi and colleagues (2018) found that flow in listening also depends on the type of music being listened to.

### Young children and the experience of flow

One of the first researchers to study flow in young children was Lori Custodero (1998). She identified nine emotional indicators in pre-school children that help us to identify their flow: happy/sad, moody/irritable, enthusiastic/unenthusiastic, awake/sleepy, active/passive, excited/bored, satisfied/frustrated, successful/failed, pleasant/unpleasant. Flow in young children should therefore be evident mainly from their mood, which is reflected in the child's alertness, activity, engagement, joy, good mood, enthusiasm, satisfaction, pleasant feelings, and is revealed in the success of the child's participation in a particular activity (Custodero, 1998). In her study, Custodero (1998) organised the indicators of flow into four groups: emotions (happiness, mood, enthusiasm); vigour (animated, involved, active); self-image (success, satisfaction); and pleasure. The ninth indicator of flow relates to behavioural observation and includes mental engagement, which refers to the level of skill development, anticipation, scope and length of activity.

The experience of flow in young children can be linked to different theoretical models of developmental psychology. According to the theory of performance motivation, from the earliest years children are predisposed to engage in tasks that offer them just the right challenge (Barrett et al., 1993; McCall, 1995). Children draw on resources in their environment as they strive to maintain a balance between skills and challenges through mastery of

activities. The child's tendency to select activities that evoke feelings of competence is present from early childhood. In maintaining a balance between their own abilities/aptitudes/skills and the complexity of the activity, they help themselves by finding appropriate social and material assets in their environment.

Duckworth (1996) argues that children are always looking for activities that are personally meaningful to them, that engage their interest, provide immediate feedback and for which they are able to find solutions. The child's intrinsic need is to learn about the world by first observing a particular phenomenon in the environment and then adapting it to their own frame of mind. The child's thought process is constantly subject to a process of equilibration (Feldman, 1994).

The musical materials, movements and patterns that the child experiences during musical activities such as listening, singing, moving and playing, offer an invitation to the youngest child into a world of constant perceptual transformations.

Engagement and development are in an interactive relationship: developmental changes influence a child's engagement; while on the other hand, the social and cultural conditions in which engagement occurs can influence an individual's development (Shonkoff & Phillips, 2000).

### Fostering flow in young children through listening

A child's way of experiencing the world, and therefore art, is open, fluid, sparkling, playful – it is infused with flow. Children are curious, they wonder, they play, they experiment, they improvise, using all

their senses. When the child is in flow, their attention is focused on the activity at hand, they are totally absorbed in listening for which they are intrinsically motivated and enjoy it.

If we want to ‘infect’ young children with flow, we need to create the right conditions for this. One of the key conditions for flow is a balance between abilities and challenges. To engage a child in listening, hence, needs us to first take into account their abilities (psychomotor, emotional, social, mental). This means that the audio material must be adequate to the child’s listening abilities; emotionally appealing in terms of content derived from the child’s immediate environment; stimulating for social interaction; and structured appropriately for the child’s attention span and cognitive capacity. This needs to be balanced with challenges that arouse the child’s curiosity and invite them into a new sound world. Csikszentmihalyi (2014) states that the following are important factors that influence children’s experience of flow:

Children experience flow most easily in activities for which they are intrinsically motivated.

Children most often experience a sense of flow in activities that are personally meaningful to them and that they can relate to their real life and current experiences.

The reduced presence of distracting stimuli in the environment increases the likelihood of young children experiencing flow.

Social interaction is also important in the experience of flow (Pels, 2018). A child’s listening to a radio play will become more engaged in the presence of a parent, especially a primary caregiver. Listening becomes a kind of social interaction

between parent and a child. It is by no means just passive listening, but a social play between a child and a parent with the help of sound stimuli.

It is good if active listening can be supported by touch and movement. For the child, music and movement are inextricably linked. When listening to music, the child starts to move spontaneously and it is good for parents to encourage and support this. Children intuitively match their physical movements to music, when they move expressively (Eerola et al., 2006). Even the youngest children have the ability to match their own movements to music according to the rhythm, character or emotional characteristics of the music (Nijs & Bremmer, 2019). This coordination is thought to take place in two ways (Leman, 2016). A child may coordinate the expressive course of their physical activities with the metre and the bar mode in the music, or they may coordinate their movement with important time markers in the music. A prerequisite for a child to be able to coordinate movement with the music is that they recognise key moments in the music, perform rhythmic patterns, and adapt the action of the rhythmic patterns to the overall time frame (Nijs & Bremmer, 2019). Clayton et al. (2004) state that the matching of the child’s movement to the music is possible due to the process of ‘entrainment’, which allows them to adapt and stabilise the two rhythmic processes through their interaction, which in turn leads to the synchronisation of the child’s motor response with the music. This results in the synchronisation of motor responses with sensory input (Ilari, 2015; Phillips-Silver, et al., 2010).

Therefore, if we want to stimulate flow in the child when listening, it is important to allow the child to respond spontaneously to the music with a motor response. They may simply sway while listening, move parts of the body, crawl or dance. What is

essential is not to restrict the child’s movement, but to allow the child to respond spontaneously to the audio-musical material. If the adult deliberately stimulates certain movements in the child, such as clapping, stomping, playing on pots with spoons, the child’s sense of flow is all the greater.

## Conclusion

From the insights about the young children’s experience of flow when listening, we can summarise that it is extremely important to capture the child’s attention with a variety of auditory stimuli. It is particularly interesting for children if these auditory stimuli contain content that comes from their immediate environment and is familiar and known to them. Children also like surprises, when a particular sound presents a puzzle for them, making them wonder what will happen, what the sound represents. The whole sound material should be an integrated acoustic game that the child experiences with all their senses and that makes them want to repeat certain sound elements just as they repeat them when they are learning a language. The sound material should actively invite children into an interaction in which the child enters together with the parent.

In conclusion, the creation of radiophonic plays for babies and toddlers represents, on the one hand, an imaginative, innovative approach to building future mindful listeners of the radio and, on the other hand, enriches the overall development of the youngest ones through sound stimuli.

Last, but not least – experiencing flow during the creative process of an artist who creates sound art for the youngest, is very likely to enable flow in young audiences, as flow is an emotional state that is highly ‘contagious’.



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“Chitter-Chatter” at the Festival of Radio Plays for Babies and Toddlers, RTV SLO, March 2023, Ljubljana, Slovenia.  
Photo by Adrian Pregelj

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## CHITTER-CHATTER

Psycho-energetic radio play, a conversation between a child, a frog and a bird. Its theme is toddlers' vocal creativity, focused on pronouncing particular words and the 'music' created in this process, instead of actual definitions of words.

Its poetic vantage point is the assumption that children may be able to understand the language of animals, and that animals understand the language of toddlers. Children and animals communicate at a level inaccessible to adults. Practicing non-verbal, meaningless chatter children are able to enter this dialogue. Interpretation of syllables – chatter – is not about exchanging verbal information; it's more of an energetic sound exchange.

The adult who listens to this piece together with their child, needs to engage the toddler – repeating words and syllables as they appear in the piece, helps one to engage their child even more. The adult can also show the child various objects, explain different notions, distances.

Before listening to the piece, the adult also receives short instructions how to approach the child with the help of a sound piece.

**Introduction** (3-4 min.)

*Forest ambiance*

**Person 1:** *reads the sentences very slowly, rhythmically*

Let's go on a hike.

Let's go on a hike. Let's go on a hike.

Walk carefully on this little path, walk slowly, walk slowly,  
walk quietly, be quiet like a little mouse, like a little mouse.

Listen.

Forests are rustling. Listen.

A tree understands the language of animals, the language of animals  
a bird, a cricket, a frog, a grasshopper...

A tree understands the language of animals, the language of animals.

A tree knows the language of children. Small children.

Children who chatter under treetops.

A tree knows the language of children.

Small children understand the language of animals,  
a melody of a bird, a melody of a frog, a grasshopper, a cricket.  
Small children understand the language of animals.

The animals also understand the language of children. Small children.  
The chatter of small children.

Animals and small children can talk to each other, sing, together.

Stop when you see a tree. Find a comfortable place.

The tree listens. The tree listens. One day.

In the grass, under a treetop, a small child is crawling.

The child listens.



**1<sup>st</sup> part** (7-8 min.)

**Adult - child**

*Sounds of nature - Wind – Chatter of a child*

**Person 2:** reads the sentences slowly, pauses between the lines, rhythmically.

*The adult encourages the child to repeat selected words, syllables – but the point is to listen, to observe the surroundings. The adult also observes the surroundings and explains it to the child.*

A tree. T-ree.  
A treetop. Tree-top.  
A leaf, leaves rustle.  
Lea-ves ru-stle.  
A tree listens.

*Sounds of birds – chatter of a child*

A bird. A bird sings.  
A bird jumps in the treetop.  
Si-ngs. Si-ngs. Si-ngs  
Chirrup, chi-rup.  
Chirrup, chi-rup  
Si-ngs, chi-rup  
A bird sings. A bird sings.

*Sounds of birds – chatter of a child*

A frog. F-rog.  
A puddle.  
Pud-dle.  
Over there, far away, is a puddle.  
In the puddle, a frog quacks.  
F-rog. F-rog.  
A frog quacks, a frog ribbits  
F-rog. A frog qua-cks.  
F-rog. A frog qua-cks. rib-bits.  
F-rog. A frog qua-cks.  
A frog sings. F-rog

*A frog – frogs – child's chatter*

A child. A small child.  
A meadow. Mea-dow  
A child crawls is the meadow. Ch-ild.  
A meadow  
A child chatters in the grass.  
A child chat-ters.  
A child listens.

*Individual words, syllables, deconstructing words into syllables is heard more clearly child's chatter*

A birds listens,  
a bird chirrup, chir-rup  
A frog listens,  
a frog quacks, qua-cks  
A cricket chirps. A cricket ch-irps.  
Sounds intertwine.  
In-ter-twine. In-ter-twine. In-ter-twine

**2<sup>nd</sup> part** (5-7 min.)

**A dialogue between a child – animal**

**The dialogue is gradually turning into a musical composition**

**Person 2:** Deconstruction of words into syllables is more pronounced and gradually takes the lead. The composition of the dialogue between a frog and a child is slowly expanding until it's clearly articulated. A bird is singing in the background, maybe an impression of a dialogue between a bird / child and of course between bird/ frog.

*The adult encourages the child to actively listen, by repeating syllables and observing the surroundings, just like in the previous segment .*

Ma - ta -la  
Ma - ta -la  
Ta ma to  
Ta ma to  
Ma ta la  
Ma ta la  
Ta ma to  
Ta ta

Ma ma  
Ma ta la  
La ba to  
Ba ba  
Ta ma  
Ma ma  
Ta ta

To da  
Da to to  
Da to to  
To da  
Da to to  
Toda  
Toda

### Conclusion (2 min.)

**Person 1:** reads (the same as introduction)

Our story ends here. Our song is finished.  
But the song, the sound around us is never silenced. Listen.  
Listen to birds, frogs, the rustling sound of leaves. Faraway traffic noise,  
the humming sound of an airplane above the clouds.  
Chatter. In a forest, in a forest with a bird. With a frog.

Children, small children, understand the language of animals, a melody  
of a bird, a melody of a frog.  
The animals understand the language of children. Small children.  
Animals and small children can talk to each other, sing together.  
Animals and small children can talk to each other, sing, together.  
A tree listens. A tree listens.



Photo by Adrian Pregelj

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## CHITTER-CHATTER

### An introduction for adults during a listening session with a child

Psycho-energetic radio play “Chitter-Chatter” is a musical tale, its theme is toddler’s vocal creativity – different ways to create sounds together with animals, trees and small children. When toddlers begin learning their first syllables, they usually enjoy it very much; but not because they want to communicate (like adults), they have other tools for that since they mostly communicate on an energetic level from the day they’re born; instead, while learning different syllables they actually enjoy the process of creating (with) their own voices and the music made in this process.

Poetic vantage point of the “Chitter-Chatter” radio play is its assumption that children may be able to understand the language of animals, and that animals understand the language of toddlers. Children and animals communicate at a level, inaccessible to adults. Practicing non-verbal, meaningless chatter children are able to enter this dialogue. Interpretation of syllables – chatter – is not about exchanging verbal information; it’s more of an energetic sound exchange.

#### Instructions: Make it a shared experience

Radio play “Chitter-Chatter” is not meant for toddlers to listen to it by themselves; firstly, because they don’t have the concentration needed to be able to listen for that long. Instead, it can encourage and strengthen the bond between an adult and a child – as a shared experience of an artistic piece. The key role is given to the adult who listens together with a toddler. The adult plays the role of a mediator or rather an animator.

We’ll offer some suggestions but you can also include your own ideas.

You can listen to this radio play only once or multiple times, together with your toddler. In the latter case, you can use different ways to animate your child, for example, changing the way you listen to the play and how to create with your voice.

Get a quality mobile loudspeaker and a player (maybe a laptop with Bluetooth or something similar). You’re supposed to listen to this radio play while walking in a park or sitting in a garden at home. Of course you can also listen to it inside the house,

but be active and change locations, find a space where you can pretend there’s a tree or a meadow. Sounds of animals were recorded in early summer, but you can listen at any time. To animate your child more easily, prepare some objects which can represent a bird and a frog as well as the location of the tree.

#### The radio play is divided in three parts.

**Introductory part** is there to guide you further into the story and help you prepare for the a-part of deconstructing the syllables, chattering. Listen attentively and observe the surroundings where you walk. The best way to do this is in a park or at home in a garden.

In the **second part** you’ll be invited to find a spot under a tree. Look at the tree, sit under its treetop, look at the tree together with your child, give your child a leaf to hold in their hand, or a piece of roots, bark... Try to repeat words and syllables as they appear in the play, and in doing so animate your child. The adult shows the child various objects, explains notions, distances.



*A tree. T-ree.  
A treetop. Tree-top.  
A leaf, leaves rustle.  
Lea-ves ru-stle.  
A tree listens.*

Listen to the bird, continue deconstructing words into syllables. While doing so, you can use an object that represents a bird, like a feather for example, or something similar. Do the same when you come to the part about a frog and imagine a pond, maybe use a blanket and an object that can represent a frog. You can also communicate using gestures.

*A bird. A bird sings.  
A bird jumps in the treetop. Si-ngs. Si-ngs. Si-ngs  
Chirrup, chi-rrups.  
Chirrup, chi-rrups Si-ngs, chi-rrups  
A bird sings. A bird sings.*

From the spot under a tree you can move to a more open space, maybe close to a meadow, maybe you just move a few meters further. You do this when you come to the part in the text where it says “Let’s go on a hike”. Break words into syllables; motivate your child to engage in a dialogue so you chatter together, creating different sounds.

*A child. A small child.  
A meadow. Mea-dow  
A child crawls in the meadow. Chi\_ld. A child chat-  
ters in the grass.  
A child chat-ters.*

In the **third part** you can freely chatter together with your toddler, or just listen to the radio play in silence. The voice is singing syllables, which are the same syllables that were part of the words in the previous segments, but now they’ve become

musical elements. Singing intervals serve as the basis for fine-tuning, and the significance of associating singing with child’s repeating of individual syllables becomes that much more visible and real. Encourage your child to sing along, but don’t expect them to sing a particular song or pronounce a particular word. In this segment you’re meant to let your imagination run free and just enjoy listening to your own voice singing.

**Concluding part** is devoted to listening. Listen to the radio play and the sounds in your surroundings – be it the sound of a bird singing, rustling or the noise in the street and the humming of appliances in your home. Listen and when the story ends – try to name the sound(s) that you hear.

### Background

Before the two of us, authors of this radio play, began conceiving and working on this piece, we’ve read an extensive amount of research and listened to several high-quality and inspiring interviews conducted by Igor Mihael Ravnik for the B-AIR project. We were intrigued by research showing that few months old babies begin to chatter in distinct ways, depending on the linguistic environment they’re growing up in. For example, the chatter of French babies is different from Slovene or Chinese babies – the sound of words, the rhythm, etc. reflect the linguistic environment within which they develop.

As one can hear in interviews we mentioned, and we’ve seen ourselves listening to our daughter chatter, babies’ chatter isn’t primarily focused on communicating. Children communicate very clearly from the day they’re born and they don’t need words for that. Instead, babies simply enjoy chatter because they listen to their own voice; they create using their voice...

Tackling this subject, this radio play offers a helpful tool – a possibility of a shared musical creative process with animals. A particular branch within the research of musical creativity is studying musical creations of animals and people, called zoo-musicology. There are several artists who engage in these practices, with more and more scientist following their lead. But experiencing it first hand – the synchronicity of joint creation of animals and humans – either coincidentally or when framed as an artistic event, this connection becomes much more evident.

What’s also interesting is the mythological and fairy tale-like background as part of the explanation why small children are able to comprehend the language of animals. In this view, human speech – as one’s desire to communicate clearly – blends heavily with the desire to create music(ally) and the boundaries between the two become blurred.

The small boy we recorded for this play was a little over one year old, growing up bilingually and was just beginning to articulate his first word. His parents who recorded the chatter, used the text of this play (in Slovene) to stimulate him. The toddler was repeating after them, at his own pace, while enjoying his own creation. These parents are also generally very encouraging when their toddler engages in musical creativity.

The baby-girl recorded in the introductory chatter and whose voice – here and there – intertwines with the voice of the toddler, was a few months old when she was recorded. However, the grown-up singer we hear in this piece is this same baby-girl, 17 years later. Singing and musical creations are very familiar to her.



We recorded the frog in Cerknica lake in 2021, as well as sounds of the lake; the singing of a night-ingale was recorded at Ljubljana Marshes in 2022; the rustling of the wind was recorded at Bukovniško Lake; and all other sounds come from the sound archive of the author of the musical composition.

### Credits

#### Text and story:

Irena Pivka

#### Musical composition:

Brane Zorman

#### Interpreters:

**Narrator's vocal** - Nada Vodušek,

**Toddler** - Kiran Benjamin Rosenbluth Orlič

**Toddler's vocal guides** - Nina R. Orlič,  
Brandon Rosenbluth

**Baby-girl and grown-up singer** -  
Naomi Uma Zorman

#### Curator and producer:

Saška Rakef

#### Production:

Radio Slovenia, B-AIR project

To listen to "Chitter-Chatter":

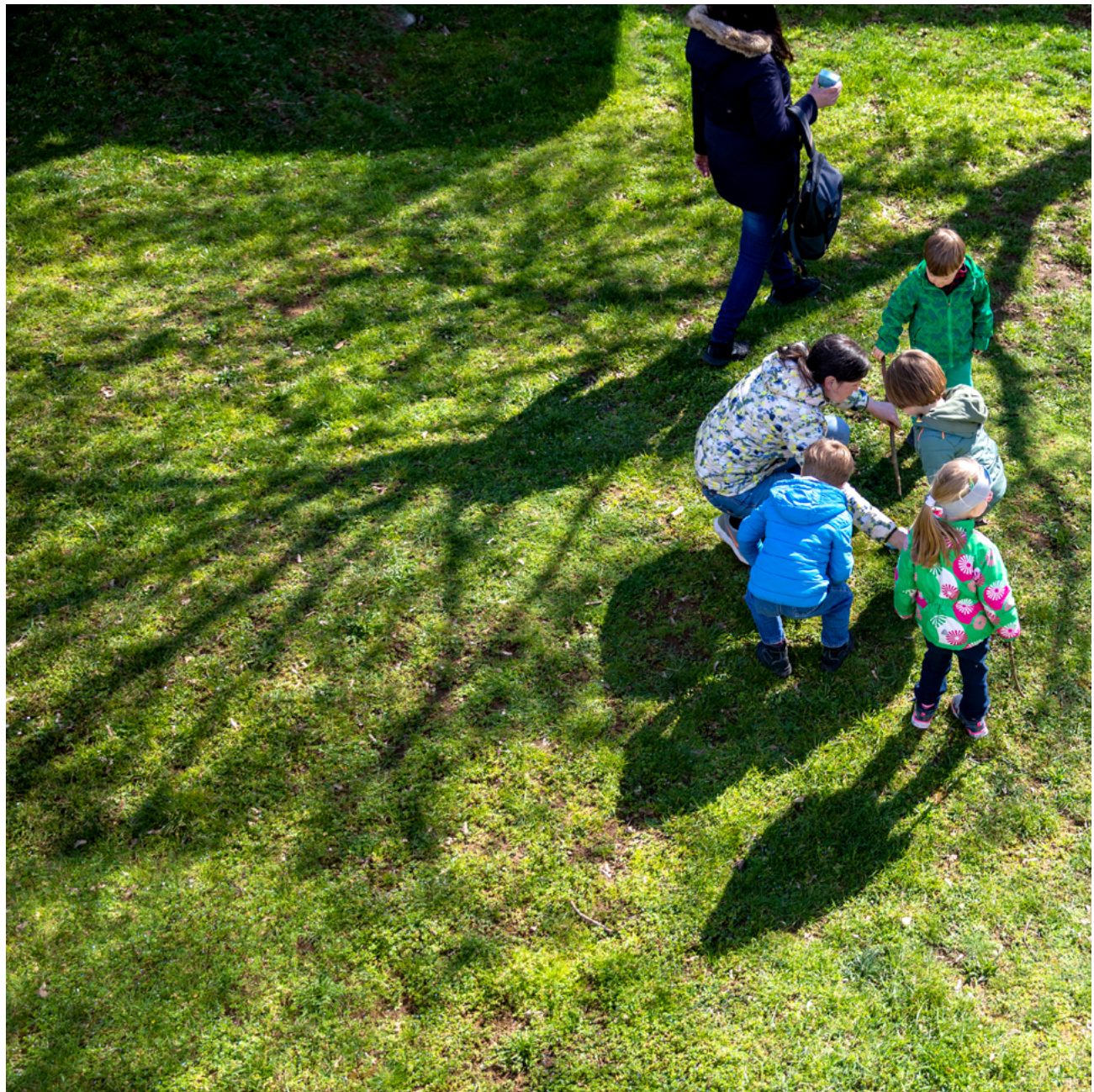


Photo by Adrian Pregelj



# INTERPRETATIVE AND DIDACTIC POTENTIALS OF THE RADIO PLAY FOR BABIES AND TODDLERS “CHITTER-CHATTER”

*The leaves in the trees sing, and the forest clearing becomes a concert stage.*

The radio play “Chitter-Chatter” was co-authored by Irene Pivka who wrote the text, composer Brane Rozman and producer Saška Rakef. This radio play is also intended for babies, toddlers and their adult companions (parents or caregivers). The fundamental purpose and guiding principle of the creators is to encourage and support an important milestone in speech-singing development – bubbling – through sound pictures and musical narration of animals and trees and vocal expression of children in the earliest period of life. Bubbling or vocalization, which appears distinctly in the period from 6 to 18 months of age and is reflected in the rise of sequential repetition of spoken or sung individual syllables, words, later phrases, is fundamental in the development of speech and also singing. The radio play thus primarily encourages listening and creating, or imitating heard syllables. Departing from verbal, sound and musical building blocks, the youngest are encouraged to explore their own speech-singing expression, as children are enthusiastic about discovering and shaping their own voice. Such vocal games, inspired by the radio play, are based on a poetic starting point – the assumptions of the child’s intuitive knowledge of the language of trees and animals and the mutual communication of trees and animals with the child.

The colour of the sound of skunk chirping, the frogs croaking, the leaves rustling in the wind and the birds singing, invites us to wander through the forest clearing. The entry of the narrator’s voice leads us through nature, and a forest clearing turns into a pleasant sound and music concert stage. In the forest with lovely sound background, the narrator invites us for a walk. With a calm voice, she urges us to take a slow, calm and quiet step and simultaneously listen to the sound and beautiful music of the forest. Thus we arrive at the tree where the conversation between the tree and the bird, the cricket, the frog and the grasshopper is happening. The tree knows the language of children who happily chatter under the tree. Children know the language of animals and animals know the language of children. The narrator makes a short rest under the tree which listens to the child speaking and watches him. The child also listens to him, and after listening carefully for a long time, he starts humming happily in an atypical rhythm, with various vocal expressions. This is when the dialogue between the narrator and the child begins: the tree repeats the words (tree, canopy, leaves), imitating and learning these words from the child.

The action continues with the sound of a bird chirping as it flies into the canopy, and the narrator

announces the singing and whistling of the bird. By repeating and syllabifying the words about the bird singing, chirping, whistling, we recognize the child’s repetition of the narrator’s speech at the same pitches, we sense the child’s speaking and singing repetition of the spoken words, according to the pitch of the narrator’s voice. Then we hear the sound of splashing water and croaking of frogs, as the narrator leads a walk by describing nature and repeating words (frog, pond), imitating them with a child’s bubbling. The walk continues to the meadow, where the child crawls and bubbles and begins to listen to the singing of the human voice interwoven with the sound background of the forest and animals. The narrator continues repeating the syllables of a voice singing, which is joined by other singing voices until they completely prevail, changing the sound event into a musical one with simple melodic motifs on the syllables “ma-ta-la(lo), to-da-to” in the minor tonal mode. At the end, the narrator’s voice enters again, and so does the opening soundtrack with the rustling of the forest. The narrator encourages further listening in nature and the wider environment, as well as mutual communication between trees, animals and children.



The radio game “Chitter-Chatter” invites children and adults to listen together; its building blocks encourage the shared experience of an artwork at an early age. Repetition of words and syllables encourages the educator, parent or caregiver to tell them again to the child during and after listening to the radio play and to improvise their own sayings in different tempos, rhythms and voice pitches. From a didactic point of view, the radio play represents a proposal for possible vocal, singing and speech communication between an adult and a child, and encourages the search for one’s own creative approaches. In this way, learning new syllables and words, based on speaking and singing, becomes a vocal game in which the child will enjoy and participate with great joy and enthusiasm.

The content of the radio play is related to the natural environment, which represents the child’s first classroom, in which he explores and learns immensely. Most of the sound elements in the radio play are of natural origin – the rustling of leaves, the sounding of a skunk, the call of frogs, the whisper of the wind, the splash of water, the hum of insects, the chirping of birds – which invite us to a real walk in the forest or elsewhere in nature. In an authentic environment, an adult can use this radio play as a base to focus his and the child’s attention on listening to sounds in nature, imitating them with his own musical instruments and voice, and recognizing sounds by naming them with words or speaking and singing syllables. A walk in nature is also a cue to find and explore elements from the radio play in a real environment. For example, we find a tree and leaves under a tree, collect them, rustle them and try to imitate them with our voice, etc. With such approaches, the child memorizes the explored elements in nature by the sound, internalizes them and later also recognizes them by listening and names them accordingly.

Radio play for babies and toddlers “Chitter-Chatter” reflects calmness, dreaminess and mystery. The sounds from nature, the spoken part and the music-sound sections contribute to this atmosphere, opening up the space of a safe environment and the possibility of social and emotional interactions between adults and children. “Chitter-Chatter” offers many approaches to listening, which we have described mainly for periods when the child is awake and ready for dynamic activities. Due to its sound atmosphere, this radio play also encourages a joint listening with the aim of calming down before going to sleep, or viewing a children’s picture book with similar content to that of “Chitter-Chatter”.

# ALLOW YOURSELF TO WONDER AND (RE)CONNECT

## Some thoughts while listening to radio plays “Sea”, “Chitter-Chatter”, “Musical Kitchen” and the concert “So Quiet”

**A valuable contribution to culture, based on a respectful attitude towards the child and the mother, father, and caregivers**

Creating of artworks such as radio plays for babies “Sea”, “Chitter-Chatter” and “Musical Kitchen” and the concert “So quiet” was possible only with opening the concept of the child to in-depth understanding who the child is, and what its needs and capabilities are.

It also wouldn't be possible without opening the concept of parenting to understanding the challenges that men and women face in transition to a new life stage and the related experiences of themselves, a new being and all new relationships growing among them.

Questioning traditional and shifting to contemporary concepts marks the progress of many professional fields which regard the beginning of family life from specific perspectives, including paediatrics, midwifery, psychology, biology, physiology, neuroscience, pedagogy – to name but a few.

**How very important: beyond any underestimation of the child, their abilities**

Only when we dare to cross the boundaries of self-assurance and false sense of security can we delve into the inner worlds of babies, young children and adults. Thus, it is possible to react openly and create outside old, outdated codes or clichés about what the child, mother, father needs, and also take into account what mom, dad and caregiver have brought from the time when they were still in the mother's body, when they were babies and toddlers...

In the modern human world, in which the visual prevails, it is very important to revive awareness of the importance of numerous inner and outer senses that connect us with ourselves and others. We experience the world and ourselves also with the help of haptic, tactile, sound, balance, tasting, odorous, pain, proprioceptive perception. Our overall perception and complex experience enables holistic existence in the world and within ourselves. The beginnings of these abilities occur while the baby is still in the mother's body and are developed and realised through the child's growth before and after birth.

**How do works of art contribute to the life of the child and to the realization of the child's potentials? We feel that the authors thought about the needs of children and parents or caregivers when creating them.**

**First of all: Children are at the heart of what it is created for them** (in the centre of a radio play or a concert).

The key starting point for the full expansion of the artists' creativity is the understanding of the baby as a full-sentient and mindful being. It is about overcoming the traditionalist concept of the baby, their needs and development, which diminished parental care to hygiene and care for the physical needs, and which structured the child's time and activities from the outside. It was based on a disregard of what was fundamental and crucial: it underestimated the relationship and what is happening within it.

One of the child's fundamental needs is to explore their inner world and the world around them, a need for inter-action and involvement. But the child can explore only when they feel safe and accepted. Then they can dedicate themselves peacefully to

their activities. Therefore, first of all, make sure that everything – surroundings, space, people – expresses recognition, welcome, acceptance. What all (can) happen when a child is confirmed, noticed, welcome! - this is evident in the recording from the concert “So Quiet”.

**How important it is for parents/adults to be (even more) sensitised to the needs of the child; of all children and of each child individually; to take into account the diversity of children.**

**Next: the focus is also on adults and their needs** (in the art work “Sea” perhaps mainly on mothers).

**And last but not least: the relationship is at the centre.** The relationship in which contact is established, and sometimes interrupted... and restored; which oscillates and pulsates.

Today we know how important the basic settings of the particular attachment style between child and adult are; how crucial this matrix of relationships is and how it determines the experience of oneself and others, and the world, too.

The more synchronised the mother or father and each specific child are, the more likely the matrix is to be as aligned as possible with the bio-evolutionary needs of the child. Meeting them in turn allows for good growth and development.

For good parenting, openness to a relationship is important, but it also means uncertainty, wondering, coping with pain, with a full spectrum of experience. It renounces absolutism and does not strive for abstract perfection, but enters with sensitivity to oneself and others and in footsteps seeks the right measure and direction...

In the artists’ creative processes, it is precisely this openness that is a prerequisite for the creation of an art work, which gives children and parents permission to become ‘collaborators’, ‘co-creators’, active participants in the listening process.

Such an art work is an invitation, example, cultural and unobtrusive model for parents to (once again) open up to the play, to relationships of play and playfulness and to co-experiencing the world together with the child.

Playfulness that is inherent in the child, and that wakes up again even in an adult when he feels accepted, non-condemned, non-judged... it evokes in them their own childhood enthusiasm for living. If little children can teach us anything, or rather, if they can remind us of something, it is that with playfulness and wonder we touch that essence of the world that again makes it bright and, in a sense, sacred...

In this, audio interactive radio games are real games in the fullest sense of the word; they involve the joy of learning and creating, surprises and non-sense, fun and seriousness...

It all happens through the play of musical instruments and the human voice in speaking and singing; through rhythmic, sound and word games, rhymes, repetitions, simple and compound sequences, and build-ups into more or less composed structures; through mini-rituals; organised and yet flexible and variable enough to allow participation.

This is very important for the child: it gives them safety and allows predictability, while at the same time unobtrusively contributing to a relaxed experience of sequences in everyday tasks, e.g. first meals, daily care, sleep, etc. So in the “Musical

Kitchen”, the end of feeding is followed by the moment when the cup, spoon and fork jump into the sink to be washed: “Hop into the sink” ☺.

Also important is a wide range of feelings and micro-experiences: “yuck” (a sock), “om nom nom”, which are in a pleasant counterpoint – also with the help of excellent interpretation (“Musical Kitchen”).

The radio plays step into the world of children through different entrances. Switching to a mixed diet is an important life transition for a child, which is addressed in “Musical Kitchen”. The sound walk “Chitter-Chatter”, which unobtrusively invites you to eavesdrop on nature, is also a special recognition for children (“children, plants, animals understand each other”). The soundscape, which expands the boundaries of each individual experience (radio play “Sea”), subtly represents the fundamental human experience of harmony and chaos; it allows us to rely on an experience that becomes tradition and that has already been thought out and tested in the common human experience: for example, that the loss of connection also means the possibility of restoring it...

**Not only for the child, not only for parents or caregivers, but *with the children, together with them.***

“Sea”, “Chitter-Chatter” and “Musical Kitchen” are more than radio plays for children, because it is assumed that there will be an active cooperation between parents and a child/children, which means joint listening. They are an inspiration for parents, even ‘permission’ for parents and children to play, to ‘be in the body’, to respond and move, to sing and to explore. And also the message that they do not need to be perfect, that a relationship is



sometimes broken and restored (“Sea”). The creators think of both aspects – mom (dad, caregiver) and child – together. It is about building mindfulness, calming down and slowing down, also to face and process one’s own content.

### More about sound, voice, music... and silence

In the perinatal period, the voice deserves special attention. Let us think of its importance within the child’s first environment, in the foetal and newborn’s eco-system, and especially of the importance of the mother’s voice and her body sounds, with a mother’s body acting as a sounding-source. In the mother’s womb and, after birth, in her arms, the child is within the range of her voice, it is touched by her voice, her rhythms, experiencing her (also) through her voice and sound. All this affects the baby’s wellbeing and health in the short and long term.

We all live in sonic landscapes, and what’s more, sound co-creates our perception and experience of space, we are constantly surrounded by sound, rarely by silence. Message to today’s parents: think about creating spaces of silence, places where we can experience tranquillity, as we could experience it with ‘whispering pillows’ exhibited in the Museum of Contemporary Art Metelkova in summer 2023 <sup>1</sup>. It is important to provide soothing and supportive sound environments that protect against sound overload which cause stress at home and in kindergartens, to reduce noise and sound chaos, to remove sound pollution, to repeatedly invite – (into) silence.

It is not a coincidence to say how important it is for parents to tune in to the child, to listen to the child and themselves. Voice, sound touches (us) – even

at the level of physical phenomenon, by vibration, etc.; sound is a bridge between humans – even more, between living beings, with the world itself.

Listening together to human voices, voices of nature, sound games, concerts (“So Quiet”) at the earliest age is an opportunity to strengthen physical and emotional closeness, synchronization, mutual attunement, exchange and bonding between adult and child and their cooperation. Sound, music also invites us to make our own contribution with voice, responding with movement... It is of utmost importance that sound games and concerts are thoughtfully tuned to the child’s need to ‘be in the body, to move’.

### Artwork for children, with children

The message that someone thinks of children and creates for children is of greatest importance; especially when designing opportunities for parents or caregivers to create together with children. The ranges of emotions, feelings in these works, are an incentive for parents and children to continue on their own when the radio game or concert has already come to an end.

For high-quality artwork (what these sound plays are), it is important that it is not programmatic, narrowed to the learning purpose, that it is not placed from the outside, that it is not based on the abstraction of the ‘child’, the idea of the ‘child’. When didactics is ahead of richness, complexity, even contrasts and contradictions of the content, the child will feel it as intrusive, unrelated to them, limiting and ‘demanding’. A good work of art is respectful of children’s inner worlds, addresses what is ignored, unheard in an ordinary fast-paced world...

It encourages listening: listening to nature means both – hearing animals, plants, natural phenomena, and listening to oneself, one’s inner nature.

Quality sound art strengthens auditory sensibility, i.e. addresses it, not artificially, but through a (deep) experience. It is important that it is devoid of intrusive didactic points, that altogether it is not too simplistic and underestimating for the child – we are returning to the starting point again: respectfulness towards the child!

The child – as well as adults – surrenders, ‘dives’ in the world of quality artwork... And only then can artwork broadly ‘act’ on the development of children’s senses, perceptions, experience, deepening, eavesdropping and co-talking. Children enjoy co-creating, contributing to the world, voicing, playing and communicating at the same time; in other words, they are in a relationship.

Creating by voice is extremely important – the narrator (“Chitter-Chatter”) speaks slowly, calmly, distinctly, in different rhythms, melodies, with different intensity... The singer and narrator (“Sea”) complement and upgrade each other, establishing a difference and harmony... And these sound spaces are of paramount importance, as they allow special types of ‘settlement’. We could probably say that experienced and lived works of art remain in our memory as chambers, as spaces with the characteristics of a shelter, cradle, den, nest..., to where we can return for a new experience of peace, harmony, relaxation, acceptance, security, affirmation... Why sound plays so early, and why multiple listening, if not also because these kinds of early experiences add something to the quality of these memory spaces.

<sup>1</sup> Zorman, B. and Pivka, I., “Sing, Pillow, Sing”. Museum of Contemporary Art Metelkova, 17<sup>th</sup> of June 2023.



Children are not superfluous and distracting in 'enjoying' those artworks; on contrary, they are actively invited and involved. We have to remember: they are not just potential beings, just future adults, whose development must be stimulated or even accelerated; they are but full-fledged sentient beings here and now, in the moment of their own development rhythm.

Artwork is (enough and not too much) complex to invite you to listen to it multiple times; we know that for a child repetition means strengthening a sense of security and coherence. At the same time, the child is invited to explore new aspects, which contributes to 'listening carefully' – we listen attentively, set our ears, become quiet, calm down, we are available for what others (tree, animal, human) communicate, speak, exchange with us.

**This is important now, and an excellent foundation for the future.**



Photo by Adrian Pregelj





“Sea” at the Festival of Radio Plays for Babies and Toddlers, RTV SLO, March 2023, Ljubljana, Slovenia.  
Photo by Adrian Pregelj



# SEA

## Libretto

*A fish swims the sea,  
the Fish Pharaonic.*

*Jesus swims after it,  
along the deep current:*

*“Wait, oh wait,  
fish Fish Pharaonic!*

*We’d like to ask you  
how the world fares.”*

*“If I flap my tail,  
the whole world shall sink;*

*If I flip around,  
the whole world shall perish.”*

*“Oh no, pray not,  
fish, Fish Pharaonic!*

*For the sake of little children,  
and the birthing mothers.*

*For the sake of little children,  
and the birthing mothers.”*

*A fish swims the sea,*

*A fish swims the sea,*

*A fish swims the sea,*

A fish swims the sea,  
the Fish Pharaonic

*The world lives together in harmony*

the world lives together in harmony.

*The world lives together in harmony*

Then, something creaks  
the song of the sea erupting with noise  
the sea wails and whispers  
the Pharaonic fish startles  
it flees, and it flees  
Nothing’s been right in the sea ever since

Those looking for each other can’t find  
one another

Those looking for each other can’t find  
one another

*Aaaaa, aaaaaaa*

Those looking for each other

*Aaaaa, aaaaaaa*

can’t find one another

*Aaaaah, aaaaaaaah*  
Many, many seas  
Many, many seas

*Aaaaaaah, aaaaaaaaaaaaaah*

Those looking for each other can’t find  
one another

*Aaaaaaaaah, aaaaaaaaah*  
Many seas  
A single sea  
The sea is just one  
The sea is just one  
Countless droplets, drop, drop, dro

*Aaaaaaaaah, aaaaaaaaah*

Many  
Many secrets

*Aaaaaaaa, aaaaaaaa*

If you find secrets murmuring in the sea

*Each secret a song  
A song murmuring in the sea*

If you sing them along with the sea  
The song of the sea murmurs powerfully  
drowning out all the noise  
calming the Fish Pharaonic  
Those looking for each other  
Can find one another

Listen to the secrets,  
woven in the weaving sea.

*And each secret a song  
A song murmuring in the sea*

Crabs ...

Secrets  
Secrets

Fish

Sea horses

Secrets

aaaaaaaaaa

Dolphins

aaaaaaaaaa

Those looking for each other  
can't find one another  
Those looking for each other  
can't find one another

Those looking for each other  
They can't find one another

Nothing is as it was

Nothing is as it was  
It was no more than nothing  
Nothing more as it was not  
It is as nothing more it was

Aaaaaaaah, aaaaaaaah

Many secrets

If you find  
secrets murmuring in the sea  
if you sing along with the sea

And each secret a song

A song murmuring in the sea

the song of the sea murmurs powerfully

Those looking for each other  
can find one another.

aaaaaaaaaeiou

Can you hear what's lost, woven in the  
weaving sea?

aaaaaaaaaeiou, aaaaaeiu

Where the silver threads are  
spun

coral gossamer

Where rays of light refract

and shimmer with the blue

fragments

mystery

Can you hear      šššššššššššš

the song ...

... woven in the weaving sea

So murmurs the song of the sea

All is connected

All is connected

All is connected

All is connected

All is connected

All is connected

All is connected

All is connected

There are many seas.  
But there is only one sea.  
Full of secrets.  
Each secret a song.

Fragile – powerful like silence  
Fragile – powerful like silence

Ha, ha, ha, ha, ha      ha, ha, ha, ha, ha

Fragile – powerful like silence

Fragile – powerful like silence

Fragile – powerful

Fragile  
Powerful  
Like silence

Fragile – powerful

Ha, ha, ha, ha, ha, ha  
hi, hi, hi, hi, hi, hi  
ho, ho, ho, ho, ho, ho

Fragile – powerful like silence  
Fragile – powerful like silence

Fragile – powerful

Ha, ha, ha, ha, ha, ha  
hi, hi, hi, hi, hi, hi  
ho, ho, ho, ho, ho, ho

like silence

like silence

*Fragile – powerful*

*Ha, ha, ha, ha, ha, ha*  
*hi, hi, hi, hi, hi, hi*  
*ho, ho, ho, ho, ho, ho*

*Fragile – powerful*  
*like silence*

Can you hear what's lost, woven in the  
weaving sea?

*Fragile – powerful*  
*Like silence*  
*Like silence*

*aaaaaaaaa*

*Fragile – powerful*

*Ha, ha, ha, ha, ha, ha*  
*hi, hi, hi, hi, hi, hi*  
*ho, ho, ho, ho, ho, ho*

*Fragile – powerful like silence*  
*Fragile – powerful like silence*  
*Like silence* *aaaaaaaaa*

*Fragile – powerful*

*Ha, ha, ha, ha, ha, ha*  
*hi, hi, hi, hi, hi, hi*  
*ho, ho, ho, ho, ho, ho*  
*Fragile – powerful*

The song that murmurs in the sea  
Fragile – powerful  
Can you hear what's lost, woven in the  
weaving sea?

*Ko ku ki ko ke*  
*Ko ku ki ko ke*  
*Ko ku ki ko ke*

*Tropo tropo trop blip blip*  
*Tropo tropo trop blip blip*  
*Tropo*

*tropo trop blip blip*  
*Tropo tropo trop blip blip*

Song

Fragile – powerful

*Fragile – powerful like sea*

Fragile – powerful like sea

*Fragile – powerful like sea*

*Fragile – powerful like sea*

*Fragile – powerful like sea*

*like sea*

Fragile – powerful like sea  
Murmurs in the mountain  
In the earth  
In the tree trunk

A wave with a beginning  
And an ending  
An ebb and flow that's infinite.

Murmur  
Murmur  
Murmurr(s)

Murmurr(s)  
Murmurr(s)  
Murmurr(s)  
Murmurr(s)

RRRssssshhhhhh  
RRRssssshhhhhh  
RRRssssshhhhhh

Ba bam ba bam ba bam ba bam  
Ba bam ba bam ba bam ba bam

There are many seas. But there is only one sea.

*iiii iiiiiii*

Murmurs in the mountain

In the tree trunk

In the earth

A wave begins

and ends

The waves are infinite

*iiiiiii iiiiiii*

Murmurs in the mountain

In the tree trunk

In the earth

A wave begins

and ends

The waves are infinite

*iiiiiii iiiiiii*



Song, woven in the weaving sea

Fragile – powerful  
Like you

Fragile – powerful      like you

Fragile – powerful      like you

Fragile – powerful      like you

Fragile – powerful      like you

There are many seas, but there is only one sea  
All is connected  
So murmurs the song of the sea.

*All is connected*

*Fragile – powerful*  
*ha ha hahahaha      like silence*  
*hi hi hihihhi*  
*ho ho hohohoho*

*Fragile – powerful*  
*Ko ku ki ko ke      like sea*  
*tropo tropo trop blip blip*

Murmurs  
In the mountain  
In the tree trunk  
In the ground

A wave  
Begins  
And ends  
The waves  
Are endless

Fragile-powerful  
ba bam ba bam ba bam      like you

All is connected  
A fish swims the sea  
The Fish Pharaonic  
The world lives together in harmony

A fish swims the sea

A fish swims the sea

The Fish Pharaonic

The world lives together in harmony

The world lives together, connected in harmony.

So find each other  
Those looking for one another.

## Credits:

### Direction and script:

Saška Rakef

### Music:

Bojana Šaljić Podešva

### Sound Design:

Sonja Strenar

### Dramaturgy:

Katarina Kompan Erzar, Nina Kokelj

### Expert Collaborator:

Pia Brezavšček

### Language Editor:

Mateja Dermelj

### Translation:

Jeremi Slak

### Interpretation:

Rebeka Pregelj (Soprano), Vesna Jevnikar,  
Zala Ana Štiglic, Asja Kahrmanović Babnik

### Production:

Radio Slovenia B-AIR, Puppet Theatre Ljubljana

### Premiere:

13<sup>th</sup> November 2022

To listen to “Sea”:





Photo by Adrian Pregelj

# INTERPRETATIVE AND DIDACTIC POTENTIALS OF THE RADIO PLAY FOR BABIES AND TODDLERS “SEA”

*The ancient Fish Pharaonic swims in the sea...  
But one day – something happens, the song of the sea breaks, the Fish Pharaonic gets scared, runs away...  
Those who search for each other can no longer find one another.  
But it is said that they will meet again...*

The radio play for babies and toddlers “Sea” was co-authored by composer Bojana Šaljić Podešva, dramatist Lia Katarina Kompan Erzar and producer Saška Rakef. The radio play opens with the solo singing of a female voice, introducing the swimming of the ancient Fish Pharaonic. The swimming of Fish Pharaonic is mirrored in a simple melodic structure in a three-beat meter, which sounds reminiscent of the spirit of the medieval Gregorian chant, sonically outlining the depths and tranquillity of the sea world and invoking the air of ancient past. When the opening melody is played, performed aesthetically by an interpretatively experienced, trained singing voice (soloist), another female voice enters, and then also the voice of the narrator. The narrator repeats the fifth word heard, bringing it to the fore with the announcement that the world of coexistence and complacency is lost and the harmony of the sea life is shattered.

The plot starts on a vocal plane and then, with the escape of the Fish Pharaonic, the electroacoustic sounds appear, outlining the pain and moaning of a lost world by invoking the splashing and flowing of the sea. The sound base with disharmonies reflects the haziness and wandering of the Fish Pharaonic;

its lostness and assumed presence is suggested by the sung motifs from the opening melody heard in the distance. The presence and quest of Fish Pharaonic are mirrored in the two-part singing of female vocals from the introduction, against a continuous reverberant electroacoustic sound background expressing incredible depths and flowing of the seas. The narrator in the authorial position explains the events and the sound world from the background and announces the reunion of two beings who are looking for each other and find one other. That's when life returns and the world of sea animals (fish, crabs, seahorses, dolphins) lives in harmony again. However, the harmony of the sea world is shaken again and the moment of searching for connection enters again, which is announced by the narrator in the rhythmic statement of the new changed situation, using the already familiar sound and singing elements. The song of the sea enters again with two-part singing, illustrating the roar of the sea, the intertwining and connectedness of sea life. The mystery of sea waters with their fragility, power and silence is introduced through the singing part with a new musical component which is rhythmically more pronounced in both female voices, and an electroacoustic background indicating the move and the underwater world.

With radiophonic effects, both components create the sense of joy, mystery and seclusion of the sea depths; they convert into the natural sound of sea waves, as the narrator describes the moving and the roar of the sea. The sounds carry the heartbeat of this sea and of the hearts of every sea of this world, which are interconnected with the melody of all the already heard musical elements and sound components that gradually emerge during the radio play. With this coherent sound and musical image, and the narrator's final address about the connectedness of the whole world, the radio play for babies and toddlers comes to an end.

The radio play “Sea” is like an opera for babies and toddlers, as it is based on the artistic singing of trained singing voices. Due to its calm character, the work is suitable for joint listening by an adult with a baby or toddler. From a didactic point of view, the radio play has the purpose of relaxing or calming the youngest and preparing them for rest. Sound and music components call for immersing in the unity of all radiophonic elements, encouraging thus the development of auditory sensibility and sensitivity of the child at an early age, which is open and



receptive to diverse sound elements. At the same time, the radio work focuses on inward listening, which means that it encourages a direct physical connection between an adult and a child. It is recommended to listen together in such a way that the child is in the parent's arms and they delve into the sound work together, while the adult, with the help of sound on a non-verbal level, creates an emotionally safe space of interconnecting. The radio play can also be used as a suggestion or inspiration in finding active approaches during the time when child is awake. Activities can be related to vocal imitation of the sound of the sea and waves, creating a sound image of moving water by blowing into a glass of water through a straw, using shakers, a rain stick or sliding on the membrane of a drum.

The radio play for babies and toddlers “Sea” reflects calmness, dreaminess and immersion in the sound space of singing which touches on the past, and the natural sounds of the heartbeat and the sea. Musical and sound elements co-create a safe space for social and emotional interactions between an adult and a child. In passive joint listening, “Sea” offers many approaches to relaxing or calming the child, also before sleep. The active approaches which we have described especially for periods when child is awake, should creatively build upon the base of the radio work. And although we have only listed a few of them, all radio plays for the youngest should encourage parents to find their own creative approaches and activities with their youngest in the home environment.



Photo by Sunčica Milosavljević

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## THE SEA OF EMOTIONS: Restoring the world in art and life

This sound journey takes us through a sea of emotions, thematising the so-called 'baby blues'. The feeling of sadness captures many mothers (80%) upon the birth of their first child, when they need to accept a role larger than them, a role mysterious, still vague and unknown to them, but at the same time deep and warm.

The phenomenon of *postpartum* sadness is a sign of the mother's sensitivity to a change in the life cycle, arriving to a new field, opening a new chapter; and also entering the depths of the mother-child relationship which awakens in the mother the physical memory of her own mother and her own experiences of growing up with her. At the same time arouse two complex feelings: the longing for safety given by her own mother's warm embrace, and the discovery of what it is like to be on the other side of motherhood, not a child any more, but a mother who gives safety.

*Postpartum* sadness includes feelings of loneliness, melancholy, farewell and new creation, vulnerability and longing, and it is often not expressed, understood and even comforted at all, because it goes away by itself, and because it is so closely linked to the experience of giving birth, becoming a mother.

At the same time, this experience is strongly related to the newborn's experience of the first contact with the external environment, outside the womb. The multitude of perceptions that were not there before: light, sounds, touches, tastes, hunger and thirst, fatigue and boredom, the rhythm of being awake and asleep, overwhelm their organism, and at the same time, in an amazingly fast and intense way, shape their brain structures, so they can adapt and accustom to the environment.

The mother's empathy and attunement to these events and the constant microregulation of this mutual perception and response is also something new and challenging for the mother. It captures the whole of her attention and also her physical rhythm. Through moments of contact and discovery of her child's unique rhythm, specifics, peculiarities, needs and sensitivities, a recognizable melody is soon formed, which then enables the mom and the baby to connect in a way that is permanent and recognizable and that allows them to enter the world around them.

Accepting, recognizing and regulating this sadness, is certainly a process. Too often we ignore it and thus detach moms from this deep intuitive feeling

through which the motherhood of past generations is reflected and transmitted, connecting the mother with her mother, grandmother and all mothers who, through their motherhood, time and again opened the entrance to the world for a new generation.

The radio play "Sea" is designed as an opera for mothers with babies which is centred around the old Slovenian myth about Fish Pharaonic, which is frightened by noise (which represents fear, shock, loudness of the world, restlessness and lack of contact) and breaks the song of the sea (previously the mother's inner peace and connection with others and with the world), of which only fragments remain. Just as the mother is left with only fragments of her previous sovereignty, only tiny grasps of intuition, on which she can lean while being aware of the innocence of the newborn and the weight of her responsibility for him.

By gradually following these fragments spread out in the waves of the deep-sea world, symbolizing sadness, longing, hope, life and loss, a new image of the whole is slowly being drawn. A new meaning emerges from fragmented words, opening the space for a new encounter, which is now different from what it was before.

The connection of a pregnant mother with the baby inside her breaks at childbirth. As the newborn suddenly finds itself out of the water in the air, which is much harsher, so does the mother find herself out of her previous world – a well-known, adult world – in the face of a completely unknown world, which at first completely isolates her and swallows her in its flow.

Here, the metaphor of the artistic story corresponds most accurately with the situation of a new mother, child, family.

As the former self-evident organic connection is broken, new connections need to be created. Previous relationships are no more, and a new way into relationships and the world must be found. The family must reintegrate, with new roles, new composition and connections. Everything must be done in such a way that nothing old is lost and at the same time space is created for the new.

In this way the composition from fragments – which at the beginning represent different aspects, feelings, content levels – reveals the true beauty and complexity of the inner world, which we constantly sense, but fully connect only at the end of the composition. Just as the Fish Pharaonic returns back, to a newly built whole.

The end of the piece is also the beginning, just as the end of the *postpartum* sadness is the beginning of a new exploration and construction of an interpersonal and inner world that, by its complexity, significantly exceeds the previous depth of experiencing connection and love, as this love now also includes an awareness of helplessness, loneliness and a deep need for contact. It covers both the sadness, change and feelings of loss, and at the same time the joy of a new life, beauty and trust.



Photo by Adrian Pregelj



# **COMPOSING MUSIC FOR BABIES, TODDLERS AND VULNERABLE GROUPS**





# REDEFINING MUSIC, SPACE, AND AUDIENCES:

## Creating new symphony orchestra pieces for babies, toddlers and vulnerable groups

The commission of four new symphony orchestra pieces by Radio Slovenia, within the B-AIR project, arose from a desire to offer symphonic music and contact with live musical performance and orchestra to babies, toddlers, vulnerable groups, as well as parents, families, communities.

The idea behind commissioning new works involved a series of unanswered questions: Should everyone attend a music performance? How open are the doors of music venues? Should a symphony orchestra perform concerts for babies and toddlers? How to think of vulnerable groups within our understanding on musical art, its wonders, and inner truths? What might contemporary music for babies be like? Do they need it? Or does perhaps contemporary music of the 21<sup>st</sup> century need the children's perspective even more?

The symphony orchestra can be considered an embodiment of the Western music culture's magnificence, an incredible potential of sonorities, dynamics, onomatopoeic musical means. At the same time though, the modern orchestra represents social and cultural hierarchies. The musical roles within the orchestra are already clearly divided; its members are bound by the inherited rules, the division of tasks between the sections, the notation in the score and the conductor's lead-

ership. Likewise, today's repertoire of the symphony orchestra focuses on historical styles, and living composers are only occasionally granted access to the programs. Musical life is, at least implicitly, arranged in a way that leads to divisions in the audiences, because despite the openness and accessibility of modern public music institutions, symphony orchestras attract an audience of uneven age and social status, one possessing specific cultural capital.

Together with introducing young and sensitive audiences to sound richness, timbre and dynamic nuances of symphonic music, with new symphonic pieces we addressed the issues of the hierarchy of the symphony orchestra and the musicians' setup within space, and opened questions on how to centre on the sound experience, presence, and wellbeing of the listeners and in this way delineate a new kind of artistic ritual. In the background lingered also an idea about the possible impact that an experience of creating and performing music for a different kind of audiences would make on the creative perspectives of artists.

Four composers of diverse aesthetic and stylistic attitudes, each preferring particular techniques and music materials, have been invited to create new pieces for the RTV Slovenia Symphony Orchestra.

Larisa Vrhunc is a composer with a distinct closeness to spectral music; her pieces regularly explore quiet sonorities and movement within stillness. Larisa Vrhunc also has a background in pedagogics; she earned her Ph.D. in musicology, and is a professor of music analysis and listening skills.

Svetlana Maraš is the only composer from the four selected who regularly uses electroacoustic means. While the technological aspect stays one important feature of her music, it must be emphasised that her pieces are clear-cut sound filigrees, rich in unexpected turns and twists, and highly conceptual.

Matej Bonin is a composer who works in close connection with musicians; he highly values their creative input and invites them to join controlled improvisations with great effect. Bonin's pieces establish an emphatic relation with the listener, calling the audience to partake in the inner complexities of music. Matej Bonin composed his symphony orchestra debut piece “Cancro” for the RTV Slovenia Symphony Orchestra and was the selected composer in the ‘Under-30’ category at the 62<sup>nd</sup> International Rostrum of Composers in 2015.

Petra Strahovnik also worked with the RTV Slovenia Symphony Orchestra with stellar results in the premiere and recording of her piece “Prana”, which was a selected work at the 66<sup>th</sup> International Rostrum of Composers in 2019. Petra Strahovnik also includes questions of vulnerability in her art and has already created a project encompassing multidisciplinary performances about mental health. Her passion for using unusual materials and creating connections between material, gesture, sound, and event, has made Strahovnik an obvious choice for the task of composing a piece for babies, toddlers and vulnerable audiences.

The four composers were invited to attend seminars and expert lectures within the B-AIR project. Upon score rehearsals staged to test the music material, on the days of the performance three different events were organized for limited audiences in the rearranged radio orchestra’s Studio 26: a concert for children with developmental disabilities and their parents and caregivers; a concert for babies, toddlers, and their parents; and a performance for the adult audience. The concerts for adult audiences were also captured as multichannel studio recordings of all the pieces.

The circulation and presentation of recorded pieces eventually gave an answer to one of the initial questions – whether contemporary music for babies and toddlers can reveal new perspectives for the adult listener. At the 69<sup>th</sup> International Rostrum of Composers in 2023, the contemporary music experts chose the piece “So Quiet” as one of the recommended works.



Symphonic concert for babies and toddlers, RTV SLO.  
Photo by Adrian Pregelj



## WHAT ABOUT THE MUSIC?

# Musicological notes on symphonic concerts for babies and toddlers

### Prelude

In the realm of Western classical music, where conventions and traditions often still dictate the atmosphere, I recently found myself immersed in an unexpected sonic and social experience. In the company of my 4-year-old son, I attended a series of symphonic concerts thoughtfully designed and curated for babies and toddlers. While now considered commonplace, the classical concert is undoubtedly a product of a specific era and its ideals. It is a tightly structured social setting, carefully crafted in order to enhance the audience's appreciation of music as a collection of autonomous objects. These objects, the musical works, stand as the focal point of the entire experience. As such, a classical concert places a series of demands on the audience: the need for silence, stillness and sustained, undivided focus. Individuals unable to conform to these expectations are, by default, denied the chance to experience classical music in its social context.

It is therefore not difficult to understand the profound significance of such events for children whose relationship to art and taste are just beginning to develop. Yet, while observing them – comfortably seated on beanbags or scattered on the floor, some strolling casually around and others

earnestly engaging with sonic objects, their voices interweaving with the sounds of the orchestra – I could not help but notice that the entire essence of these concerts has been inverted. It is no longer the music at the centre; it is the audience. This shift is accentuated by the spatial arrangement, with the audience positioned in the middle and the musicians encircling them.

While by no means implying any shortcomings in this approach, the article centres on four exceptional compositions, created specifically for this occasion by prominent composers of contemporary classical music. Although contemporary classical music encompasses an extremely broad spectrum of diverse approaches, it is most often collectively labelled as 'demanding' or 'challenging' – both to appreciate and comprehend. By providing a historical overview, the first part of the article seeks to explain the reasons behind this persistent stereotype. The second part includes an analysis of works with a dual objective in mind: to present the works as tailored to a specific audience and at the same time to position them as significant contributions to the composers' entire body of work.

### Who is afraid of contemporary music?

Contemporary classical music is an expansive and diverse creative domain that includes various sound phenomena, while also extending its practice beyond the realm of sound. Its foundations – particularly in terms of general aesthetics and the democratisation of sound – can be traced back to the era of musical modernism. In musicological literature, modernism is frequently characterised as a radical departure from tradition and is often referred to as 'point zero'. Modernity, viewed as a distinct period in social history, is a sociological concept, whereas modernism refers to an artistic movement that fully embodies the ideals of modernity, most notably autonomy, rationalisation and linear progress. Influenced by such ideals, Western classical music seeks to liberate itself from the constraints that have defined its practice for well over a century, starting with the major-minor tonality system. We can observe the beginnings of such tensions in the late Romantic expansion of harmonic space and the Impressionist use of floating tonalities.

At the beginning of the 20th century, Arnold Schönberg introduced the twelve-tone technique, a compositional system that served one specific purpose:



to avoid the repetition of the same tone before all other eleven chromatic tones appear. In this way, none of the tones can assume the role of an auditory centre and the sense of tonality is finally completely lost. Although Schönberg, who was also the founder of the Second Viennese School, is often ascribed a kind of paternal role in the context of musical modernism, it was his student Anton Webern who raised the technique to the level of modernist aesthetics and thus laid the foundations for the development of various directions of musical modernism. The compositional method and aesthetics are not necessarily in correlation: Schönberg's twelve-tone compositions still embody a traditional expressive aesthetic, whereas in Webern's work, the same compositional technique intertwines with the modernist tendency toward formalism and inherent musical content. In his twelve-tone works, Schönberg emphasises register, dynamics, tone and formal units to achieve a sense of functionality and directionality in the musical flow, further accentuated by rhythmic organisation. On the other hand, Webern's twelve-tone approach, with its short forms, transparent textures, delicate sonorities, fragmentation, experimentation with time and the use of silence as a musical element, strives for non-functionality on all levels and for all musical parameters. In this way, the sense of musical flow, its direction and narrativity are lost, which becomes one of the main components of modernist aesthetics (Meyer, 1994; Botstein).

Webern's influence, through the explorations of composers such as Pierre Boulez, Karlheinz Stockhausen and Luigi Nono, culminated in the total organisation of serialism. With its mathematical and strictly rational organisation of all sound parameters, serialism not only aligns with a modern rational, even scientific approach to art but also presupposes *complete equality among all sonic*

*parameters*. As a result, the dominance of pitch (melody) and duration (rhythm), which shaped the entire history of Western classical music, gives way to the *democracy of all sonic parameters*, adding colour, timbre, intensity and density. The sound itself, with its physical characteristics, becomes the content of the music. The subsequent history of musical modernism and especially post-modernism, is thus a dual trajectory. On one hand, it is a quest to break free from the determinism of serialism; while on the other hand, it is an exploration of individual modes of orientation within a fully liberated sonic space.

Music from the classical and romantic periods often constitutes part of the cultural capital for the average listener. Its teleological and narrative orientation can evoke a sense of security and comfort, as the listener can, to some extent, anticipate the development of the musical flow. On the other hand, the unfamiliar sonorities and fragmented structure of contemporary classical music can operate quite differently, lacking the comfort of the familiar and the security of the predictable. Composer Karlheinz Stockhausen introduced the concept of the 'moment' – a conceptual form aimed at capturing the characteristics of serial and post-serial music, which no longer adheres to causal logic in shaping the musical flow. Moments can vary in duration, each possessing its own identity that is not necessarily linked to preceding or subsequent events. What happens within each moment is more significant than the relationship between them. At the same time, the concept serves as a support for the listener in engaging with challenging works of contemporary classical music. As each moment exists independently of others, the listener can selectively focus on them according to their current concentration. Interestingly enough, such a listening approach is often observed in children. They listen

unburdened by preconceptions, according to their abilities and current interest, arbitrarily 'plugging in' and 'plugging out' their attention. So there just might be a clear and obvious answer to the question in the title – Who is afraid of contemporary music?

### Not the children, obviously.

As part of the B-AIR project, composers had the opportunity to attend lectures by neurologists, psychologists, educators and other experts. These sessions aimed to familiarise them with diverse aspects of listening processes and perceptual development in young children. On one hand, the purpose of the text is to illustrate how this knowledge has influenced the nature of the resulting compositions. However, an even more significant objective is to contextualise the works within the existing opuses and the broader currents of contemporary music. In this way, it aims to demonstrate that, despite their specific purpose, the works serve as an equivalent contribution to the composer's body of work.

### Larisa Vrhunc: "So Quiet" and the subtlety of spectralism

The programme notes to Larisa Vrhunc's piece "So Quiet" offer a comprehensive explanation of sound perception in toddlers and the musical flow and sonorities of the piece are intentionally crafted to align with these insights. True to its title, the music remains entirely quiet, with the loudest dynamic level being *mezzo-piano* (moderately quiet). The defining feature of this musical flow is its gradual unfolding, skilfully crafted by the composer as tones or layers of sound delicately enter one after another.

Typically, the sounds emerge from silence, reaching the piano (quiet, soft) dynamics and then gradually fade away. This piece, with its quietness and subtlety, aligns with Vrhunc's established creative practice. In an interview with Primož Trdan following the performance of her composition, Vrhunc expresses that it is within quiet sonic environments that she “feels most at home and can express herself most easily,” as they provide her with “the possibility of focus and a sense of peace.”

The initial segment of the composition introduces delicate sounds, creating echoes among the accordion, piano, harp and bells that merge against the sonic backdrop of strings and wind instruments. As the sound material gradually intensifies, the composition guides the listener's focus towards subtle sonic surprises; the auditory portrayal of diverse emotions unfolds in the central section of the piece. Throughout this, the composer maintains a commitment to subtlety. The rhythmic movements, despite their liveliness, remain consistent, while the melodic progressions are always chromatic, serving more to create colour than to fulfil their primary function. The final section brings about a renewed calmness, which is achieved through reference to the alpha brain waves, which usually occur when one is engaged in activities such as daydreaming, meditating or practising mindfulness. Musical representation (and stimulation) of the alpha brain waves is the sonic frequency between 8 and 12 Hz, which can be achieved either through differential



Figure 1: Gradual layering of the music material culminating in the sound of tinkling metal tiles.



Figure 2: Simulation of alpha brain waves.

The keen attention to sonic colours and consideration of physiological modes of human perception align Larisa Vrhunc's creative work with the tradition of French spectralism, which she became well acquainted with during her studies in France. She delved deeply into it in her doctoral dissertation titled "Influences of Spectral Music on Slovenian Compositional Creativity in the Last Decades". Spectralism, which emerged in the 1970s, served as both a response to serialism and as a politically charged movement that resisted the institutionalisation of modernist art. Aligned with contemporary social movements such as the environmental and marginalised rights movements, spectralism engaged critically with consumer society (Juvanc, 2018). At its core, spectral music uses the acoustic properties of sound, or sound *spectra*, as the basis for composition. While advancements in sound analysis and synthesis techniques in computer music and acoustics were pivotal during this period, Larisa Vrhunc underscores that the essence of spectral music is never merely abstract structure. Instead, it consistently highlights the physiological and psychological dimensions, exploring ways to evoke sensations and influence perception.

In order to familiarise children with the sound palette of her piece, Vrhunc incorporates everyday sounds, such as murmuring and the rustling of paper. However, the most distinctive sonic feature of the composition is the delicate tinkling, produced by a pair of hanging metal tiles. They serve as additional instruments for the participating musicians and, at the same time, as a large sound object suspended in the centre of the concert space, inviting toddlers to engage spontaneously. With the same purpose, special sensory-sound cushions were distributed to the toddlers at the beginning of the concert. The spatial design of the concert, placing the audience at the centre of the experience and surrounding

them with music, along with the potential sound interventions by the children, challenge the traditional structure of the concert. The composer further softened it with a sonic introduction and conclusion, technically conceived as a guided improvisation by the participating musicians. Rather than presenting the work to the audience as a stand-alone object, the introduction gently eases them into the experience. Furthermore, the concluding improvisation replaces the traditional applause that interrupts the end of the composition and gives the audience time to say goodbye in peace.

### **Matej Bonin: "Perpetuum Mobile II" and the principles of controlled aleatoricism**

Matej Bonin's creative process is distinguished by a deep dive into compositional approaches, often unfolding over extended periods. Notably, his "Shimmer I–VII" series took shape between 2017 and 2019, while "Eppur si muove I–IV" evolved from 2011 to 2023. Perhaps his most notable recent project, extending its influence on several of his other creative pursuits, is the series entitled "Gymnastics of non/sense". Initiated in 2014 and now comprising three projects, it blurs the lines between composition and improvisation, sound, language and movement, as well as acoustic and electronic elements. Extended periods of intensive rehearsals with a small ensemble provided the composer with the opportunity to explore varieties of written and spoken instructions to the performers and the way they would affect the sonic outcome. This approach allowed him to depart from the notation and give the musicians a degree of interpretative freedom while retaining control over the macrostructure of the work.

When working with a symphony orchestra, the composer is, of course, not afforded such freedom; preparation time is compressed and the

working method is entirely different. Yet, Bonin draws experiences from other projects, seeking ways to use minimal notational means in order to spark independence, liberation and complexity. In the composition "Perpetuum Mobile II", yet another one of the works with the title somehow implying movement, he employs a technique known as 'controlled aleatoricism'. Aleatoricism is the umbrella term encompassing various ways in which chance invades the compositional and/or performance processes. While serving as a response to the determinism of serialism, aleatoricism simultaneously represents a continuation of its tendencies to break away from traditional ways of shaping musical flow. Controlled aleatoricism, first introduced by Polish composer Witold Lutosławski in the 1960s, can also be encountered in various compositions by Slovenian post-war modernist composers, most notably Primož Ramovš and Ivo Petrić.

Controlled aleatoricism serves Bonin as a means of achieving complex results with minimal notational tools. Simultaneously, it continues his exploration of possibilities "for creating sonic textures from a single monophonic line" (Bonin, 2023) – the quest he addressed in an entirely different way, for example, in the cycle of works "Shimmer". Bonin's score for "Perpetuum Mobile II" provides simple melodic patterns and defines the range of their repetition. Within these, musicians perform the material with a certain degree of rhythmic flexibility. It is crucial that each performer selects their rhythm independently, while the conductor's task is to guide and synchronise individual layers. Consequently, as the performance unfolds, simplicity metamorphosises into complex polyrhythms and lush sonic textures. The composer further directs the sonic flow with written instructions added to the score.



A crucial element of the live performance is the circular arrangement of the performers and instrumental groups, allowing the listener to perceive not only intriguing textures and sound combinations but also the movement of sonic masses in the space. With dynamics that never escalate into loudness, and gentle transitions between individual sections, “Perpetuum Mobile II” never feels like an imposition on the listener – always an invitation. And whenever the listener decides to tune in, there is always beauty and magic just waiting to be heard.

### Svetlana Maraš: “Defiance of Glorious Children” and the quest for the new sonorities

Since her early childhood, Svetlana Maraš demonstrated a keen interest in the inner logic of music material and the creative potential it offers. Remarkably, even in her youth, she stood out as one of the rare individuals who, instead of gravitating towards playing an instrument, favoured lessons in solfeggio, harmony and counterpoint. Today her creative work transcends various media, genres and contexts, encompassing live electronic music performance, electro-acoustic composition, radiophonic art, sound and media installations. In an interview with Lucia Udvardyova, Maraš highlights that the sonic character of her works predominantly emerges from the foundational material she employs. Her affinity lies in creating sonic material from scratch, delving into granular sounds, pointillistic sounds, clicks and glitches. However, for “Defiance of the Glorious Children” she adopted a different approach, as detailed in the programme notes. She gathered an ensemble of children-improvisers and engaged them in exploring musical structures, timbres and characters. The result of the “playful, liberated and inspired approach to improvisation” are short (1-minute) recordings, serving as the structural and sound foundation for

Figure 3: Controlled aleatoricism in Matej Bonin’s “Perpetuum Mobile II”; the conductor uses numbers as signs in order to synchronise individual layers

the composition, a dedication to the “adventurous, fresh and boundless musicianship of children and their freedom in experimentation and improvisation” (Maraš, 2023). As a result of this collage-like approach, the piece is characterised in many ways by the fragmentation of form and sound.

The vivid and diverse sonority of the piece sets it apart from the other three compositions that emerged within the context of the B-AIR project;

the music is loud, dynamic, lively and full of sonic surprises. The latter often comes as a result of employing new ways of utilising traditional acoustic instruments. Based on the ideals of social modernity, novelty became an important aesthetic category of musical modernism and the search for new sonic possibilities became an essential part of compositional exploration, often occurring in collaboration with musicians. In addition to the traditional

way of playing instruments, musicians were asked to produce sounds by striking the body of the instrument, blowing into it, manipulating keys, and using everyday objects to produce sounds on instruments. Notation of such sounds requires new signs, so composers often add legends to their works, explaining the graphic symbols used. Additionally, scores may include verbal instructions that precisely explain the method of sound production or its intended outcome. Svetlana Maraš's score serves as a good example of such an approach and is a true treasury of contemporary performance techniques. Yet, sound effects never remain self-contained; instead, they always serve to establish specific sonorities and sonic textures.

Although traditional instruments have remained largely unchanged for almost a century, classical music is not immune to the technological progress of society. Electronic devices designed for sound manipulation and generation have introduced new, practically limitless sonic possibilities into music. Svetlana Maraš's creative work is intricately interwoven with technology – both historical and contemporary. In the featured piece, she utilises an unusual multi-channel speaker set-up to achieve the effect of sound travelling through space and to blur the boundary between sound and audience.

### Petra Strahovnik: “Sense-S” and transcending the boundaries of (classical) music

Petra Strahovnik's creative work is characterised by a unique sonic identity, derived from inventive methods of creating soundscapes, instrument preparation and the creation of her own sonic objects. However, an equally significant dimension of her work appears to be the social component embedded in her creations. It goes beyond merely expressing existing themes through mu-

Group C (16)		SCENE3 b 0"		1'07"	
Ob. Tr.	<p>pitch-bend around the highest note you can get</p> <p>mp-mf (trumpet - mute)      ff</p>	+	<p>air only</p>	+	<p>pause</p> <p>combine freely, vary length of each model and duration of breaks</p>
Vi. Vc.	<p>strong pressure, twist the bow to get "crackling sound"</p> <p>all strings</p>	+	<p>single strings</p>	+	<p>combine freely, vary length of each model and dynamics</p>
+ perc.3	<p>2 strong plastic glasses</p> <p>L R</p> <p>circular motion</p> <p>R</p> <p>continuous</p> <p>vary speed of the circular motion, size of the circle and appearance of tremolo</p>	+	<p>slide on the surface</p> <p>L</p> <p>hit</p> <p>6</p> <p>combine freely, vary length of pauses</p>	+	
speakers 3, 4	<p>Sample: Noise 1</p>				
					5

Figures 4 and 5: Examples of notating contemporary performance techniques; verbal instructions precisely explain the method of sound production and the sonic outcome or are intended as additional guidance in shaping the musical flow

sic; instead, her contemplations on society fundamentally shape her creative process. During a two-year art residency with the ensemble Mode62, Strahovnik explored mental disorders and their profound impact on the daily lives of those who struggle with them. A tangible outcome of this exploration is the project “DisOrders”, a multidisciplinary endeavour that transcends the boundaries

between music, visual arts and performance. The concept of ‘intermediacy’, infused into her works from the realm of performance art, is becoming increasingly crucial for her, also notably influencing the composition “Sense-S” developed within the B-AIR project.

The project “Sense-S” is a fusion of two works. The central piece, “Sense”, for orchestra, was created as part of the composer’s art residency at Villa Concordia in Bamberg. The composer embarked on a unique challenge: to craft a new piece every day for 20 consecutive days, dedicating six to nine hours each day to the creative process. What set this endeavour apart was that it unfolded within the confines of a gallery space, with the public as witnesses to the ongoing artistic journey. The exposure of her most intimate moments to the eyes of random visitors resulted in an exceptionally rich and delicately pulsating drone-like sonic texture, now displayed in manuscript form within the mentioned gallery space. The composition allows for two possible performances. The performance for children should be lighter, quieter and involve communication with the young audience, including eye contact, observing their attention and responding to it. The performance for the general audience, on the other hand, anticipates energy, more intense dynamic changes, higher volume and a focus on the music; communication with the audience should occur through the musical material.

The central composition is framed by a sound introduction and conclusion, “Senses 1” and “Senses 2”, designed as a guided improvisation for musicians, electronics and a magician. The participating musicians are arranged into four groups, each representing one basic element: earth, fire, water and air. The composer structures the entrances and exits of the individual groups and roughly outlines their musical actions. But more importantly, the piece is envisaged as a unique performance for each individual musician. Petra Strahovnik introduces the term ‘open sonority’, signifying the absence of any preconceived mode of listening.

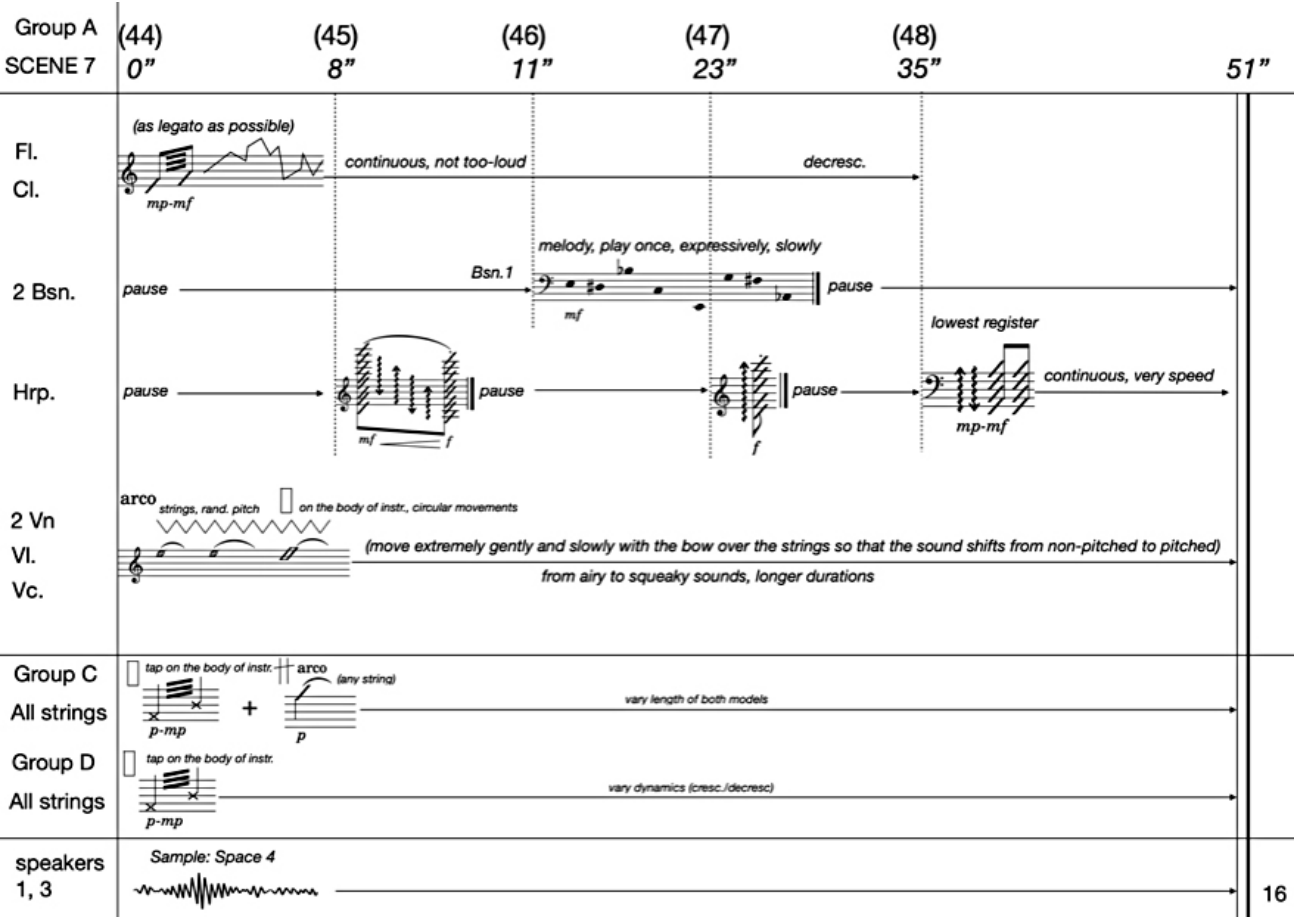


Figure 5

Especially for this composition, the composer designed various sound objects: styrofoam and hard plastic transparent balls filled with marbles, superballs and steel balls. Objects are used by the musicians as well as accessible to children, who are invited to join the music with their own sonic interventions. The listeners can thus actively engage in the sonic flow and the performers have the task of responding to their interventions. In this way, the boundary between performers and audience is blurred.

A child’s perception is not yet strictly focused and often jumps from one object to another. Taking this into account, Petra Strahovnik wanted to challenge as many senses as possible with her piece: in addition to hearing, also sight, smell and touch. In both the opening and closing sections of the composition, a performer – a magician – was subsequently incorporated and the auditory elements of his performance then evolved into a significant aspect of the overall piece.



## Postlude

The central dynamic of modernity is marked by the differentiation of individual social spheres, which, as a consequence, also grants social autonomy to music. Once an integral part of broader social institutions, music now revels in its autonomy, establishing unique internal criteria and liberating itself from conventional categories. Its essence transforms, with the primary focus shifting towards the intrinsic nature of sound. Yet, differentiation also operates within music itself: a strict separation emerges between the roles of the composer and the performer, giving rise to the concept of a musical work and the structure of a classical music concert. On the other hand, postmodernism, as theorised by Fredric Jameson, is characterised by the opposite process, dedifferentiation. This involves transcending and erasing boundaries between society and art, among various branches of art, and among different roles within music practice. In this context, symphonic concerts for babies and toddlers offer a compelling example of softening and adapting the rigid structure of the classical concert ritual. As demonstrated by the analysis of the pieces produced within the project, this serves as a catalyst for the development of inventive approaches in the creation of new music.

After the concerts concluded, I did not give much further thought to how they might influence my son's taste in music and his relationship with art. He seemed content and happy during the concerts and that was enough for me. However, about a week before composing this text, something interesting and beautiful happened. It was early in the morning and my son and I were slowly getting ready to leave for daycare. He was playing with his toy recorder, and I started to worry that the sounds might be getting a bit too loud for the early hour.



Symphonic concert for babies and toddlers, RTV SLO.  
Photo by Adrian Pregelj

Then he asked me for some 'water'. Assuming he was thirsty, I poured him a glass of water and placed it on the table. But instead of taking a sip, he dipped the end of his recorder in the water and

resumed playing – just as he had observed during one of the concerts. The sounds were still notably loud and not very pleasant ... yet, it felt wonderful.

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Photo by Adrian Pregelj



## SO QUIET

# Symphony orchestra composition for infants and babies

I wrote this piece with babies and toddlers in mind, and also their parents. At the outset of the B-AIR project, with an aim to help the creators better navigate the world of infants and their caregivers, a comprehensive preparatory educational program took place. From the neurologists, psychologists, educators and other experts who presented their research, we learned many amazing and inspiring things. From this mosaic of information, complemented with literature reading, a web of reflections emerged, mirrored in the composition "So Quiet".

The first learning was that very young children already have primal curiosity, but at the same time their systems (both physiological and psychological) are not yet well developed, which should be taken into account. A very pronounced feature of young children is that they are much more sensitive to sound impulses than adults. They perceive high frequencies much better than adults, but at the same time their hearing apparatus becomes saturated faster. Infants cannot tolerate sudden changes and loud sounds; they are frightened by those that resemble scary sounds of nature (often in the lower part of the auditory spectrum); they need time to get acquainted with and accept a new information, so they feel comfortable with repetition, slow and gradual changes, higher and quieter sounds, and, what is particularly impor-

tant, they need a sense of security and calmness. And so it became clear that the music would be quiet, hence the title.

Research by developmental psychologists and pedagogues has shown that children in their first years still don't reject certain music styles; they are primarily interested in the sound itself: how it is formed, how it moves around the space, how it changes over time. In shaping their own musical taste, they are decisively guided by the musical tastes of significant adults; so it seems that a composer needs not limit herself stylistically when writing music for young children, and that it makes great sense to expose children to a wide variety of sonorities, if only their caregivers are willing to accept them.

While the first two findings dictate the range of musical means, the further findings condition the form of the composition. It was mentioned in one of the preparatory workshops that children are more likely to attentively follow guided activities if they listen to appropriate sounds, which can be either soothing music or soundtracks with alpha brainwave frequency. This wave can certainly be measured in three-year-olds; it has a frequency of around 8 or 10 Hz, and is best studied when it occurs in an awake but very calm state close to meditation. Of

course, children are not calm for most of the time when they are awake, but already at an early age they show basic emotions and at the same time learn to regulate them: most of the literature mentions joy, sadness, fear, anger, as well as some other emotions.

Neuroscientists have in various ways observed and measured the activity of the brain while listening to sounds. They have also found empirically that pleasant sounds induce a positive physiological response, especially noticeable in people with various brain injuries, whereby the pleasantness of sounds is not an absolute category, but is conditioned by an acquired taste for music. In infants, however, it is always related to the appropriate frequency spectrum, structure and rhythm, and above all to the safety offered by the presence of a significant adult.

In the context of research on the infant's response to different stimuli, the concept of homeostasis also arises, which primarily describes the dynamic maintenance of chemical balance in the body through regulatory and later self-regulatory mechanisms, which are either activated or inhibited as necessary. The purpose of these processes is to prevent external factors from disrupting the smooth

operation of the system. Also, the purpose of self-regulation of emotions, which is one of the most important developmental tasks of the relationship between an adult and a baby or toddler, is to maintain internal emotional balance, an active process which neutralises unpleasant impulses from the environment. Music can either be a powerful support for these processes or it can jeopardise them. From the external, an internal regulation of emotions develops.

In the composition, I wanted to touch on these cues. As the title suggests, the music is all along quiet, it renounces rapid dynamic and other changes, looking for ways of inner dynamics without stepping out of the set delineations. It starts with tiny sounds that slowly sensitise the ears. The first part of the piece is intended to establish interest in the sounds coming from the orchestra, at first calmly, later also with small surprises, which, when repeated, no longer even surprise. This is followed by attempts to enter different emotions, but, by including music equivalents to alpha brain waves, the emotional balance, homeostasis, always gets re-established. It is in this spirit that the work comes to an end.

Numerous music education programmes for young children around the world have shown that for a successful educational work it is essential that both the child and the caregiver enjoy participating in music activities, building a positive relationship with each other. The listening experience of this piece should also not be a passive one, but can be actively co-created by children and parents in two ways: there are two rotating objects in the room, which parents can turn at any time at the children's request, to trigger the tinkling of hanging metal tiles, and the same sounds also come from the orchestra as the musicians trigger and move



Photo by Adrian Pregelj

such tiles when they play. Children are also given pads filled with paper which make noises when squeezed, and the musicians respond to these noises by 'playing' the paper themselves, especially when the audience is most active. With their activities, the audience can partly direct the course of music.

The literature also suggests that young children achieve best results when musical activities are not strictly structured and the child is able to engage and disengage according to their abilities, to move or be still, to make voices or to stay completely silent. The willingness to participate is not the same for everyone, and it also varies from child to child, so it is very important to allow the child to choose how much to participate. Such activities may seem chaotic, but they are the ones where children – if they choose to participate in the first place – respond the most in accordance with the music course. The performance of both compositions at our event assumes that children will be free to move, vocalise, murmur, and perhaps even leave the room; their activities are by no means a distraction, but an expected part of the action. This will also allow parents to be more relaxed with their children and to dive into music with them, and through their experience.

The same musical fabric will later be tested in the classical context of the concert for adult audiences.



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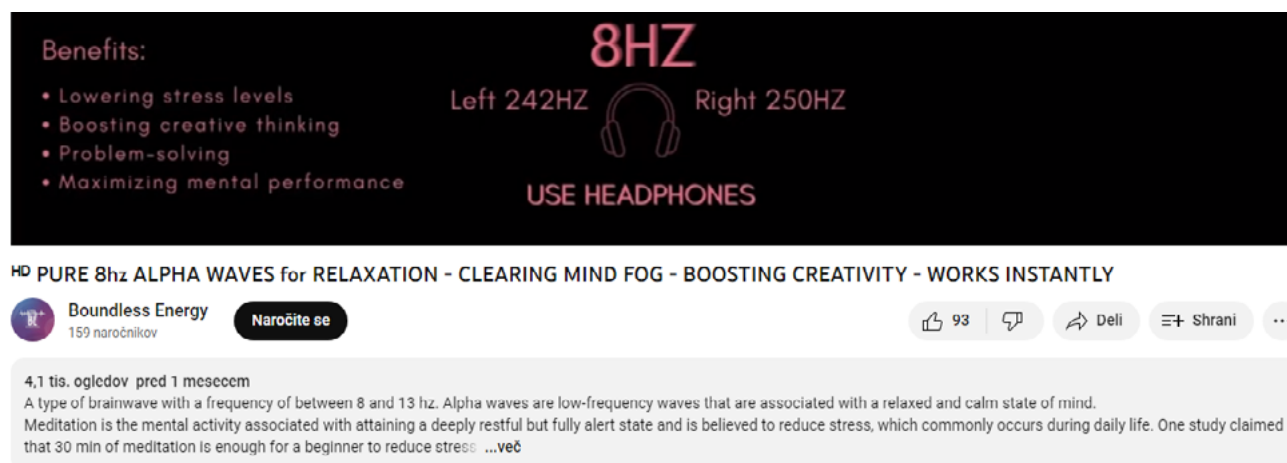
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A type of brainwave with a frequency of between 8 and 13 hz. Alpha waves are low-frequency waves that are associated with a relaxed and calm state of mind. Meditation is the mental activity associated with attaining a deeply restful but fully alert state and is believed to reduce stress, which commonly occurs during daily life. One study claimed that 30 min of meditation is enough for a beginner to reduce stress: ...več



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# RADIOPHONIC THEATRE PLAYS



“The Tree that Sang”, RadioTeatar, Zagreb, Croatia. Photo by Mia Cvitković



## RADIOPHONIC THEATRE PLAYS FOR CHILDREN

RadioTeatar Bajsić and Friends (RTBF) is an artistic organisation based in Zagreb (Croatia) which gathers artists from various generations and artistic disciplines (theatre, music, radio, film), who are interested in exploring radiophonic artistic practice as well as its interaction with other media. With its artistic expression, RadioTeatar develops a specific innovative type of artistic intervention on radio waves, on theatre stage, in nature and in unexpected performing spaces. Pavlica Bajsić, one of the organisation's founders describes RadioTeatar as a 'visual radio' and even a 'performing radio'.

RTBF largely bases its recognizability on the RadioTeatar's show "Hoerspiel: a small play for listening (and watching) by Pavlica Bajsić", which is beeing performed since 2013. After this performance, RTBF developed various activities of applied radiophony through different projects. The research done within the B-AIR project was focused on continuous monitoring of the work of RTBF on creation of radiophonic theatre plays. What can be observed from their work is that there is a very strong quality of community gathering around the professional artistic practice, involving many experts from various artistic fields and of different generations, even in the family, starting with Zvonimir Bajsić, the father of documentary radio drama in Croatia.

The radiophonic theatre for children started in 2018, with the violin and cello play "The Tree that Sang" directed by Hrvoje Korbar and written by Nina Bajsić, followed a few years later by "Wars of the Worlds" by Pavlica Bajsić, inspired by Orson Welles's novel "The War of the Worlds" from 1897, Welles/Koch's radio drama adaptation from 1938, articles from old Zagreb newspapers and the "Appendixes for the collection of verified material, about the history of motivation, about the foundation and about the first period of work of Radio Zagreb" by Rudolf Habeduš Katedrali'ss, from 1951.

Both radio plays for children grew within the program of the Ministry of Culture and Media of the Republic of Croatia "Backpack (full) of culture" (UNESCO's initiative which started in 2012). And while "Wars of the Worlds" toured less, due to the pandemic circumstances, "The Tree that Sang" largely toured Croatia, especially in 2021, as part of a special program for earthquake-affected areas in the province of Banovina.

## CHILDREN AS SOUNDMAKERS IN RADIOPHONIC THEATRE PLAYS

Theatre for children is traditionally made by adults, starting from the writing or adaptation of the text, acting, directing, and choosing the content. In the past decades there is a growing tendency to make participatory theatre, which puts the children in the position of the subject who actively interacts with the performers. The participation can sometimes be perceived even like a co-authorship. As in every participatory performative show, there are always creative tensions between creative and didactical goals, aesthetic-artistic quality, 'professionalism' and 'amateurism', participation and manipulation with the audience (Šimić, 2009).

There is a lot of literature written about the participation in performing arts, as well as the growing discussion about the involvement of children as audiences in participatory formats. Children are rarely asked how they would want the theatre to engage them in the whole experience. In that sense, a great contribution is made by the research done in Croatia by the Specialist study in Drama pedagogy at the Teachers' Faculty of the University of Zagreb, as well as the studies such as the recently published research "How children describe their Theatre" by Maša Rimac Jurinović (Jurinović, 2022).

In terms of engaging children with the music and sound in theatre, there is a lot done in the "Small Stage" Theatre (*Teatar "Mala Scena"*), which makes multisensory theatre plays for babies and children of all ages, often implementing opera. In 2023, the Music Biennale Festival and the Croatian National Theatre created "Opera Rosa"<sup>1</sup>, the first opera for babies.

In the B-AIR project, RadioTeatar Bajsić & Friends made two radiophonic theatre plays for children that aim to enlarge children's horizons of sounds: "The Tree that Sang" and "Wars of the Worlds". In the radiophonic theatre play "The Tree that Sang", participation of children in the sound adventure was invited in different ways:

- 1) listening, sense-making and entering dialogue with the sound (Violin and Cello as characters that only play music, without speaking); and
- 2) singing and playing instruments in the post-show workshop.

Since it is the radiophonic theatre play full of music both in the show itself, but also in the post-show workshop, what can be noticed in "The Tree that

Sang" are typical examples of 'musicking' (verb "to music"), which means taking part "in any capacity in a musical performance, whether by performing, by listening, by rehearsing or practicing, by providing material for performance (what is called composition), or by dancing" (Small, 1998, p. 9).

On the other hand, in the second radiophonic theatre play titled "Wars of the Worlds", no focus is put on children making music. Here children participate in creating soundscape with various everyday objects, using microphones. Their task is to follow the storytelling and wait for the word that signals their sound. Comparing to the musicking, creating soundscape makes a different level of thinking, which doesn't include pre-recorded music (Recharte, 2019) and involves different auditory perception and experience of sound, which is characteristic for the sound pedagogy (Tinkle, 2015).

More about the "The Tree that Sang" and "Wars of the Worlds" is written later in this chapter. The whole arts-based and game-based interview with children is introduced in the Chapter VII, under "Arts-based and game-based evaluation".

<sup>1</sup> See more: Croatian National Theatre (2024). "Opera Rosa", opera for babies. Music Biennale Zagreb's Festival for Children. <https://www.hnk.hr/hr/opera/predstave/opera-rosa/> Retrieved February 9<sup>th</sup>, 2024.

## “Wars of the Worlds”

### Excerpt from the arts-based and game-based interview with children-performers

In the continuation of this chapter, we are bringing out children’s voices from arts-based and game-based semi-structured interviews conducted with two 11-year-old children who were performing in the radiophonic theatre play “Wars of the Worlds”. Children’s names are changed to keep their identity protected. One of them is part of the internal crew of the radiophonic theatre play, so she comes to every show. Another one is new and didn’t attend rehearsals, except the one right before the show. What could be noticed from children’s description of the process is the importance of *peer-to-peer learning*, the potential of using *imagination* in working with children on many different levels, as well as fostering thinking about their relation with sounds and objects in their soundscape.

**Iva:** My role was to play a scared cow. I acted as a frightened cow with little bowls.

**Researcher:** Like “mooo”?

**Iva:** Yes, “mooo”, really loudly and scared. Then I acted when there was an explosion, we popped balloons, used foil for wind, and then with bags, we made, like, a fire.

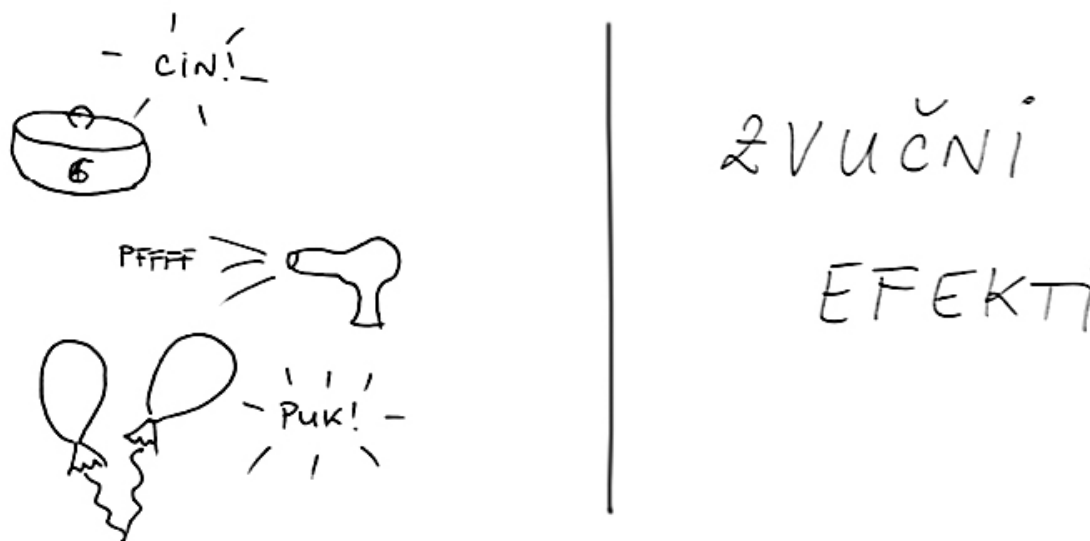
**Researcher:** I see, so you produced sounds with objects?

**Tonka:** SoundAtrack!

**Researcher:** Aaa, soundtrack. Tonka, what was your role?

**Tonka:** Same as hers!

## VIGNETTE: Children about soundmaking in the RadioTeatar play



Picture 1. Interview question about children making sound effects in the form of a Memory-game

**Researcher:** Were you also a cow?

**Tonka:** No, I wasn’t a cow, but I hit pot lids like gongs. And I also popped a balloon... then I made a little fire and such things and then... and then... Yes, then I had a microphone because at that part of the play, the actor moves a lot, and we can’t put microphones everywhere because they would fall and all that... So I went, I had a microphone, and I held... I had some cans with sand, leaves, and rocks, where I walked... and I then set up the microphone for him at the end... And I threw plastic bags that I have in this small bag.

(She is showing the bag she’s carrying.)

**Researcher:** I see, so you rustle with that?

**Tonka:** Yes. And I throw papers.

(...)

**Researcher:** How did you prepare for the play, Tonka?

**Tonka:** Well, I went to rehearsals, Iva didn’t.

**Iva:** She briefly explained to me.

(They show me their farewell gestures!)

**Researcher:** You have your own farewell? Wow! So, Tonka went to all rehearsals, and...?

**Iva:** Yes, she briefly explained to me in about 5 minutes: when we rustle for fire, when an actor calls for volunteers, you raise your hand, say your name, so she briefly explained what I needed to do...



(Tonka interrupts and mimics a worried Iva, acting: “When they ask me, do I have to say something? Am I doing everything well?”)

**Iva:** Yes, I was very curious and...

**Tonka:** She was very nervous.

**Iva:** Yes, I was very nervous, and I thought I would mess up... for example, when I played the cow, I thought I would do it wrong. But when I started, I relaxed and realized it was actually easy.

(...)

**Researcher:** Are there any other characters on the table with object?

**Tonka:** Well, there’s a cow – that’s a living being – to act, and there’s a storm drum. There’s also a small one like a drum!

**Iva:** (interjects in the same time) There’s also the one for the storm!

**Tonka:** Then there are bags for fire, there are these balloons to pop, and toothpicks, there are those bottle caps.

**Iva:** There’s also something to rustle with. Like a little drum with balls...

**Tonka:** Storm drum, that’s what I said!

**Iva:** And then when Pavlica (the director of the RadioTeatar play, op. ur.) did it, when they were like aliens... and there’s this wire in a box with a hole and when you shake it, you hear a storm.

**Researcher:** Wow. So, you learned a lot...

**Tonka:** A lot!

**Ana:** What else did you learn? What would happen if there were no children in the play? Would it be boring?

**Tonka:** Honestly? It would be sad!

**Iva:** And, I mean, it’s okay that we played...

**Tonka:** She wanted just the two of us to be...

**Researcher:** Normally, do more children come, like from the audience, or...?

**Tonka:** Yes, yes, there were three from the audience...

**Researcher:** And did you invite them?

**Iva:** No, they came.

**Researcher:** Great. So, you were their teachers then!

**Tonka and Iva:** Yes, sort of! (They turn the slips of paper and come to number 5.)

(...)

**Researcher:** What does Pavlica as the director of the show do on stage around the table, during the theatre play?

**Tonka:** Mostly, she explains things to kids, like I sometimes do...

**Iva:** (interjects) And to me!

**Tonka:** ...Hahah! ...When you’re going to pop the

balloon, when you’re going to do those things. Um, she also does some sound effects when kids don’t do them because they don’t know, since they haven’t been to rehearsals...

**Researcher:** Well, that’s normal.

**Tonka:** Yes. She also watches the play, and I think she’s also there in case actors forget something so she can tell them, like whisper to them. But I think that wasn’t necessary now.

(...)

**Iva:** Well, she sat next to us. My parents asked why she was sitting next to us.

**Researcher:** Well, she’s maybe also a child! (Laughter.)

**Iva:** She wasn’t a child then, but she probably wanted, for example, some kids who were on the side didn’t want to be alone. She, for example, said, “Here, take this and rustle a bit! Do the hair-dryer!”

**Tonka:** (acting like the director) “Wind!” She also worked with foil as wind... and then for example, when it was the cow’s turn, she’d say, “Come on, little cow!” and then I’d act as the cow.

**Researcher:** Cool. So, she was like your helper?

**Tonka:** Yes!

(...)

**Researcher:** What do the other actors on stage do?

**Tonka and Iva:** Act!

**Researcher:** And do you help them with anything else there?

**Iva:** Well, Tonka was carrying the microphone, arranging boxes to make it look like going on a real adventure in the forest... then she'd add chestnuts to throw... and then she'd carry the microphone and hold the actor's crutch, and then she'd take the microphone again and run after him.

**Tonka:** I would answer questions, like for example, "What day is it today?"

**Iva:** And then she'd say, for example, "Thursday"! (She gets into the acting and mimics the actor) "Today is Thursday!" (They turn the slips of paper again.)

**Researcher:** You've already told me about that, I wanted you to reveal some secret to me, for example, how to make sounds with a hairdryer.

**Tonka:** Yes! Very easy!

(...)

**Researcher:** Any other tricks?

**Tonka:** The microphone! Like with this tablecloth, for example. This one child found it a bit difficult... You don't have to be too light, but not too hard either. (Points to the foil with my paper) We only had better papers there! But, you can rustle it like a little fire!

**Researcher:** Good! Can we have another question now? Look, this is the easiest question in the whole conversation! What's your favourite sound?

**Iva:** (excitedly: Ooooh!) A little cow! "Mooooo"! (with tapping on the bench)

**Tonka:** Balloons for me! I love popping balloons!

**Researcher:** And normally, when you're just listening? What's your favourite sound in the world?

**Tonka:** Probably when she does the little cow, that's really funny! (Iva is still acting!)

**Researcher:** How about you?

**Iva:** Also the little cow! But also when someone does that with a hairdryer... An alien coming! (Acting another scene.)

**Researcher:** And outside the play, what's your favourite sound?

**Tonka:** (Excitedly: Ooooh!) For me, it's when it's raining, or when leaves rustle, or when you walk on snow, or water.

**Researcher:** Cool. And you, Iva?

**Tonka:** Those are also my dog's favourite natural phenomena.

**Researcher:** I love the sound of waves!

**Iva:** My dog ate snow!

**Researcher:** Do you like the radio?

**Tonka and Iva:** Yes! (One cheerfully, the other a bit questioninglly.)

**Researcher:** And why do you like it?

**Tonka:** Because it's cool.

**Researcher:** What makes it cool?

**Iva:** It's cool to me because sometimes something funny happens, something exciting, something dramatic, something sad, something cheerful...

**Tonka:** ...like, like television... how should I say, when you don't have a lot to do...

**Iva:** But it's not television, it's like a small box of television.

**Tonka:** Come on, let me tell you something...

**Researcher:** One at a time, please?

**Tonka:** So, um, it's cool because when... I mean, television is when you really have to have time for it and watch it, but with radio, you can be at home or in the car... you can be doing something and listening to the radio and doing that task.

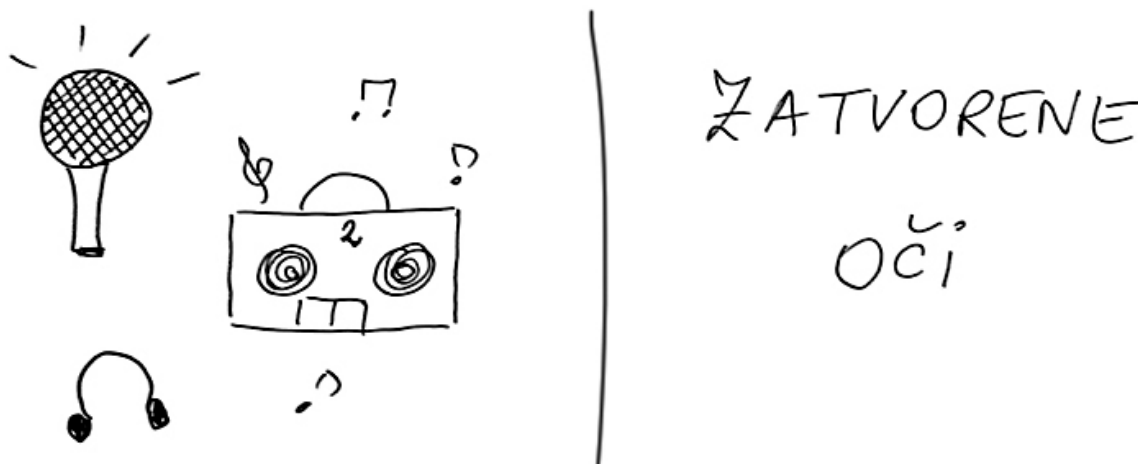
**Researcher:** I see, cool. So, you can do anything? Can you go for a walk and listen to the radio?

**Tonka:** Yes.

**Researcher:** What do you say, Iva?

**Tonka:** You can clean the house and listen to the radio.

### VIGNETTE: Children about the radio:



Picture 2. Interview question about the radio in the form of a Memory-game

**Iva:** You can do it on your phone... um.

**Researcher:** Why do you like the radio, why is it cool to you?

**Iva:** It's cool to me because then I hear everything that's happening. I mean, on television, it's okay; but over the radio, I hear everything.

**Researcher:** All the sounds?

**Iva:** Yes, all the sounds. And then, for example, when I'm doing homework with my parents or my parents are working (like my dad is making a presentation for work, and my mom is studying with my younger sister), then my dad would turn on the radio, either on the phone or on the 'radio app,' and then I think we'd listen to the news. I don't remember the latest news, but I remember it was exciting, that...

**Tonka:** My mom loves the radio. She only listens to the radio.

(...)

**Iva:** We can imagine that feeling on the radio. We don't have to watch it on television. We can imagine how we would feel in it.

**Researcher:** Yeah, you explained it well. Do your friends think the radio is cool?

**Iva and Tonka:** No, it's lame.

**Tonka:** I don't know, I've never asked.

(...)

**Tonka:** Radio... You can listen to it with your eyes closed.



## THE TREE THAT SANG

*"We have to keep your ears open  
Under this bright blue sky."*

(From the introduction to "The Tree that Sang")

"The Tree That Sang" is a radiophonic theatre play about Violin and Cello, about the friendship between a man and an instrument, classical and innovative, old and new, as well as about the freedom and responsibility that music brings. The story of two instruments is told primarily through sound, music, acting and authorial text, guiding children towards listening, a skill which seems somewhat forgotten in the age of visual communication. The protagonists of the play are the instrument builder and the instruments themselves – Violin and Cello. We follow them on their journey from the very beginning. The story opens in the forest, with the Master's search for material from which he will make his instruments. It continues in the workshop where the Master makes and grows instruments, and then takes them to their life journeys, concert stages and quests for a new sound.

The authorial team is composed of professionals in all the above mentioned arts. Everyone individually contributes with their professional experiences to the creation of this project which points, just like any radiophonic theatre piece, to the importance of the neglected culture of listening. After the performance, a music workshop is held with children. During the workshop, children use



"The Tree that Sang", RadioTeatar, Zagreb, Croatia.  
Photo by Mia Cvitković

small musical instruments to discover various new sounds around them, form their own band and, with the help of the authors' team, create and perform their own composition.

### Credits:

**Director:**

Hrvoje Korbar

**Author of the text:**

Nina Bajsić

**Performed by:**

Maja Katić/Marija Šegvić,  
Stanislav Kovačić (cello) and  
Jasmina Bojić (violin)

**Choreographer:**

Nikolina Medak

**Art design:**

Mare Bajsić

To see the video trailer  
"The Tree that Sang":



As part of the “Backpack (full of) culture” program of the Ministry of Culture and Media of the Republic of Croatia, and the B-AIR program, a cycle of performances and workshops were carried out for elementary school students from the towns that were affected by the earthquake in 2020 and 2021. It continued to be performed in the Radio Voćarska Festival cycle in 2023, as part of the B-AIR and the “Culture and art in the community” program of the Zagreb City Office for Culture. After the evaluation within the B-AIR project, the play is also to be produced as a radio drama, and it is also published as a children’s book.

The evaluation of the “Tree that Sang” was conducted during 2.5 years within the B-AIR project. In terms of a timeline, it encompassed 4 research phases:

- 1) Spring/summer 2021 – Content analysis;
- 2) December 2021 – Focus group with the creative team of authors/performers;
- 3) July 2022 – Arts-based interview with the dramaturge of the theatre play (methodology explained more in depth in the Chapter VIII)
- 4) March-December 2023 – Performance and post-show workshop observations with different audiences (festivals, schools, kindergarten).

The enquiry focused on three main research questions explored through the methods of content analysis, focus group and arts-based interview, as well as the observation of the play and the post-show workshop. Here are the questions and summary of the findings:

**RQ1: What are the ways in which radiophonic theatre for children invites its audience(s) to experience sound?**

The invitation happens through the rich palette of music and sounds; high aesthetics and sound



The performance of the show “The Tree that Sang” in a non-conventional place. Photo by Mia Cvitković

quality in the space; listening and participatory music making (learning by ear), as well as through introducing characters through sounds.

**RQ2: What is the distribution of sound/musical elements (speech, sound, music) in the selected radiophonic theatre play and how is it used in the post-show workshop?**

The sound and music are used as main elements accompanied by poetic text.

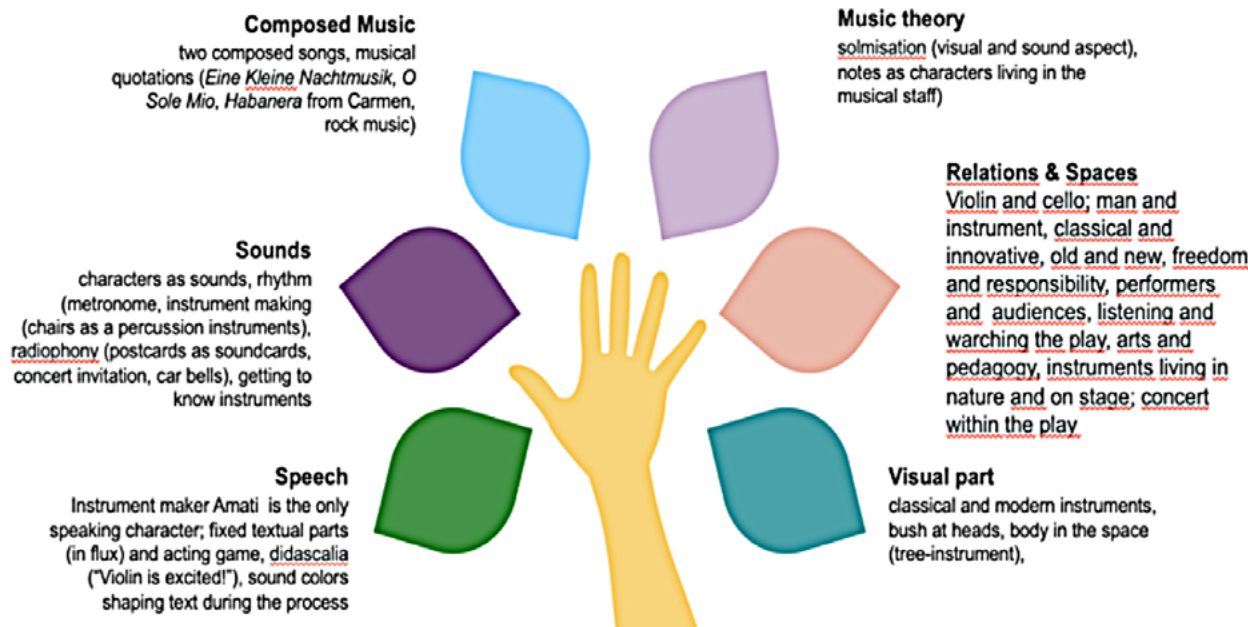
**RQ3: What are the ways in which creators and performers collaborate in designing the play (roles, interactions, expertise)?**

What can be seen is a high level of collaborative professionalism and ‘bottom-up’ approach in making and performing the play. Children’s audiences are co-creating the play, while actors and musicians are taking the role of sound mediators. The research also showed the potential to include a professional music mediator in the creative team.



# CONTENT ANALYSIS

The structure of the building blocks of radiophonic theatre play *Tree that Sang*



Content analysis (systematisation of elements extracted from the research)

In the final research phase, when performing spaces were open after the Covid-19 lockdowns, we were able to observe children's engagement during the theatre play and in the post-show workshop. Children's audiences were diverse – from kindergarten children who came in groups to Radio Voćarska Festival (March 2023) with their kindergarten teachers, to school children for whom the radio play was performed in schools. The latest theatre play and workshop were performed in the Elementary School of SUVAG, Polyclinic for the Rehabilitation of Listening and Speech

(November 2023). For this occasion, the play itself and the workshop were somewhat adjusted to match the needs of children with hearing and speech impairments. Prior to this performance, the RadioTeatar professionals received the specialised course in verbotonal method developed by the academic Petar Guberina, which is used as the basis for rehabilitation in this school.

What could be noticed while observing children's participation during the theatre play and in the post-show workshop is that children actively engage

both with the musicians-actors (Violin and Cello) playing their non-verbal roles, expressing emotions and talking to children, as well as in the post-show workshop of a form quite similar to the 'standard' process of music-making in music classrooms.

In the post-show part, actors-musicians facilitate a workshop using the main song from the theatre play, "In the Woods" (*U šumi*), as the content that is further developed.

To listen to the song:



## The lyrics of the song "In the Woods" (*U šumi*), "The Tree that Sang"<sup>1</sup>

Silence, silence in the forest

*U šumi danas tišina vlada*

Such a silence, it is oddest!

*Tiho je k'o nikada do sada*

Not a sound that can be heard

*Ne čuje se jedan ton*

Not a whisper, not a bird

*Do uha ne dopire ni zvon.*

Why the forest fell so quiet?

*Šuma je ušutjela*

Maybe, maybe... it is tired

*Da li se naljutila*

Maybe, maybe... it's afraid

*Možda nas se ona boji*

Our steps have made it scared

*Plaše ju koraci moji i tvoji.*

<sup>1</sup> Translated into English by Sunčica Milosavljević



Actors-musicians bring simple Orff instruments and some everyday objects that can produce sound and give them to children. They assign small groups of children to 'musical bands', and ask them to name their band. As there are usually many ideas for naming the band, the actors-musicians facilitate the voting process – they write the proposed names on the school board and let the children vote for the name. After naming the bands, children play the whole song with actors-musicians who facilitate the making of the basic arrangement in five steps:

- 1) Dancing to accompany the 'silence' in the beginning of the song;
- 2) 'Freeze in a sculpture' (in the silence after the verse "Not a sound that can be heard / *Ne čuje se jedan ton!*");
- 3) Making the sound "shshshshsh/psssst" together with the finger in the front of the mouth (in the silence after the verse "Why the forest went so quiet? / *Šuma je ušutjela!*");
- 4) In all instrumental interludes children play their instruments following the music;
- 5) Children are stamping their feet to accompany the verse "Our steps have made it scared / *Plaše ju koraci moji i tvoji!*".

Through the process of arrangement-making and sound-making children learn to actively listen, discover the musical form and learn lyrics. Besides this process, the workshop sometimes includes conducting exercise, with children coming in front of the group and conducting the tempo for the instruments, and sometimes also showing movements of playing different instruments ("Now let's play as trumpets/violins/percussions", etc.).

The workshop scenario slightly changes depending on the children who are in the audience. With school children there is sometimes a different division in the band, when the group of 'band singers' goes in another room with the actor/musician to learn the lyrics and sing. Since the song has many lyrics that are not easy to learn, this option usually doesn't happen with kindergarten children. Every post-show workshop, as well as the theatre play itself, finishes with simulating a concert performance.

### Exercises

As one of the practical results of the research process, we wanted to make a step further and develop additional multisensory and multimodal exercises that can be facilitated by teachers in kindergartens and schools. The exercises were tried out with children in the Elementary School SUVAG in the weeks after they watched the play.

### Examples of multisensory and multimodal exercises:

**1. MEET THE INSTRUMENTS: Level 1.** Bring the violin and the cello in the classroom. Introduce the parts of the violin/cello and the fiddlestick, which have same name as the human body parts (neck, ribs, bow hair, chin rest, body, tail piece), as well as the parts that carry names of animals (frog, horse, scroll – in Croatian language the name for this part is 'the snail') or some other objects (bridge). The task for the children is to follow the violin/cello parts that facilitator shows by showing the equivalent parts of the body; make sounds to follow parts named by animals; or take a body posture to describe the parts such as the bridge, the 'snail', etc.

**Level 2.** This game level might be performed when both performers/instruments are in the room (Violin and Cello). Divide children into two groups. One group follows the Cello, and the other the Violin. They both act as guides of the body parts. Performers show different parts of their instrument at different times. In case both groups perform at the same time, a short composition can be made and recorded.

**Note:** This exercise can be performed by actors-musicians in the post-show workshop, as well as by school/kindergarten teachers at any time.

**2. HIDE AND SEEK WITH THE SOUND:** This exercise is a combination of the hide-and-seek and the 'warm-cold' game.

**Level 1.** Facilitator hides an object in the room (children go outside or close their eyes in this part). The overall task for the group is to find the object. They move through the space looking for the object, following the music from the theatre play. Facilitator is guiding the situation and making music stop and go, cutting the song in different places (especially when children come closer to the hidden object). The instruction is to stop and freeze when the music stops. At this point, facilitator can guide the movements of the children by saying 'Now when the music stopped, and you have frozen, turn your head/shoulder/knee left/right/back in the direction of window/me/doors, etc.

**Level 2.** Facilitator can use separate Violin and Cello parts from the theatre play:

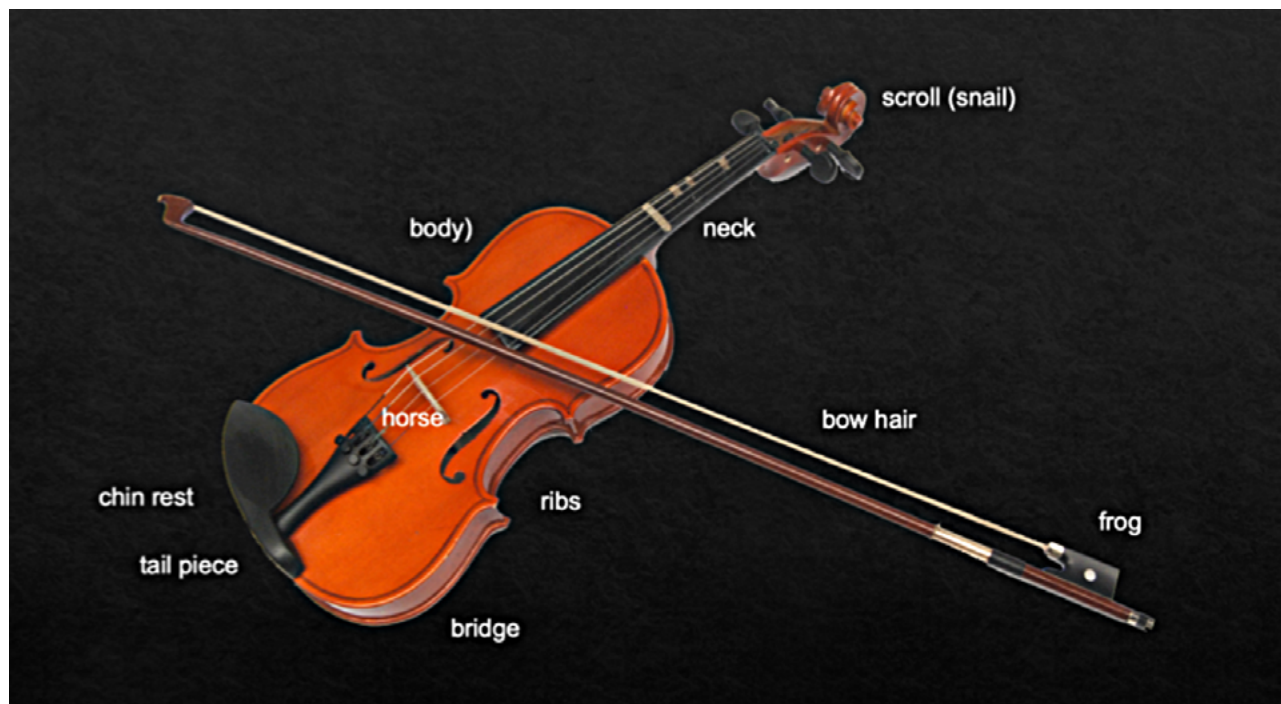


Divide children into two groups: group 1 moves only when the Violin part plays; group 2 moves only when the Cello part plays. The task is still the same: to find the object. Facilitator guides the process by playing different tracks and giving the same instructions for turning their body in different directions. In this mode of the game, the children are exercising active listening and patience on a deeper level, because they need to follow sound colours of the instruments.

**Note:** This exercise can be performed live with performers as facilitators after the show (the music is played live), as well as in schools and kindergartens with teachers as facilitators (using the recording of the song from the YouTube).

**3. COLOURS OF VIOLIN AND CELLO:** Draw a picture of a big tree on A4 paper. Each child chooses two different pastels or wood crayons. The task is to follow the rhythm and/or the melody of the Violin part using colour 1, and then of the Cello part using colour 2. In this way every child gets the unique picture of the treetop. At the end there might be a small exhibition of coloured trees. Children can exchange their thoughts about the similarities and differences of their colour lines (that also include talking about sounds).

**Note:** This game might include playing with the left and the right hand – for example, drawing the Cello line with a non-dominant hand. Also, the facilitator can encourage children to do a storytelling activity and think about a dialogue between Violin and Cello, as introduction to the next part of the theatre play.



Parts of the violin. Photo by Unknown author licensed under CC BY-NC with added names of the parts in the PowerPoint Presentation

The complete analysis and the research results related to the “Tree that Sang” are planned to be published in a peer-reviewed journal article in 2024 in English. Preliminary results were presented in the 8<sup>th</sup> International Symposium of Music Pedagogues at the Music Academy, University of Juraj Dobrila in Pula (4-6. 5. 2023), under the title “Radiophonic Theatre as a Space in-between Music Pedagogy, Community and Wellbeing”.

To see the Symposium program:





# WARS OF THE WORLDS

## A disaster radio play with shooting, singing and Martians

*„We are in the radio studio of RadioTeatar, where the evening program “Popular Science Hour” will start soon. Radio Orchestra is tuning in, the host is rehearsing the text, technician Jakob Bunda is fixing the lamp in the studio, which seems to have lost contact. Here it is, shining again!*

*Well done Jakob... And far away, somewhere in the heart of Istria, in the Observatory in Višnjan, reporter Žiga Hren looks restlessly at the starry sky and at his wristwatch that he inherited from his late uncle Rudolf... He is impatiently waiting for his first call this evening.*

*On the other hand, the first curious people gather at Radio Kavana and push around the tables on which there are radio-detectors for reception. The line for headphones has become hectic because...*

*We will be on the air soon!”*

Acknowledging the significance of children’s artistic worlds and their lived experiences on the stage is a vital part for all professionals in performing arts who are creating and performing for and with children. In this theatre play we have three adult actors on the stage who are facilitating participatory processes of the whole audience – both adults and children (age 9+). At some point they act as facilitators of the small theatrical sound-game performed with children-volunteers from the audience. For that, children are invited to a small table on the stage, prepared for them with different everyday objects and microphones.



Children creating the soundscape, “Wars of the Worlds”, Radio-Teatar, Zagreb, Croatia.  
Photo by Mia Cvitković

### Credits:

**Music:** Marko Levanić and Ivana Starčević

**Choreographer:** Srđan Sorić

**Radio drama excerpts:**  
Dino Brazzoduro and Dalibor Piskrec

**Lighting:** Sara Bundalo

**Scenography:** Metej Kniewald

**A handful of borrowed radio voices:**  
Janko Rakoš, Živko Anović, Jerko Marčić,  
Jelena Miholjević, Ljubica Letinić and  
Tihana Ostreš

**Producer:** Katarina Krešić

**From the live studio:**  
Ivana Starčević as Milena Begović  
Sven Medvešek as Fric Maramica and  
Oton Kučera  
Matija Antolić as Jakob Bunda and  
Blaž Konjski

**Texts and instructions from the director:**  
Pavlica Bajsić

To listen to the  
radiophonic clip:





Children creating the soundscape, "Wars of the Worlds", Radio-Teatar, Zagreb, Croatia.  
Photo by Mia Cvitković



The facilitator guides children through instructions: each child chooses one of the objects and tries it out in front of the microphone to hear the sound. When all children get instructions and make a small 'sound-check', adult actors resume the text of the theatre play. This time, the text is accompanied with the soundscape made by children. In this part of the theatre play there is usually the director of the play, Pavlica Bajsić, entering the space in a subtle way, sitting with the children by the table and helping them produce sounds in front of microphones at right times, as to follow the story narrated by adult actors (according to the keywords in the guidelines).

There is always one child (or sometimes more than one) who is not a volunteer, but an actor who also has a role to follow adult actors with a microphone at some points of the play.



Children creating the soundscape, "Wars of the Worlds", RadioTeatar, Zagreb, Croatia.  
Photo by Mia Cvitković





A child-actor following the actor, with a microphone.  
Photo by RadioTeatar

For the actors, professional engagement in this radiophonic theatre play means blending actor's traditional roles – it is a dynamic interplay between being an actor and musician, a sound maker and a sound facilitator (in children's participatory process), a connector and networker (with the adult audience 'behind'), a professional in one aspect and a non-professional in another.

"Wars of the Worlds" premiered during the pandemic lockdowns, in the Ribnjak Cultural Centre (two performances in the same day). After the premiere, it had one online performance during the lockdown in November 2021 in the framework of a theatrical festival (which was supposed to happen live, but had to be transferred to the YouTube space, featuring recorded performances). In both of those performances which took place during the Covid-19 pandemic restrictions, it wasn't possible to conduct a research with children. The opportunity opened in the last performance, in Cinema "Urania" in May 2022, during a 45-minute break between the two performances. The whole research process with children which was arts-based and game-based is described in the Chapter VIII, in the article "Arts-based and game-based evaluation".

Creating the radiophonic theatre play "Wars of the Worlds" was inspired by the famous event which happened in 1938 in the USA after the broadcasting of the radio drama "The War of the Worlds", based on the novel by H. G. Wells, that caused a huge hysteria of the radio-audience who believed in the simulated news from the radio drama, as if it were real and not fictional. Since the theatre play re-creates the recording and broadcasting of this radio drama, as well as the response of its audience (with the real audience in the room), the creators of the theatre play weren't sure if the show was more referential to the adult audience (as 'digital immigrants' who can understand and still imagine times without technology and remember the time when radio was listened to on massive scale), or children audience as 'digital natives' for whom this content is very distant. There is for sure part of the play that is devoted to small children as sound-makers at the small table, but RadioTeatar wanted to see if this play might work with teenagers.

Besides the game-based evaluation made especially for the young children audience, the research also included interviews with some teenagers from the theatre play. Although it wasn't easy to find teenagers who came to watch the play with their parents (so we could get the informed consent signed by the parent after the show), we managed to get the interview from two teenagers aged 15 and 19 after the second performance.

Since radiophonic theatre plays are all about the sound becoming visible in a very special theatrical way, as well as the fact that the teenagers today are mostly focused on the visuality, what surprised us was the answer of one of the teenagers when we asked the question 'for whom is this theatre play made for?':

Anyone can find himself/herself in this theatre play. There are serious subjects for grown-ups, funny elements for children, and something in-between for me.

We were interested in exploring what the 'something in-between for me' means, so we asked the teenagers what was the most interesting part for them. They didn't mention any particular part, but we noticed that the most interesting part for them was the fact that they could imagine the story through simple listening, as well as the interaction with the audience in producing sound:

You can imagine what is happening. Because, we basically only listen (the theatre play), but that is done so well that you can imagine it. You can get a great picture in your head.



I liked a lot that the audience was part of the show. It's always cool. The sounds are so great and used creatively. There are some things such as producing sound and **I could never imagine that the sound like that can be created with the audience.**

The important part of an artistic piece is to **leave space for interpretation and imagination**, because if we give all to the audience right away, then it's automatically boring. The biggest artists always go for mystery and let us (as audience) to finish the piece for us, no matter if it is about the novel, the picture, the sculpture...

Another type of feedback from the children audience was asked via the pamphlet designed as a postcard. It contained the poster of the theatre play on one side, and on another it looked almost like a typical postcard with 4 empty spaces where children can create short comic. The first picture in the comic made by Marko Golub was an invitation for children to leave the 'visual' message for the radio after the show. RTBF got only a few responses sent on their address after the show, so it would be interesting to see what kind of response will happen when this show starts playing more often to more children in the audience.



Front page of the program and the poster of the "Wars of the Worlds"



## NATJEČAJ ZA LOVCE NA MARSOVCE

Tražimo **lovce** na **Marsovence**;

Najhrabrije **klince** da pogledaju Marsovcima u **lice**.

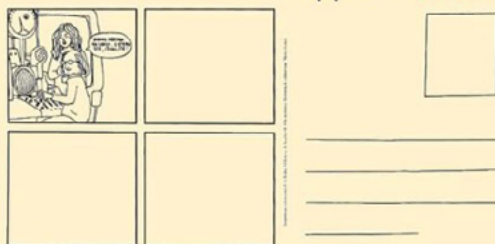
Narišite **skice** na naše **razglednice**

i pobijedite ove **krivce** za svačije **živce**.

Pošaljite nam svoje **skice** na adresu naše **ulice** (Medveščak 48).

Nagrada za **najkreativce** bit će **ulaznice**

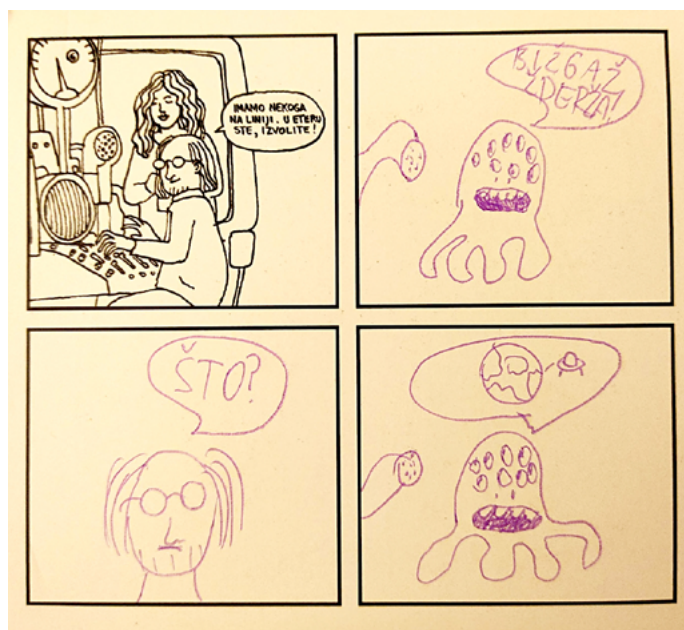
za raspjevano **Drvce**.



Invitation for the children to draw and send their sketches with the rewarding tickets for "The Tree that Sang"

One of the visual responses in the RadioTeatar's program.  
Photo by Ana Čorić

To conclude, since there weren't many performances of "Wars of the Worlds" during the pandemic times, and the audience number in performances was quite limited, it would be interesting to offer this theatre play to schools and use the same feedback methods (comic and interviews) with the larger number of children of different age to test what would be the most appropriate audience for the play and what are its potentials and challenges in relation to the children's perception.



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Vidulin, S. (Ed.). (2023, May 4–6). *Eight international symposium of music pedagogues – Symposium booklet*. Muzička akademija u Puli. [https://drive.google.com/file/d/10iyUPJD-JL9-7tpw4o0aJjCkEi1tyw\\_q0/view?fbclid=I-wAR3HXjradpm0awEdtPQR8rzTGB8125M-fKk0s906HC-z1t6JsgvTqvnESwDU](https://drive.google.com/file/d/10iyUPJD-JL9-7tpw4o0aJjCkEi1tyw_q0/view?fbclid=I-wAR3HXjradpm0awEdtPQR8rzTGB8125M-fKk0s906HC-z1t6JsgvTqvnESwDU)

# CHILDREN AS EXPLORERS IN A SOUND ADVENTURE

## Listening in the context of music and sound pedagogy

Investigating listening as a creative act, as a research field within the B-AIR project, opened the question of observing and experimenting with the ideas that derive from music pedagogy and sound pedagogy. This chapter hence presents projects that included dynamic interplay between elements from both pedagogies, with an aim to propose activities for further projects related to the radio plays and children, and establishing dialogue between disciplines. Since music is the only 'compulsory' activity within the formal learning context where listening can be 'learned' in a way, and since the researchers in the pedagogy and professional development team of the B-AIR project came mainly from the field of music education in Europe, for the purposes of this chapter it is valuable to delineate the intermediary space for listening that meets both music and sound pedagogy.

Music pedagogy in many ways embraced the usage of radiophony for its purposes, mainly related to becoming accessible to a wider audience. For example, Orff Schulwerk used radiophony as an important tool. As after World War II almost all evidence of Orff's and Gunild Keetman's creative work in *Guntherschule* were destroyed, it was the radio that gave the opportunity for a fresh start. Orff and Keetman were invited to prepare radio

broadcasts for children with children. This meant an extension for the Orff approach, because in this way, all the music materials were accessible publicly, so children and teachers could copy the music and develop it further in a creative way (Beegle & Bond, 2016).

Similarly, one of the main ideas of the B-AIR project was to establish fresh grounds for radiophonic art for babies, toddlers and vulnerable groups. Today, however, such a task is a special challenge. In our time, compared to when Orff lived and worked, the radio as a medium has a completely different position in the society which is oriented mainly on visuality. From this reason, the questions of listening and educating audiences to listen became one of the crucial points in the project.

Creating radio materials, music compositions, sound artworks within the project, showed that there is a variety of different approaches to listening and educating audiences, depending on forms of art and socio-spatial situations. In this chapter my aim is to juxtapose various approaches to listening that I managed to test during the B-AIR project within the programs of RadioTeatar Bajsić & Friends and Radio Television Slovenia.

### New approaches in music and sound education

At the moment when the B-AIR project started, the most of the pedagogical knowledge about active listening we could rely on in the post-Yugoslavia region came from music education, which is still highly connected to the Western classical music in the European context. Listening is one of the main areas that are taught in the classrooms, as well as in the non-formal contexts of learning, such as the programs for babies and toddlers and the programs designed for elderly people. What is characteristic for both music learning contexts is having the existing music that is used for the listening purposes and for the active music-making. In the formal contexts of music education, the approach to active listening has so far been mainly analytical. However, the contemporary research that arises from the formal contexts of music learning in Croatia is related to the cognitive-emotional approach to listening (Vidulin, Plavšić & Žauhar, 2020; Vidulin, 2023), as a student-centred approach that combines multimodality and interdisciplinarity in its idea to engage the listener both in cognitive and in emotional way, in order to enrich their listening experience and shape their cultural and artistic viewpoint.

The concept applied in the classroom is to listen to the selected music piece several times, but each time with a different goal. The first listening aims for capturing ‘first impressions’ and it is purely emotional. No task is given to students, but the aim is to engage them emotionally, so that they can discuss music using their own words. The second (central) listening is cognitive, and it comes with the previously given tasks for listening, with carefully crafted questions that correspond to the students’ educational level and musical knowledge. The last listening is cognitive-emotional, and it takes into consideration both of previous activities, with questions that foster both cognitive and emotional listening experiences.

What can be noticed is that the definition of listening within the actual music education standard is always related to music. But, what if we think about listening more broadly, in a non-musical way? Recharte (2019) in his paper “De-centering Music: A ‘sound education’” questions the role of ‘Music’ in music education and proposes an alternative focus on sound, that would blur the boundaries between music and noise (that can often be heard in music education). He suggests reframing ‘music education’ into ‘sound education’ and puts listening and sound-making into focus. Traditionally, in music education, listening is always taught as a *musical* practice, related to enabling aesthetic experience of a musical piece, or a cognitive process in interaction with the musical piece.

Non-musical listening is a deeply human and social practice. Thus, it is all about participation, interaction, and reflection, and this is where the knowledge (cognition) comes from. Through making relations with the world around us, it allows us to listen from the condition that is more open. Listening to sounds is a non-discriminatory practice,

so it is important to provide the ‘classroom’ spaces that can open the floor for different ways of engaging with the sound: (1) inclusion of sounds that are important to the listener from their everyday lives; (2) exploring them; (3) analysing them; and (4) creatively manipulating them. There is a growing discussion coming from the field of acoustemology that draws on works of Raymond Murray Schafer, and the whole pedagogical approach to listening in the sonic arts termed ‘sound pedagogy’ (Tinkle, 2015). Keylin (2023, p. 13) defines sound art as “a category encompassing any sound-based artworks that happen outside of musical institutions and do not conform to the traditional musical presentation formats such as concert performance or recording”. In this definition he includes “experimental sonic practices of participatory culture in the continuum of sound art”.

### Listening as a multimodal experience of imagination and creation

In the B-AIR project children were engaged with sound through active participation on many different levels, in various formats featuring examples of a continuum between music and sound pedagogy. As a researcher, I explored listening as a multimodal experience of imagination and creation using different modalities such as storytelling, active music-making, movement/gestures, dramatization, games, drawing and creation (about the works “Earlet the Gnome and the Mysterious Doors” and “The Tree that Sang” and “Wars of the Worlds”, see in this Chapter). What could be noticed in different contexts is that, even though they often have no focus and concentration to listen immediately, children get interested into the process of deep multiple listening when we engage them to create something (see example of the riddle-making in the section “Earlet the Gnome and the Mys-

terious Doors” and sound editing in Chapter VI, “The Whisper of Memories: Tuning in the Sounds of Valley”).

Other examples of multimodal listening in different contexts will be shown through the three vignettes from project activities.

### VIGNETTE 1: “Musical Kitchen” (Listening as a joint family activity)

As a researcher I explored the possibility of an interconnection between sound art mediation and music mediation, through developing the family workshop based on the listening of the radioplay for babies “Musical Kitchen” (translated material from RTV SLO). I performed a workshop in 2023 in Radio Vočarska and the “Books in the Treetops” festival. In all 4 performances/workshops I included professionals as ‘critical friends’ in an a/r/tographic research of a mediation format. ‘Critical friends’ involved were professional radio directors, a dancer, and two musicians. The idea was to treat a radiophonic play as a musical composition, since I hadn’t any possibilities to manipulate the recorded materials. This is why I decided to use ‘traditional’ activities applied in the regular music education workshops for babies and parents (e.g. sing-along song, nursery rhyme, body percussion, small instruments), and disrupt the structure by the sound pedagogy exercises, in order to investigate children’s involvement into the deep listening group process. Conclusion of the research was that some of the techniques for music education definitely work as the preparation stage before listening, but the listening of the piece itself requires different approach. There should be carefully organised space and technological ILI TECHNICAL aspect, and a facilitator to control the tape in terms of



deciding which parts of the composition could last longer/shorter, following the energy of the group, as well as which parts could be facilitated with a certain activity or left as a free play.

Introduction to the workshop had three short parts:

- 1) A song “Hi, hello, bonjour” with names (getting to know each other, playing ukulele)
- 2) A workout – legs, hands-fingers, ears, tongue (slurping)
- 3) Nursery rhyme and finger-game “Granny peels a carrot”

After the preparation part, I tested the radiophonic play (treated as a musical composition). This is the final version after edits and changes done during the workshop, in consultations with ‘critical friends’:



“Musical Kitchen” at the Radio Voćarska Festival of Radio Drama and Radio Theatre for Babies and Children, RadioTeatar, Zagreb, Croatia. Photo by Mia Cvitković

Part/text	Pedagogical intervention/mediation	Props
1. Introductory jingle	Straw in the glass of water (blowing)	straw and the glass of water
2. “Cold, curvy, smooth, shiny”	<i>Glockenspiel</i> – playing the accompaniment	glockenspiel
3. “Spoon! (one, another...)”	Each child and parent gets a plastic spoon; the mediator vocally imitates sounds of an actor from the recorded composition	plastic spoons
4. <i>Nursery rhyme</i> “Whoosh, whoosh, the little spoon gets in the soup. Whoosh, whoosh, the little spoon swims in the soup.”	tutti – rhythmical dancing with spoons in the air (hands up)  (in the end the mediator throws the spoon in the middle circle inviting the children to come closer)	plastic spoons
5. “The soup is fiery, flaming, burning, fiery, fiery, flaming, burning, writhing, pinching, tickling, stinging.”  “Warm soup, tasty soup, good soup, healthy soup...”	We blow together in the soup (circle in the middle), then we mix it and continue to curiously approach the space and props. It’s time for a free play.	all props in the space
6. <i>Song</i> :  “Five crumbs are swimming in the soup, Eeny, meeny, miny, moe.”  “A fork?”	We stand on our feet and dance. If there are toddlers, parents and mediators use the scarf like a parachute – children dance under it. If there are smaller babies in the group, each parent dances with their baby in hands.	big scarf
7. “Under-the-table. Next-to-the-table. At-the-table.”	Adults are ‘standing/sitting’ on the knees. We are imitating (by changing the body position) the prepositions from the text (under, at, below, etc.).	-
8. “And now — give me a bite! A piece of banana — yum, yum, yum! Some soup — yum, yum, yum! A piece of cake — yum, yum, yum! A piece of ... a sock — Eeeeeuuuwww!”	Listening – mediator using gestures and mimic, as well as facial expressions as reactions to the text.  (if children still hold spoons in their hands, we imitate the feeding each other – spoons like small airplanes)	-
9. “And — splash into the sink!”	We are tidying up the dishes in the circle in the middle. During the final jingle, the mediator is blowing bubbles from the soap as a multisensory simulation of washing the dishes.	soap and balloon maker

Table 1. The mediation example of the “Musical Kitchen”

## VIGNETTE 2: Listening in a group activity of soundpainting

Another example of engaging children in deep listening of sounds and each other through improvisation and creation was introduced by the soundpainting, a “universal multidisciplinary live composing sign language for musicians, actors, dancers, and visual Artists”<sup>1</sup> invented by Walter Thompson. Within the RadioTeatar Bajsić & Friends soundpainting activities for vulnerable groups were performed by musicians and music

pedagogues Lucija Stanojević and Tena Novak Vincek, in 2 cycles:

- 1) March-April 2023 – a series of Impro Lab workshops in the Culture and Youth Centre Ribnjak offered for the pupils who already attend specialised music schools, with the mission to offer them new tools in improvisation, graphic notation and composition, that can't be found in the official school curricula which are focused only on the Western Classical Music.



Graphic notation made by children.  
Photo by RadioTeatar

- 2) 30.11 - 1.12.2023 – a two-day workshop in Music Improvisation and Soundpainting Method was held in the Elementary School “Grigor Vitez” in Zagreb. It was offered to the mixed class with a small group of children with special needs.

The research included two phases of work: 1. process observations through retrospective audio and video analysis; 2. a narrative analysis of a professional learning journey through a focus-group with facilitators using arts-based and game-based research. As in both situations the soundpainting was done with the vulnerable groups, one of the goals was to compare the work in both contexts. In both groups children learned basic soundpainting signs, explored graphic notation, and composed their own motives through different games. Workshops ended with the small concerts of composed works.

Some conclusions from the research:

- 1) The offered practice of active engagement with sounds is very liberating both for children from music schools and for children from general schools, with and without special needs;
- 2) “More *listening* to music, and not more playing music.” In both groups, the fact that the children played instruments was less important. More important was to develop the process of *deep and concentrated active listening*. Even though children from music schools already played the instrument, the process of deep listening, presence and listening to each other was more important than anything else;

<sup>1</sup> Soundpainting <http://www.soundpainting.com/soundpainting/>



- 3) *Listening to the environment* is crucial (playing with silence and noise) – including sound pedagogy in the school contexts;
- 4) *Continuity* of soundpainting, composition and improvisation workshops is needed in both contexts;
- 5) Commitment and efforts of music schools to involve children in improvisation, composition and soundpainting is very poor;
- 6) There is a need for collaborative professionalism of sound facilitators in schools: visiting artists, school pedagogues (especially in the context of children with special needs) and teachers and directors in music schools.

### VIGNETTE 3: Listening as ‘sounding’ the visual / written story of the community

As a researcher I investigated the intersection between music mediation and sound art mediation within the festival context. In August 2022 and 2023, I created an education program of the KULTRA Music Festival in Makarska, Croatia, implementing activities for audiences of different age groups.

For the purposes of investigating topics related to the B-AIR program “Our songs, our dreams”, I created and implemented/performed 3 types of activities with the main aim to inspire local people and tourists to listen to the music and sounds in the community:

- 1) **Pub choir “Song to Go”** (in both festival editions – 2022 and 2023): the idea is to gather local audience and tourists around the wooden table in Konoba Kalalarga to sing traditional songs,

listen to the stories, and thus announce the festival week. Singing in harmonies around the food table with a glass of wine can be found in many cultures in the world, and it is especially characteristic for Dalmatia as ‘klapa’ singing, which is more and more dislocated from the traditional practice and implemented as the popular music genre. Through this activity we wanted to revive the old contexts of group singing (for locals) and introduce it to the tourists. In 2022 we sang traditional Spanish bakers’ song “Las Panaderas” (with body percussion) and in 2023 we sang traditional Macedonian song “Sedna baba”. In both editions, locals and tourists brought their own songs to us, too, so we were listening to each other stories and sounds of our music and languages. In the second edition many locals who participated in the first edition (a year before) showed up. In conversations with them, they expressed the idea to have more of this kind of community encounters during the whole year.

- 2) **Soundstory:** In 2022 I facilitated a small group of children whose task was to give sounds to a traditional legend from their city. The collaboration was done with the local librarian who, for this special purpose, adjusted the text of the local legend about the slipper of the bishop Nikola Bijanković. Children were exploring the city through the story, practicing listening through the exercises from the sound pedagogy, and searching for the sounds in colours and cityscape recording. After 4 days of workshop the soundstory was performed in the local church for the blindfolded audience.

The workshop was documented by the local teacher Lara Kuluz who made an animated video:



- 3) **Soundwalk:** In the 2023 edition of the KULTRA Festival, I co-created a soundwalk with children and local painters. The idea was to investigate possible connections and intersections between music mediation and sound mediation, as well as visual arts. The KULTRA Music Festival combines exhibitions and concerts, and in that year one of the main musical pieces performed was “Pictures at the Exhibition” by Modest Petrovič Musorgski. The piece was performed by the pianist Ivan Horvatić who carefully crafted the full-evening musical repertoire in collaboration with the researcher, using some modern musical pieces, too. Before the festival, there was an open call for local painters to contribute to the exhibition by painting the piece with the topic “Promenades of Makarska”. The idea was to put paintings at the exhibition on the day of the concert and sell the pictures with the humanitarian purpose and donate the collected funds to the local NGO Sun (*Sunce*) for children and people with special needs. The children aged 6-12 had a workshop within the festival, with a task to create a soundstory based on the donated paintings. They recorded the sounds, and we gathered all materials together in a soundwalk, so that visitors could make a real ‘promenade’ at the exhibition, curated by children’s voices. What was especially interesting in the performance was how the children treated silence in the soundwalk, which was equally important to them as all the sounds they decided to map in their explorations of their city and its painters’ works.

All materials can be found on IG and FB pages of the KULtra festival of music: @kultrafestival



Children creating a soundscape in the room full of paintings, as a curated soundwalk for the exhibition at the KULTRA Music Festival. Photo by Ana Čorić

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**Pavlica Bajsić Brazzoduro**  
Artistic director  
RadioTeatar, Zagreb, Croatia

## ECO HOOLIGAN AND PETRICA PUH

“Eco Hooligan and Petrica Puh” is a detective-science children’s humoristic radiophonic serial. The main plot deals with the problem of communal waste in the modern city of Zagreb and is located in the main green oasis in our city – parks Maksimir and Ribnjak, lakes Jarun and Budek. The main characters are a girl Petrica Puh, who is a brave eco-activist, and a boy Eco Hooligan who is a nervous gaming addict and an anti-ecologist. All characters were inspired by old Slavic mythologies, but completely transferred to the contemporary urban world, keeping some elements of the fables.

The podcast had its premiere at a temporary neighborhood radio program Radio Voćarska in 2023. All episodes are distributed through online platforms.

Behind this project stands an intergenerational team: author of the text is Pavlica Bajsić Brazzoduro and the director is a retired radiodrama drama director Biserka Vučković, with complete sound design and music support by Dino Brazzoduro. Also, the script was developed in close collaboration with children. The actors include children Zvonka and Pavle Brazzoduro, Natan Medvešek, with still active professionals like Jelena Miholjević, Sven Medvešek, Iva Vučković, Vid Čosić and their retired colleagues Lela Margitić and Boris Miholjević.



Radio Voćarska Festival of Radio Drama and Radio Theatre for Babies and Children, RadioTeatar, Zagreb, Croatia. Photo by Mia Cvitković



## EARLET THE GNOME AND THE MYSTERIOUS DOORS

“Earlet the Gnome and the Mysterious Doors” (*Patuljak Sluško i tajna vrata*) is a radio play for babies, toddlers, and preschool children, a project that encourages their development through concentrated listening. It is a series of short radio games each thematising a specific sound from the environment and naming it.

### Credits:

#### Director and author:

Biserka Vučković

#### Sound design:

Dino Brazzoduro

#### Actors:

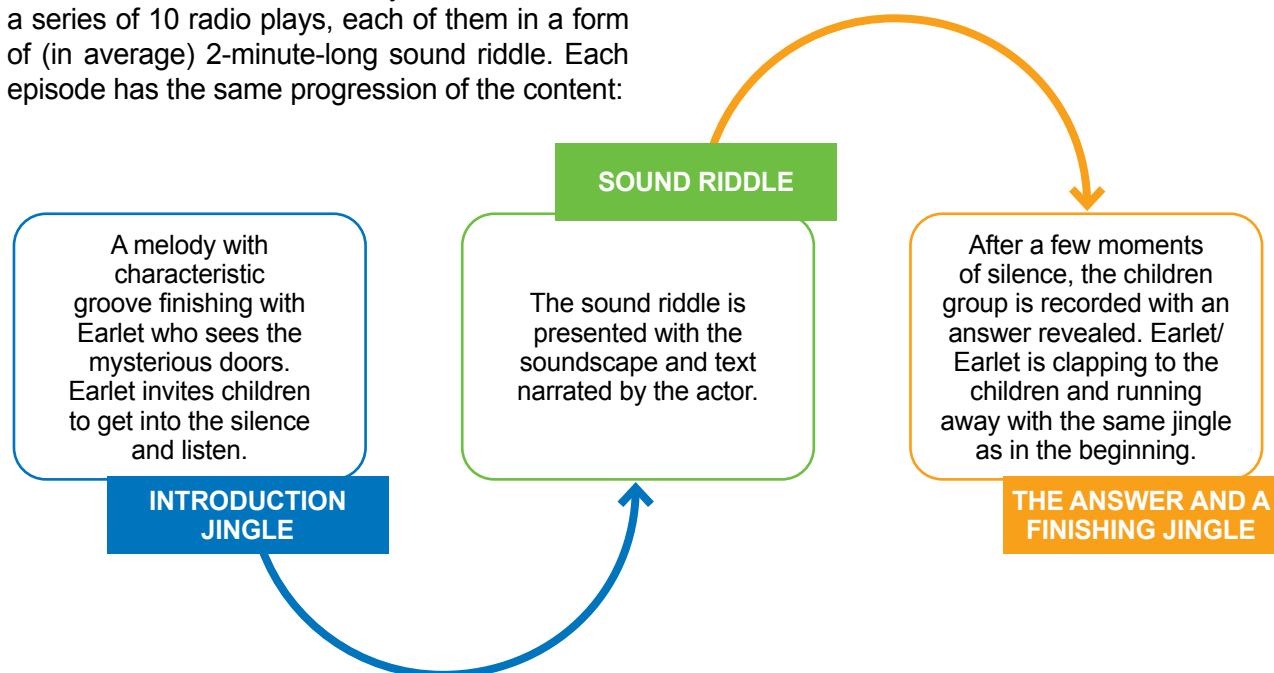
Dunja Fajdić and Mladen Vasary

To listen to full tracks:



Earlet in the kindergarten.  
Photo by Mia Cvitković

“Earlet the Gnome and the Mysterious Doors” is a series of 10 radio plays, each of them in a form of (in average) 2-minute-long sound riddle. Each episode has the same progression of the content:



Graphic 1. Progression of each episode

Riddles have the following solutions: 1. cow; 2. owl; 3. frogs; 4. rain; 5. blackbird; 6. creek/brook; 7. wind; 8. violin; 9. sea; 10. cuckoo.

In 2023 RadioTeatar Bajsić and Friends started the evaluation process of the 10 episodes, using a/r/tography as a special form of arts-based action research to test possibilities of listening process development with children in kindergarten and first grades of the elementary school. In this chapter, we are going to present practical outcomes of the research (storytelling, listening exercises, children creating riddles).

In March and April 2023 we have entered two kindergartens in Zagreb area (DV Košnica, Gajnice

and DV Trnoružica) to test radio plays. For the purpose of making listening a joint process, with an aim to listen to as many episodes as possible, we have created a story which gathers all episodes through collective engagement of children as ‘detectives’ who are looking for the gnome Earlet (*Sluško*) who is hiding somewhere and sending us the ‘voice messages’ (which are actually the radio plays). During the process of storytelling children guess where Earlet might be and the story stays open with Violin as the last episode because it is our aim at the end to invite and motivate children to visit the places where they can listen to the music, such as concerts and music schools. Here is the final version of the story after testing it five times with children aged 4 to 7 in kindergartens and in the hospital:

*Hi everyone!*

*I’m Ana, and this is Katarina! We used to be dwarfs and gnomes, but now we’ve somehow grown a little, so all that’s left is a pointed dwarf cap on our heads! And this is our friend Pero the Silence (showing the hand up in the air)! You know, Pero is a special guy (I am addressing him). As you can see, he doesn’t actually talk, he doesn’t shout, he doesn’t even whisper! He can’t be seen or heard, and he only appears when it’s too loud in his space! Then he curls up like a swan in the air like this, and everyone who sees him should greet him with the same greeting (hand up) and silence. Let’s try it now! You talk, and when Pero comes, we all raise our hands in the air and greet him in total silence! (rehearsal) But that’s not all! Each of us carries one of our own Pero, maybe someone’s name is also Tihomir or Tihana. And that’s why, if at some point in our story it’s too loud for you here in the room, feel free to put up your Pero, and we’ll greet him as soon as we see him, okay?*

*We’ll tell you a little secret – another friend of ours came to the kindergarten with us today – Earlet the Gnome! Or, rather, Earlet the Mischievous (*Sluško Neposluško* – wordplay: *Neposluško* – a disobedient, naughty child)! (We describe how he looks like) You know, he likes to make fun of others! Today, on our way to the kindergarten, he ran away from us and we can’t find him! To make things better, he keeps leaving us some clues. But these are not ordinary traces in the ground or in the snow – Earlet leaves us sounds as clues! He sends them to us in a voice message and runs away! And we can’t figure out where he is by the sounds alone!*

*Can you help us find Earlet? (yeah!)*



For that you'll need hands to begin with (so I can see hands!), then ears (massaging the ears and popping to make sure we're hearing well). Let's use our ears to discover where to look for our Earlet the Mischievous! Are you ready for our first clues?

**Riddles (animals first – from known to unknown):** 1. owl 2. frogs 3. cow 4. blackbird 5. cuckoo.

Nursery rhyme (also the riddle) as interlude which goes where/when necessary to change the energy in the room and activate children's listening and attention via active music making (and using different hand and fingers movement in each repetition, to get the silence in the end):

*HEDGEHOG (by Sandra Markoč)<sup>1</sup>*

Šumom šumi, šumom šuška

*Crossing forest forth and back*

mala, crna, topla njuška.

*There's a muzzle small and black*

Na leđima igle broji

*Counting needles on his back*

nikoga se on ne boji.

*He fears no one on his track*

**Riddles (water/environment):** 6. stream 7. sea 8. rain 9. wind.

...and just when we wanted to leave, I noticed another sound on the way/in the bag!

## 10. violin

And that's how we got to the end – and we didn't manage to catch Earlet! Where were we today, what sounds did we hear? Who knows, maybe Earlet didn't hide in the forest at all, but somewhere else! And that's why – keep your ears open, you might meet our Earlet somewhere in a garden (as a garden gnome), you might find him in your room or living room, and maybe he's swimming in the sea! Or maybe he's at a concert? Who knows! You never know with our Earlet the Mischievous! In any case, take your Pero the Silence with you and go on a quest! And be sure to let us know how you got on and what sounds you caught along the way!

*Oh, we need to go now! Hurry! (Žurimo, jurimo!)*

What we noticed during testing the story with the children is that it is enough to wear only a small cap (the best is to take a 'happy birthday' paper cap), a mobile phone and a portable speaker to the performance. The rest happens in children's imagination. During our performances, children usually have a lot of ideas about the ways and places where we can find Earlet. One of the groups even made spontaneously a small performance of the song they learned in the kindergarten, as an invitation to Earlet to come back to us.

At the end of the storytelling we invited children to draw what they remembered the most from the story. What we noticed is that, from all episodes, what they liked the most were animals, especially an owl. They often drew a hedgehog, which means that the active music making was crucial for the whole process.



A drawing from the kindergarten, showing the hedgehog (with the gnome) as the most remembered Earlet's riddle. Photo by Ana Čorić



A drawing from the kindergarten, showing that the child remembered almost all of the radio plays (the child asked to take the drawing home so she could finish all the riddles). Photo by Ana Čorić

<sup>1</sup> Translated into English by Sunčica Milosavljević



In general, what we noticed during the development of the story together with children is that it is good to use a lot of gestures, especially in listening to the introduction jingle before every episode. Many children spontaneously started to dance and repeat the phrase “Ooo, neka vrata?” (Ooo, some doors?), but for some of them listening to the same introduction several times affected their attention and concentration, so we decided to insert gestures with each new round of listening. Also, in many episodes we simply cut the last jingle because it wasn't necessary to listen to it every time. However, the introductory jingle was usually used as a preparation for the listening of the riddle itself.

In October, November and December 2023 we decided to explore how we can use Earlet sound riddles to invite children to even deeper listening. With the motto ‘Children create riddles for children’, we entered two elementary schools (Elementary School “Ivan Goran Kovačić” and Elementary School of Polyclinic SUVAG) and tried out the story with children, with the idea to use the beginning and the ending jingle of the original Earlet radio plays, and create their own riddles in-between.

In the first grade of Elementary School of Polyclinic SUVAG we used the idea of guessing the secret code number to open the mysterious doors:

## 1. GUESS THE NUMBER, OPEN THE MYSTERIOUS DOORS:

The back side of the upright piano (*piano*) served us as the Earlet's mysterious doors. In the front side (where the piano keys are) we put 5 small instruments (kalimba, music box with Happy Birthday song, shaker egg, bells, claves). We gave the number to each

instrument (1-5). First, children need to remember the sound of each instrument and its number. Then we make a riddle: we play instruments in some particular order and children need to guess the number. If 5 sounds in a row are too much at first, we start with 3 sounds. When the children learn the game, they become facilitators. Each child who is entering the role of the facilitator is putting Earlet's hat on their head and then giving it to another child when finishing their turn.

With 7-year-old children we also used the listening and imagining game with drawing to create their own riddles:

## 2. WHAT WOULD YOU LIKE TO SEE/HEAR BEHIND THE MYSTERIOUS DOORS?

The facilitator gives a piece of paper and crayons to the children, with an instruction: How do you imagine that Earlet looks like? Could you draw Earlet and the mysterious doors? After drawing Earlet, on the flipside of the paper children draw their own riddle. What would each of them want to find behind the doors? This is a wonderful opportunity to talk with children while they are drawing, to see their process of thinking and imagining, as well as to make a transition to the creation of their own riddle. For example, the facilitator can ask: which sounds would you use in your sound riddle?

**Note:** Before starting the drawing exercise it would be good to mention to the children not to use the ideas that are already recorded

in the 10 episodes of Earlet, because in this task they usually have the tendency to repeat something they have already heard.

With 9-year-olds in the 3rd grade of Elementary School “Ivan Goran Kovačić” we used two radio plays only to illustrate what we plan to do with children – without the whole story about Earlet. We had a 4-day workshop with children, with two school hours per day for making riddles. We chose personal names and names of the famous people who changed the world as the main content. The progression of exercises looked like this:

### Day 1. Introducing name games and the microphone (from the sound pedagogy).

Children were writing riddles about their personal names. Each child gets the text about the famous person with the same or similar name as theirs. The final task was a creative reading task: children read the text and extracted 5 interesting and important facts about the person (e.g. Nikola Tesla, Vesna Parun, Louis Braille, Marija Jurić Zagorka, etc.).

Content was chosen and taken from the literature that is written especially for children:

- Brooks, B. (2018). *Priče za dječake koji se usuđuju biti drugačiji: istinite priče o iznimnim dječacima koji su promijenili svijet a da pritom nisu ubijali zmajeve*. Znanje.

- Favilli, E., & Cavallo, F. (2016). *Priče za laku noć za mlade buntovnice: 100 pripovijedaka o izuzetnim ženama*. Znanje.
- Favilli, E., & Cavallo, F. (2017). *Priče za laku noć za mlade buntovnice 2*. Znanje.
- Favilli, E. (2020). *Priče za laku noć za mlade buntovnice: 100 žena koje su emigrirale i promijenile svijet*. Znanje.
- Kugli, R. (2020). *Ikone: neustrašive žene koje su promijenile Hrvatsku*. Iris Illyrica.
- Piumini, R., & Paganelli, E. (2020). *Moji prijatelji, književni junaci*. Profil.
- Zalar, D., & Velički, V. (2021). *Mark je pisao Ani: studije o piscima i djelima u svjetlu poticanja čitanja*. Učiteljski fakultet Sveučilišta u Zagrebu.

**Day 2. Individualised work with every child on writing their riddles.** We try to make rhymes and we talk about the sounds that we could put in a soundscape. What we noticed here was that imagining the sounds wasn't an easy task for children. In the beginning it was easier for them to verbalize the story or to take a look at the face of the selected famous person and think about visual elements. With the little help and explanation of a facilitator, most of the children spontaneously started adding existing and non-existing sounds (such as driving the imagined vehicle in the space), as well as constructing dialogues and stories that could be included in the soundscape.

### Day 3. Finalizing riddles.

### Day 4. Children recording the voiceover.

All of the recorded sound riddles and materials are planned to be produced and put in the Soundcloud channel of RadioTeatar, and thus offered to all children and teachers to use. Since the research was conducted from March to December 2023, the complete research results are planned to be published and presented in 2024, in a peer-reviewed journal article and in symposia, and the same is planned for the practical outcomes intended for kindergarten and school teachers.

# EARLET THE GNOME AND THE MYSTERIOUS DOORS

## Riddles

### 1. epizoda: TKO TO SLUŠA SVOG PASTIRA?

Tko to sluša svog pastira kako divno frulicu svira?  
Pogodite!  
Ona nam svakog jutra daruje puno mlijeka,  
a za nagradu je čeka livada i fina travica!  
Ja znam tko je to, a vi?

**Djeca:** Kravica

### Episode 1: WHO LISTENS TO THEIR SHEPHERD?

#### **Earlet the Gnome:**

*Who's this creature big and cute  
Listening to shepherd's flute?*

*Guess!*

*Every morning gives us milk,  
Grazes grass, soft as silk.*

*Who's that creature – I can tell;  
Can you guess it just as well?*

*Tell me now!  
It's a...*

**Children:**  
*Cow!*

### 2. epizoda: HU-HUUU

Hu Huu! Hu HUUU! Hu HUUU!  
Noć je i spavaju svi  
u toj našoj šumici.  
Ali ja ne! Ne, ne! Hu, huuu!  
Znate li, djeco, tko sam ja?  
Hu huuu! Pogodite!

**Djeca:** Sova!

### Episode 2: HOO-HOO

#### **Earlet the Gnome:**

*Hoo-hoo! Hoo-hoo! Hoo-hoo!  
It is night time all around  
The whole forest's sleeping sound.*

*But not me! Hoo-hooo! No, no!  
Who am I – does someone know?*

*In the night – Hoo-hoo! – I prowl  
And they call me... Guess!...*

**Children:**  
*An owl!*

### 3. epizoda: KRE KRE!

Krekre krekre krekre kre  
hi hi hi hi hi hi hi!  
Pogodite tko smo mi.  
Krekre krekre he he he!  
Mi smo male.....

**Djeca:** Žabice!

### Episode 3: RIBBIT, RIBBIT!

#### **Earlet the Gnome:**

*Ribbit, ribbit, ribbit, ribbit  
hee hee hee hee hee hee heeee!  
Can you guess: who are we?  
We're not dogs, we're not hogs  
Ribbit, ribbit! We are...*

**Children:**  
*Frogs!*



#### 4. epizoda: TO ŠTO PADA S NEBA

To što pada s neba  
pa nam kišobran treba.  
To što smoči sve  
pa čak i malenoga miša.  
To što slušamo sada,  
to se zove....

**Djeca:** Kiša!

#### Episode 4: THAT WHICH FALLS FROM THE SKY

##### **Earlet the Gnome:**

*When it's falling from the sky  
Get umbrella, don't be shy!*

*If you don't, you'll get wet:  
Like a mouse or a rat.*

*When in Spain, it stays in plain;  
Pitter-patter, it's called....*

##### **Children:**

*Rain!'*



“The Tree that Sang” workshop. Photo by Mia Cvitković

1 Translated into English by Jelena Stojanović and Sunčica Milosavljević

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**WELCOME  
OF THE WORLD**



## CREATING ART FOR YOUNG AUDIENCES IN SYNERGY OF PEDAGOGUES AND ARTISTS

In the complexity of the project B-AIR, the Artists' Association BAZAART explored and promoted the pedagogical power of art in the development of the child.

At the core of the concept lies the cooperation of pedagogues and artists in the creation of artistic content intended for the audiences of early age.

Our aim is to strengthen the role of art in the upbringing and education of young generations, and at the same time support cultural professionals for inter-sectorial cooperation.

Through the lasting program "Welcome of the World" (continuing also beyond the B-AIR project), we encourage the child between the ages of 3 and 5 to develop an open, active, exploratory outlook on the world and on life.

With artworks and various creative formats spanning across disciplines and expressions, we foster the dispositions of the child to learn *about* the world – *in* the world: curiosity, courage, persistence, creativity, critical thinking and sensitivity to other/s (empathy and sociability).

On our way of discovering the world, we are guided by two powers innate to every child – imagination and play. With the help of imagination, the child creates a world of fiction, just as real as the physical world – a world of possibilities, secrets and discoveries, miraculous experiences and unusual paths. We build this world from artistic meanings, by playing a game of life.

Many artists, art pedagogues, pedagogues and other experts partook in numerous art productions and creative activities over three years of the program development. Hereby we thank them all for joining us.

Special thanks to the Little Theatre "Duško Radović" who co-produced the theatre show "WOW!"; the Cultural Centre "Parobrod" who partnered us in the annual Conferences; to all project partners who enlarged our knowledge and expanded our visions; and last but not least, to the Ministry of Culture of the Republic of Serbia who co-financed the program.

### The team of artists and pedagogues engaged in the development of the concept:

#### Concept author and artistic director:

Sunčica Milosavljević

#### Pedagogue:

Nevena Mitranić

#### Preschool teacher:

Marija Jovanović

#### Dramaturge:

Bogdan Španjević

#### Composer:

Irena Popović

#### Music pedagogue:

Ana Čorić

#### Drama and dance pedagogue:

Nataša Milojević

#### Artistic coordinator:

Jelena Stojanović





Teachers and artists in the Symposium about Arts Education, BAZAART's annual Conference 2021  
Photo by Lidija Antonović



## WELCOME OF THE WORLD

The central activity line that the Artists' Association BAZAART pursued in the project B-AIR was the complex and durational multidisciplinary program "Welcome of the World".

The main program goal was to promote the contemporary concept of pedagogically relevant creativity for children, based on close cooperation of artists and experts in child upbringing and development. In this program we addressed children of 3 to 5 years of age, but the principles on which the program is based are more than relevant for all artistic and cultural endeavours wishing to engage children across age groups.

The master methodological approach, and in the given circumstances also an experiment, was a research-to-create approach: developing artistic creation from pedagogical objectives. In contrast to how art for children is usually produced, and not only in Serbia (with no or little consultancy with experts in child development), we decided to actually start with the educational objectives set by the pedagogical team and develop artworks with those objectives in mind.

Another methodological and research principle of experimental nature, enabled by the 3-year project duration, was the process-based multidisciplinary in artistic creation. From its beginning to the end, the program crossed through several scientific and artis-

tic disciplines, in the spiral trajectory where the results from the previous phase were taken as a departure point for the next phase: from pedagogical guidelines to creative writing, and further to composing music and its creative exploration with children in the media of dance, drama and visual arts, to theatre creativity and radio playwriting with stage presentations. During the process, the knowledge and experiences coming from diverse perspectives have accumulated in artworks and added to their complexity with layers of different, yet complementary codes and meanings.

The artworks which emerged from this process were numerous, diverse in expression and rich in various authorial handwriting; what was a common denominator for all of them – from bedtime stories that an adult can read with a young child in home settings, to the staged radio play and the theatre performance requiring specialized production technology – was the pedagogical relevance embedded both in the concept and the artistic expression. From that point of view, the program to which we gave a pet-name „WOW!“ turned out successful. The support of scientific consultants proved essential in providing pedagogical value to literary, musical and performative artworks and the program as a whole promoted a holistic model of artistic creation for children.

Huge learning came out of this process. For some of it we can be thankful to always precious mis-

takes. Most of those we made have to do with managing a difference between two very different cultural paradigms which define the role of arts and culture in upbringing of young generations and hence in the society. The first can be described as static, based on the concepts of instruction and enculturation as main tasks of cultural practices and art productions that the 'educated' adults prepare for the young. The second can be regarded as dynamic, promoting concepts of co-learning and co-creation of culture by artists and children together, in an interactive and open creative process. Striving to negotiate between the two paradigms and to promote the dynamic approach, especially in the existing context, wasn't easy, and at times not even possible. However, every step taken on this path is valuable, as it brings us, and also our social and cultural milieu, closer to understanding the new ways and new social significance of art for children.

### Looking back

The program concept was designed by the artistic director Sunčica Milosavljević who named it "Welcome of the World" or simply „WOW!“ to capture the project aim of fostering an open, interested and dynamic attitude of a child towards the world, through sound, music and other art wonders.

From the initial idea to many creative works which were produced, the program developed in several phases and disciplines.

The first step was to bring together artists and experts in child upbringing, interested to work as a team on creating art for young audiences. A strategic partnership was made with the Little Theatre “Duško Radović” in Belgrade, with a desire to also include their artists and cultural professionals in the team. At the outset of the working process, the team members were acquainted with scientific knowledge about the role and importance of sound and music as auditory information and stimuli, as well as the ways of art reception and expression by children in early age. This was made possible thanks to the B-AIR partnership resources: the webinars realized at the international level, and the opportunities for exchange of knowledge through lectures and workshops held by experts from different disciplines and countries, organized within the BAZAART’s annual conferences.

The next step was to outline the horizon of pedagogical development that we would strive for. Given the age of the children whom the project wanted to address (3-5 years of age), pedagogue Nevena Mitranić set the development of [learning dispositions](#) – the abilities of a child to engage in learning processes – as the pedagogical objective for the entire process of artistic creation that was to follow. Basic learning dispositions: Curiosity, Courage, Persistence, Critical Thinking, Creativity and Sensitivity to others, have determined both the pedagogical and poetic landmarks for the artists who followed with their creativity.

Guided by the meaning and the structure of the learning dispositions, and in close collaboration with the pedagogue and the artistic director, dramaturge

Bogdan Španjević developed a highly poetic [open narrative](#) on the theme “Welcome of the World”. He introduced the character of the Wind who leads the child through various situations – from those which are pleasant and fun, through those which are unexpected, to the ones which are risky and dangerous – inviting them to be curious, brave, persistent, critical, creative and sensitive to others. The story intentionally renounces a diachronic structure and offers space for co-creation to a child, through questions and encouragements to join the Wind in its actions.

This open and interactive narrative was an inspiration for the composer Irena Popović to create a six-movement [music composition](#) titled “Welcome of the World”. Her artistic music for young listeners strives not to illustrate, but to encourage the development of learning dispositions in young children. Irena’s lasting contribution to the process was the interpretation of the child’s journey with the Wind as a metaphor for growing up. In her own creative process, she also included visual expression, whereas her music has a distinct spatial quality inviting the listener to move and explore the space.

This is exactly what followed in creative dance workshops-performances which Nataša Milojević, a dance and drama pedagogue, conducted with children of preschool age. On the basis of the musical story which the children interpreted in their own way, she danced them through a creative journey. In a similar manner, using the music as an inspiration, the visual arts pedagogue Ljubica Mladenović conducted creative drawing and painting workshops with children. Assisted by other art pedagogues and preschool teachers, the workshops reached the program objective of sound and music creating the inner landscapes of children, enriching their imagination, emotionality, inner experiences, and widening their developmental horizons.

Certain backtrack in the progress of the concept occurred at the point of creating a theatre piece. Here, the discrepancy between two very dissimilar paradigms of creating for children – one centred on adult artists and another centred on children audiences – clearly came to the fore. The first is anchored in the category of ‘production’, most usually done in a traditional manner which is still largely practiced in cultural institutions globally; it is centred on the author/s, aspires for artistic achievements, and results mostly in forth-wall productions with children as passive consumers of a finalized artwork. The second favours the category of a ‘process’, strives for cultural and aesthetic learning of children and develops more or less open formats in which children can participate as co-creators of art or cultural actions.

Our program clearly opted for the second approach, with a strong input from the pedagogical team and an open space for artists to experiment with any performative expression supported by the composed music. Sadly, director Miha Golob took another course by following the verbal instead of the musical narrative, loosing the music in the theatre piece entirely; and by rejecting the pedagogical perspective, which resulted in having conventional theatre space and one-way communication with the audience. Instead of inspiring the children to listen attentively to sound and music and participate in theatrical situations, he made a silent show with children as passive audiences. Luckily, because the basic structure of six learning dispositions underpinned the dramaturgy of the play, the meaning relevant for our program was saved in the show, but its principal purpose wasn’t met – creating a context for children to learn by listening actively and engaging holistically in aesthetic experiences.



To mitigate the minor power of the theatre show for attaining the program objectives, pre-show and post-show drama workshops for children audiences were designed by drama pedagogues. The workshops before the show prepare children for experiencing theatre and help them recognise the learning dispositions. The workshops after the show support children to connect those key qualities with their own experiences and inner ways of interpreting and imagining the world. The cycle consisting of the pre-show workshop, the theatre performance and the post-show workshop is monitored and evaluated by the project team and the conclusions are discussed in team meetings.

The metaphor of a journey as a growing-up process was picked up again by the scriptwriter Bogdan Španjević who developed a radio play for young listeners. What was left open in his initial narrative was now defined as a sequence of scenes located in diverse stimulating situations and places that the Wind and a child visit in their quest for the secret of growing-up. During the journey, the little Wind discovers the key qualities that enable a child – also a wind-child – to grow-up. He realises the importance of being curious, courageous, persistent, mindful, creative and open to others. The radio play was written in verse, inviting other artists – director, actor, sound designer – to compose songs, soundscapes and other acoustic elements of the narration. Directed by Sunčica Milosavljević, the music and soundscapes were composed and performed live by the actor and musician Eldar Zupčević and the sound designer and also a musician Siniša Marčeta.

A stage premiere of the radio play in the Festival of sound and music for children and youth “Listen to Play”, marked the official closing of the lengthy and exciting process of the “Welcome of the World”.

### Looking ahead

The artworks and creative formats born within the project continue to travel the world, stimulating active listening, sensitizing young children for sound and music, and supporting their entrance to the World.

The music of Irena Popović “Welcome of the World” traveled to the 18<sup>th</sup> Biennale of Architecture in Venice, as part of “Séance d’écoute” at the pavilion of the Republic of France<sup>1</sup> and made friends in the EBU Ars Acustica Art’s Birthday Party 2024 global radio celebration<sup>2</sup>.

As the central artwork in the process, the music continues to radiate in educational practices for preschool children – both in kindergartens and cultural venues, as an art piece in itself and as inspiration for creative workshops. Other artworks also continue to live: the theatre show “WOW!” is on the repertoire of the Little Theatre “Duško Radović” and the radio play “Welcome of the World” is performed in cultural venues and preschool programs. The story of the child and the Wind, as well as the music and the workshop scenarios, are offered to parents, caregivers and preschool teachers in the websites of the B-AIR project and the BAZAART.

What is most important, the cross-disciplinary team of artists and pedagogues continues to work together towards new processes, within what has grown to become the lasting program of the BAZAART Association: “Welcome of the World”.

1 18<sup>th</sup> Venice Architecture Biennale as part of the French Pavilion. (2023, August 4). *Radio utopia, le bal des sonorités*, 13-1. (see also: Biennale. (2023, August 1). *Radio utopia, le bal des sonorités*, 03-4 [Popović, I. **Welcome of the World: Movements II (Courage) and IV (Critical Thinking)**]) [https://cressound.grenoble.archi.fr/son/2023\\_VENEZIA/RADIO\\_UTOPIA\\_Programme.html](https://cressound.grenoble.archi.fr/son/2023_VENEZIA/RADIO_UTOPIA_Programme.html)

2 EBU Ars Acustica Art’s Birthday Party 2024 global radio celebration (2024, January 7, from 20-24 CET) <https://www.artsbirthday.net/2024/schedule.php>; <https://arsacustica.wordpress.com/2024/01/10/2024-2100-2120-utc-ljubjana/>



Nevena Mitranić and Marija Jovanović giving a lecture about arts in early childhood education, BAZAART's annual Conference 2021  
Photo by Lidija Antonović



# WHAT EXACTLY DO WE DO WHEN WE MAKE THEATRE FOR CHILDREN? Involvement of a pedagogue in artistic creation

In the year 1987, famous French philosopher Gilles Deleuze gave a lecture to the students of film and cinema and asked them (and himself) not-so-popular nor often-asked question:

“What exactly do you – who do film and cinema, do? (...) What exactly do I do when I do, or hope to do, philosophy?” (Deleuze, 1998).

This interesting twist of thought – what *exactly* do we *do* when we do whatever we think we are doing – might be a promising departure point for considering the role of a pedagogue in artistic creation in general, and in the specific process of the “Welcome of the World”. Hence – the question in the title.

And also, if the question in the title is really so powerful as to spin this entire text around, it might as well deserve some further explanations – most importantly: what has a pedagogue to do with the making of theatre for children; or, even better, what is so pedagogical in the (process of making) theatre play?

## Who?

The word ‘pedagogy’ is existent everywhere, but the practice of pedagogy – how we define it – is not something that actually exists everywhere.

In most countries, ‘pedagogy’ is seen as a method – the way of working with children. This might sound like a straightforward answer to both of our questions posed above, but the point of this text is to actually show that the doings of pedagogy are not that simple – nor should they ever be.

The metaphor of ‘the way’ has its etymological background – for the Ancient Greeks, the pedagogue (*pais*, *paidos* – boy; *ago*, *again* – to lead) was the slave who led the children (male children, of course) to the place where education was taking place and who watched their behaviour on the way. For Ancient Romans, the pedagogue was also a slave, but he was educated as well, and his primary task was to teach, and thus metaphorically ‘lead the children’ on the right path. Pedagogues of today have the idea of leading and taking care of children at their core, but the paths have changed, and the ways of being and walking in this world (as well as the goals we are walking towards) have dramatically shifted –

even so that we as adults can not distinguish them anymore.

Let’s face it: we don’t know where the world is going. During our lifetime, we witness the changing of practices, values, ideals and normalities almost as often as we witness the changing of seasons. For our children, this world will be some other world and we’re not sure that, with our own decisions or actions, we can help ourselves cope with it – let alone someone else.

So what could it mean to ‘educate’ today? What could it mean to ‘lead the children on the way’? What does it mean exactly to ‘take care’...? Those are the questions which go far beyond the issues of method, of educational institutions, or of the development of an individual child. Those are the questions which address the entire social context and all the people, environments and practices which create it. Those are the questions of pedagogy as a *science*.

As a science pedagogy deals with the questions of learning and development of children, but principally strives to understand the factors which shape those



processes – complex physical and social relationships in which children are immersed and engaged within different contexts (Vukojević, 2021). A pedagogue can no longer be the one who 'leads' the children, but could be understood as the one who 'seeks the paths'. As such, a pedagogue, as an educational expert, works in different places – in the educational institutions, cultural institutions, media, different organisations, associations and boards whose work directly affects the lives of children and young people. No matter the position, along practical research, a pedagogue is engaged in critical thinking of the conditions for education, as an initiator of a joint endeavour with other social actors and institutions in establishing common values and goals, and towards their transformation (Krnjaja, 2013 & 2014). Pedagogue is a leader of change, a promoter of the rights and well-being of all those involved in educational processes (Pavlović Breneselović, 2013) and a creator of new possibilities of *being and becoming* in different contexts (Miškeljin, 2019).

### Why?

In the contemporary times marked by the unknown and uncertain, existential tensions and shifting values, the idea of education as the acquisition of universal knowledge and fixed pre-established meanings, inevitably falls apart. Contemporary educational theories point towards the understanding of the potential of education to affect the reality (Colebrook, 2017). Education is not seen in the amount of information or skills a person possesses, but in the very ways of *being and becoming* in and with the world, being and becoming 'worldly' (Fink, 1960/2000). Such education is a creative process of inhabiting, listening, marking, performing and creating different modalities of existence, a process of experimenting

with the world and the self in the creation of new values and meanings (Semestky, 2017). Hence the transformation of the context and creation of new paths, previously mentioned as a perspective for education in our times, and the task of pedagogues.

New paths cannot be created upon the already existing perspectives of being, and modes of becoming – on the basis of rationalisation and calculation which lead us to the traps, lostness and detours of our times. New education does not require thorough knowledge, but a specific 'ignorance' – the conscious abandonment of predictable and established solutions and possibilities – as a productive force that drives imagination and creative discovery (Carlin & Wallin, 2014). Instead of the development of cognitive capacities, skills intended for the labour market and adoption of social rules, what is necessary is the education of the *senses* (Semestsky, 2017) through the experiences that enhance our powers to affect and be affected (Massumi, 1995), at the same time moving the boundaries of ourselves and of the field in which we are immersed (Naughton & Cole, 2017).

Therefore, the power of *transformation and creation* represents the backbone of education for our times (Rakić, 1946). However, it is not the power of an individual that should be strengthened, but the power and potential of the entire social field. Thus, what we would call 'pedagogical action' – an act that has a certain intentionality, an active demand for transformation and change – cannot be directed at individual entities – be it children, contents, or work materials, but towards shaping relationships, making it possible to question, illuminate, provoke and create different ways of dealing and being with different human and non-human, material and immaterial 'others' (Ceder, 2020).

Within the domain of individual achievements, we may say that education is directed towards 'learning dispositions'. Those are understood as capacities of a person to affect and be affected in a positive and transformative manner, an aim which can never be fully accomplished, but only continuously realized and supported through different contexts we engage with.

The potentials of art in the educational process lie in the awakening of different modalities of thoughts, actions, choices and becomings, activating the core potential of human beings – the ability to step into the yet unseen, unknown and unrealised and to create new meanings, ideas and values (Krnjaja, 2010). As such, the importance that art has for education is not limited to the specific school subjects or learning content, but engages art as a *process* and a *value* – of action over words, of creating, cultivating and initiating over instructing, memorizing, and reciting. The task of education is to build an environment that supports the realization and development of learning dispositions, encouraging each student's ability to think synergistically and to create – structures, experiments, or flexible solutions to problems (AWSNA, 2020). In such a task, art might play a vital role.

But the artistic process is not in itself a guarantee of moral rightness or merit – the question of values in the relation between art and pedagogy is two-fold. Next to the fact that art could send different, both positive and negative messages, provoke different behaviours and responses, lead people to different emotional fields and possibly leave them in the dark, there are always dangers of art slipping away to elitist practices and self-elaborating performances which stay on the surface of interaction.

When it comes to the art for and with children, responsibilities for ethical worth and interaction are further emphasized. But if education is a joint endeavour of different social actors, an active search, creation of the path and transformation of the context, what would it mean for art to take these responsibilities seriously?

The practice of institutionalized early childhood education might offer an inspiring example of responsible (and most importantly – *response-able*<sup>1</sup>) pedagogical engagement of art and art-based creativity for the realisation of learning dispositions as well as transformation of educational institutions. Contemporary approaches to early childhood education (such as Reggio Emilia approach) build upon the premise that a child is naturally focused on establishing relationships with their social environment, but also with non-human others, interpreting the world precisely through creative engagement and exchange in an active relationship with it. In this process, children use different symbolic systems to understand and communicate experiences and ideas – words, images, movements, numbers, sounds... and through this complex and divergent mode of communication, they learn about the world, about others and about themselves. But communication always involves more than one side. Learning is considered to be both a social and creative process, a joint adventure based on the discovery and active experimentation with the world, triggered by curiosity, intuition and creativity in the mutual effort to make ourselves intelligible to one another. Learning is achieved through participation in action (MOESTD, 2018) – through a unity of experience, thought and act, through joint diving into the sensational, affective, experienced but

not-yet-thought-out impulses, ideas and processes as an active driver from which a ‘new thought’ emerges.

In such a learning process, a wisely set and jointly developed artistic experimentation plays a vital role, opening the possibility for teachers, artists and pedagogues, as well as for children, to work side by side and enrich the educational experience with their unique perspectives and contributions.

### How?

We’ve stressed the importance of art engaging in the educational process, but what would it mean for a pedagogue, as an educational expert, to be engaged in the institutions of art and in the process of creating artwork?

The very inclusion of a pedagogue in the process of creating an artwork (be it art for/with children or not) implies the understanding of the strong pedagogical – contextually transformative and individually empowering – potential of art. But the pedagogical potential of the artistic process to evoke and enhance the realisation of learning dispositions and to transform the context which it engages with, is not guaranteed. As it is already mentioned in previous paragraphs, for artistic creation to have pedagogical importance, there is a necessity for joint work, sensitivity and *response-ability* with/towards others.

This leads us to the question of how we could create art for/with children in a way that enlivens it as a pedagogical framework – as a *process* and a *value* which are significant for supporting chil-

dren’s further relationships with the world. How could we build an environment that encourages the ability of each child and educational actor, to *exactly* think synergistically and create structures, experiments, or flexible solutions to problems *here and now*, with the human and non-human others of the specific context?

The task of *exactly* doing what we say and think we are doing, is more complicated than it sounds; even more so complicated when it involves working with others. In the process of creating an artwork for/with children, the situation further complicates with the fact that not only different professions, perspectives and positions must be engaged, but also different generations. The common misconception of the adults is that we already know what children need and want, what they aspire for and generally what it is like to be a child (“Well, we’ve all been there, haven’t we?”), so that the perspective of the child is already involved through our own evoking of the past. But not only that children are individuals different from us, but their childhood is different from ours – the times of our growing up were different times with different opportunities, limits, experiences, problems and values. We don’t know what it means and how it feels to be a child *today*. We have no direct access nor understanding of the ways in which the lives of contemporary children – their very ways of thinking, feeling and engaging with the world – are being shaped. We do not think, feel, or exactly do – whatever we are doing – in the same way.

If we want to evoke art as a joint endeavour, to embody its *response-ability* for/with the audiences which we wish to engage, we as adults – being

1 According to Donna Haraway (2015), the concept of *response-ability* emphasizes the idea of living responsibility as being able to respond to situations or human and no-human *other* in a responsible and ethical manner.

us teachers, pedagogues or artists – have to work on our own sensibility and openness towards seeing, hearing and playing with the world in the ways children do. In order to be able to create art which would be meaningful for children, we have to *think with* them, always bearing in mind their contexts and positions, and let ourselves be continuously challenged by their ways of being and acting. That's why in any process striving towards creation for/with children, the children must be involved as active participants – either in the process of creation or the realisation of an artwork – but by no means as passive consumers.

Remembering the title: „What exactly do we do, when we make theatre for children?“, I wish to argue that this question is *par excellence* pedagogical and that the position of a pedagogue in the process of artistic creation lies in continuously returning to it – and bringing the entire team there.

No matter the profession and the exact field of 'what (we think) we do', the possible answer to the question Deleuze brought to the table is the fact that we *think*. Difference lies in what we're *exactly* thinking in the process: what methods do we use to elaborate our thought, what are the horizons our thought opens and strives to and the borders it will never cross, and – maybe most important for the pedagogical potential of anything – whom and how do we include and engage in our process of thinking.

The task of a pedagogue is to always think about the contexts and environments in every possible sense (social, material, cultural...), about how they constitute the idea and materialization of childhood and what they make (im)possible for a child, but also for all the social actors involved. Thus, when a pedagogue works on enhancing and realising the

pedagogical potential of art and the pedagogical capacity of art institutions, she has a twofold task: to insist on the understanding and involvement of children as active participants who will bring new meanings, new practices, new ideas and new possibilities into the context; and to provoke and inspire the entire team to engage in the process of creation as a joint adventure of creating new paths while making ourselves intelligible and *response-able* to one another.

There is no recipe for the job of the pedagogue – it is always shaped by the specific people, contexts and relations she engages with, but the essence lies in the insistence on *exactly* doing what we think we do – continuously rethinking and practically reworking the questions of what it means to create, to create together, to create for/with children, to make a statement, to make a value, to make art – to make sense.

### What?

It's tempting and certainly more comforting to talk about how things should go in an ideal world; but what happens when we apply those ideas in practice? Let me briefly address my own experience and the challenges I faced while being part of the team who created a musical play for children.

If we should sum it up and look at it objectively, my role as a pedagogue in this specific process should have been centred around establishing and endorsing the pedagogical principles which would shape the entire play. At the very beginning of the process, the pedagogical aspect of the play was anchored in how young children understand the world – emphasizing active participation, sensory engagement, affectivity of experience and in the encouragement of interaction as key principles,

while the very „narrative“ of play was based on pedagogically crucial learning dispositions – curiosity, courage, persistence, critical thinking, creativity, and empathy.

However, when it comes to what *exactly* I did when I thought I was insisting on these principles and dispositions, this might be a different question.

We've highlighted the recurring question of what precisely our actions entail, with the answer circling back to the fact that we *think*. The pedagogue's role demands thoughtful consideration of contexts and environments – how the contexts shape the notions and experiences of childhood and the opportunities and limitations they present for children as well as for all the social actors involved. The focus of the pedagogue's role hence extends beyond merely envisioning the play as a setting for children's experience; it encompasses the entire creative process as an environment wherein the team collaborates and experiments collectively. That would mean that the principles we've established and the dispositions that we've chosen should not apply only to the end product – the theatre performance itself; the entire process needs to be imbued with participation, sensory experimentation, affectivity, and a sense of joint work. The process itself must strive to embrace curiosity, courage, persistence, critical thinking, creativity, and empathy of and between all participants. Now, the question emerges: How can a pedagogue facilitate the being and becoming of such a conducive work environment? And more crucially, did I succeed in doing so?

As for the second question, my response is somewhat ambivalent, and truthfully, it's not mine alone to provide. Perhaps it's my personal tendency to think



about how things could've turned out differently, which tends to make me view processes and roles from a somewhat negative angle. This tendency leads me to address a few potential missteps and challenges that could arise when working as a pedagogue in an artistic team, aiding their creative endeavours.

The role of a pedagogue remains rather alien and enigmatic to many other professionals, often being perceived as secondary, technical support within the core of the process. This misconception can be even more pronounced within the artistic contexts, where science may be perceived as the antithesis to art – something rigid and restrictive for the creative course. Consequently, the pedagogue might be viewed as an annoyance rather than a requirement, positioned more as a scrutinizer than a collaborator alongside others.

This misconception leads to the phenomenon where many persons, whether they are fellow professionals or parents, interact with a pedagogue expecting precise information and definitive answers that can be readily applied. Frequently, the sought-after information and solutions aren't intended to fuel further exploration or provoke reevaluation. Instead, they are asked merely to serve as validation for pre-existing notions, aiming to assert that the idea at hand already possesses inherent 'pedagogical potential'. The very notion that a pedagogue's role is to catalyze a collective reevaluation of previously held beliefs, while collaboratively seeking information and devising solutions, faces resistance and is often misinterpreted as an indicator of the professional inadequacy of the pedagogue.

Adding to the specificity of the artistic milieu is the assumption that a pedagogue lacks competence in matters of art, rendering her incapable of comprehending artists' concepts, the process of artistic genesis, or the art's impact on its audience. While such assumption is not devoid of validity, a parallel argument could be posited: pedagogues asserting that artists are inept at engaging with children. Yet, how productive is this cycle of argumentation? The true essence lies in the collaborative creation of art for/with children, which rests upon mutual learning and establishing a shared language. A paramount principle to uphold throughout is prioritizing the perspective of children themselves – not our pedagogical theories or artistic visions.

To truly embark on this endeavour in a way that matches our intentions and sparks a collaborative creative journey, we need to dig into lots of important questions: the purpose of both education and art, the possibilities of the encounter between adults and children, the potentials and challenges of the very society we live in (and should the art or education deal with the issues of society anyway). There aren't clear-cut answers to these questions, leaving us all somewhat uncertain about the solutions we've devised and the compromises we've made. These are the questions which demand time to be seriously thought out and continuously played with, as well as certain trust and intimacy to be built amongst all that are involved. Time which, very often, none of us has.

This brings us to the broader question of the context of our times – the circumstances that envelop artists' efforts and their capacity to wholeheartedly commit to projects, as well as the conditions under which pedagogues are involved, and the avenues available for their integration within artistic institutions.

Certainly, things could stay just the same – theatre for children will exist and some plays will be made. But if we wish to dive deeper into their relevance and for them to actually mean something for the children they should engage, we must come as well to the question of our collective willingness to create novel paths starting on the premise of mutual trust, despite the constraints that encircle us.

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Workshop "Object Animation - Creating Connections and Communication" by Viktória Makra, Hungary. BAZAART's annual Conference 2022  
Photo by Vesna Šojić



# LEARNING DISPOSITIONS at the age of 3 to 5 years

## 1. CURIOSITY

**What does it mean to be curious:** Perceiving oneself as someone who is interested, who expects that people, places and things can be interesting; Having the motivation to understand; Asking oneself: How does something work? What if... (I throw this on the floor, for example)? ... and what if I could... (jump higher, build a taller tower...)?

**How does it manifest in early childhood?** Expressions of wonder; 'Wide-eyed' gaze; Vocalizations of excitement and asking questions; Attempting to take the object of interest or engage in the action that attracts their attention; Coming back to the same activity over and over.

**How do we support it?** An environment rich in materials, stimuli, and provocations; Allowing attempts and mistakes; Observing children's wonder and supporting them in the action through which they express it; Asking open-ended questions; Encouraging children to find different solutions; Modelling curiosity (as a sense of wonder) through our own behaviour.

## 2. COURAGE

**What does it mean to be courageous:** Perceiving oneself as capable of dealing with challenges and difficulties; Confronting doubts, fears,

anxieties, and pressures which come from the environment and acting despite them if we believe it is right to do so; Doing the right thing in difficult situations.

**How does it manifest in early childhood?** Trying something new even if afraid; Acknowledging mistakes; Asking for help; Willing to stand for others; Doing what makes sense to them, regardless of what other children in the group are doing or saying.

**How do we support it?** Encouraging a sense of adventure; Supporting new experiences; Allowing children to decide when they are ready to engage in something; Treating children as if they are already brave/courageous; Giving them space to make mistakes and challenge our authority; Giving them space to not go along with everyone else; Modelling courage through our own behaviour.

## 3. PERSISTENCE

**What does it mean to be persistent:** Perceiving oneself as capable of responding to challenges and difficulties; Continuing to engage in meaningful activity despite setbacks.

**How does it manifest in early childhood?** Most often manifests in playing; Continuing to engage in something despite mistakes and difficulties – consistently, or returning after breaks.

**How do we support it?** Supporting children to persist in what they are already doing well and enjoying; Breaking tasks into 'bite-sized' pieces; Refraining from providing answers and solutions; Allowing children to feel frustration; Making every progress visible; Sharing examples of persistence; Encouraging children to help each other; Modelling through our own behaviour the 'struggle' to achieve something, facing difficulties.

## 4. CRITICAL THINKING

**What does it mean to think critically:** Perceiving oneself as someone who 'does not take things lightly'; The ability to view experiences from different perspectives, to question what is happening; Being aware that there is no single truth.

**How does it manifest in early childhood?** Comparing and trying to explain different phenomena; Questioning where something came from; Expressing opinions, making projections, and suggesting solutions (verbally and non-verbally).

**How do we support it?** Asking open-ended questions; Giving children time to think and speculate before providing solutions; Encouraging children to consider situations from different angles and to search for solutions; Modelling questioning.

## 5. CREATIVITY

**What does it mean to be creative:** Perceiving oneself as someone who communicates, innovates, and creates; Using different media for expression; Trying new and different ways of using objects and materials from the environment.

**How does it manifest in early childhood?** Playing, imitating, moving for the sake of movement; Experimenting with objects and materials in the environment; Creating new structures and patterns.

**How do we support it?** Providing rich experiences and environments; Giving children space and time for experimenting and expressing; Making available rich and diverse materials through which the child can express themselves; Engaging in experimentation and creation together with the child; Modelling openness and constructiveness through our own behaviour.

## 6. SENSITIVITY TO OTHERS / EMPATHY

**What does it mean to be sensitive to other/s (empathetic):** Perceiving oneself as ‘another’ in relation to others, as someone whose actions have consequences beyond oneself; Being aware of the feelings of others (and the differences in perspectives on the world) and acting responsibly with that in mind.

**How does it manifest in early childhood?** Showing distress when others are distressed or enthusiasm when others are enthusiastic; Observing reactions of adults and peers to align reactions to the environment; Showing tenderness and care for both living and non-living things (such as plants, animals, toys...)



“Hymn to Kindness”, Elementary School “Majka Jugovića”, Belgrade, performed interactively at the opening of the BAZAART’s annual Conference 2023. Photo by Marko Nektan

**How do we support it?** Encouraging children to work together towards a common goal – fostering gathering around a common purpose; Encouraging children to share and to listen to each other; Encouraging children to respect the choices of others and to consider how their actions affect others; Modelling tenderness and care through our own behaviour.





Theatre show "WOW!", directed by Miha Golob. Coproduction of the BAZAART and the Little Theatre "Duško Radović", Belgrade, Serbia, December 2022  
Photo by Lidija Antonović



# WELCOME OF THE WORLD:

## An open script for artists and a collection of interactive stories for children

### SCENE 1

**Disposition: CURIOSITY**

### TRAVEL WITH THE WIND

**The Wind likes to travel. Embark together on a miraculous journey.**

The Wind is a great traveller. Oh, he loves to travel, sniff, snoop around, snooze and rattle from end to end of the world, crawling into every corner, under every stone. The Wind has a bag in which he collects interesting, mysterious, exciting and fun things that he finds as he travels the world. In his hands, everything becomes a toy: an umbrella, smoke from the chimney, a paper plane and... what not. In autumn, he especially likes leaves. They're his favourite toys. He plays with autumn leaves, carries them, lifts them, throws them and dances with them. Sometimes he stuffs them in his bag and then releases them all together, making a colourful carnival down the street. But that's not all – he also blows dandelions, and carries paper scraps newspapers, and pushes beach sand, sea waves, canopies and everything that can be moved... If you inspect his bag, who knows what you will find there?

*Do you want to travel with the Wind? His bag is full of toys – come and find the most beautiful, most colourful toy for you. Dance with him and let him carry you. Look at it. Turn around. Enjoy the colours. Repeat.*

### SCENE 2

**Disposition: COURAGE**

### PLAY WITH THE WIND (you can do it)

**The Wind likes to play, but also forgets when to stop. And who dares tell him to stop and calm down?**

The Wind flies high. That's – very high. He messes hair and beards to clouds... spins them, makes them pigtails, ponytails and funny hairstyles. The clouds, they're slow and lazy, so they can't catch up with him. Sometimes they laugh together, and sometimes they get mad at him... But what good is that to them? No one can catch up with the Wind. But if he gets angry, take care. When the Wind is angry, he grabs the whole car, tree or house and throws it in a some corner. Same as you, anyway. Kids are kind of 'windy'.

*Do you dare fly with him? Jump over the canopy, skate on the waves, flutter with leaves and clouds, knit them pigtails, and laugh about it afterwards? If you fall, don't worry – the Wind will catch you and gently bring you down – it's so soft and comfortable on the Wind's back. If you have the courage, there's a flying adventure waiting for you.*

### SCENE 3

**Disposition: PERSISTENCE**

### STAY WITH THE WIND

**The Wind likes to play music**

Do you hear the music of the Wind? Do you know what tunes the Wind can play? His breath triggers both trumpets and flutes and bagpipes and oboes and other instruments of strange names. You try it, too. The Wind will give you breath to create magic. He'll inhale it to you, and you give it to the silent things that will suddenly start speaking and whispering and singing to you. Try to talk them into it.

*It's not working? Doesn't sound good? No? Try it again... and again. Play. If you keep trying, you'll get the most beautiful sounds from instruments. When the Wind speaks with them – they create magic for your friends and all the people around you. Persistence makes a master. You can do it.*

## SCENE 4

Disposition: CRITICAL THINKING

## CATCH THE WIND

The Wind likes to change his mind

The Wind goes one way and then changes his mind and comes right back. He goes left and then turns right. He starts blowing straight in your face and then turns around and pushes you in the back. Now here, then there, you can't grab him by the head or the tail. No one knows what he's thinking or where he's going. He doesn't tell it to anyone. He just comes in and sweeps everything in front of him. Who's going to play with someone like that? And how to play – when he's always having second thoughts? He's very mischievous and stubborn at the same time. When he sets off, he keeps going where he's decided.

*The Wind thinks you're a leaf in the air and he can carry you wherever he wants – but you're not. You can tell him: No, – and he'll hear you. You can skip him, go around him, hold him by the hand and stop him... Try it. It's not hard. You're not a leaf after all.*



## SCENE 5

Disposition: CREATIVITY

## FLY LIKE THE WIND

The Wind likes to move things

The Wind brings things together. He joins one with the other, the other with the third, the third with the fifth... He doesn't mind colours and shapes... He doesn't care about order and neatness... He's messy and cheerful and he's always where there's fun (except of course when he's angry).

You never know what the Wind is going to put together. He patches up and dispatches things as he likes.

*You try it, too. Look what's in here. Let the Wind flutter and breeze and blow and buzz around you, and you give him something to play with. Look around. Think. Imagine. Fly with and like the Wind.*



Visual Arts Workshop by Ljubica Mladenović, Art Studio Artina and BAZAART. Photo by Marko Nektan

## SCENE 6:

Disposition: SENSITIVITY TO OTHERS  
(EMPATHY)

## FEEL THE WIND

The Wind doesn't like to be alone

The Wind's got a bag of toys. He carries you in the clouds and throws you on their soft back. He plays instruments and he keeps changing his mind, so you don't know where he's coming from or where he's going. He moves windmills and dandelions, entering dreams and children's hearts.

Even though the Wind loves it all, still... There's something he doesn't like. He doesn't like being alone. You don't like that either, do you? He's like you.

*So – swiftly, swiftly, quickly, quickly... Find a buddy to play together with the Wind. Because only when more people sing, more instruments play, more hearts cheer... Then only the Wind becomes the joy that carries you all over the world and says "Welcome".*

# HOW I GOT TO KNOW MY INNER CHILD WHILE TALKING TO THE WIND

## or

### How the Wind took me to my inner being which was craving for dancing in the wind again

(*The action happens in the World.*)

My inner Wind (*speaking to me*):

“Your relation to the art of theatre is intricate and complex, and therefore you take music you write for theatre performances very seriously. It seems to me that you are sad because you have realized that in that huge opus of yours there are only a few works for children, which you somehow always started with enthusiasm and finished in the manner ‘as the wind blows’.”

Me:

“Dear Wind, but that wasn’t because of me being irresponsible. It was because children accept everything.”

Wind:

“Do you believe that birds fly only because you saw them flying?  
Do you believe that birds do other things as well?”

And so it goes forever between the Wind and me, around and again...

Questioning, debating...

The invitation to compose the music for the program Welcome of the World, with the Wind as a main character, made quite confusion in my habitual work approach. It shook my confidence gained while working for ‘grown-up’ theatres, and made me go back to myself – to my forgotten inner child.

I felt big anxiety and responsibility because the music was meant for children. It had to be active and interactive, bright and dark, fast and slow, equally exciting at every moment, so it would hold attention of the youngest recipient – a child that listens with eyes and ears and the heart and the stomach, and sinks in music with their whole being, and reacts immediately, openly, without lying or withholding. Unless it gets even worse: responding to music by covering their ears.

I received a nice and smart email explaining and elaborating what was asked from me to do. Oh, and also apologising for very short time at disposal. And yes, complimenting me with high expectations the whole team has from me – a devoted and well established composer.

I copied some of the indications to a piece of paper and pinned them around the apartment, mostly above the piano and on the fridge door. Some of them I learned by heart, and some I didn’t understand... ever.

I was constantly having dialogue with that Wind of mine, which quite often led me far from the initial idea, blurring my thoughts and distuning my chords.

Me (*constantly repeating to myself*):

“What’s important is the aesthetic side of the experience, which goes beyond mere ‘playing’ and offers children a complete artistic experience: emotional, aesthetical, ethical, cognitive. Their participation is creative, and it is enabled by an aesthetic experience.”

Wind (*reminding me*):

“Not to forget: Interaction, active involvement and participation of the child is one of the axioms in artistic work and expression for the youngest.”



*(This one I must apply on myself if I mean to make some quality work!)*

Me (*calling out*):

"Hello, active involvement! Please, help me compose something that would keep child's attention."

Wind (*warning me*):

"Sound and music composers have the liberty to develop dramaturgical proposals in accordance with their personal ideas and the sound/music principles."

*(This was one of the indications which buried me in the initial chord, while I was supposed to work freely.)*

What confused me even more were the concept and the task of having poetic situations correspond with learning dispositions. As a framework for their development, and in accordance with it, I was offered, or rather presented with the titles for each movement and situation/action:

1. **Curiosity** – Wind travels and explores.
2. **Courage** – Wind reaches high, higher, far, farther, into the unknown.
3. **Perseverance** – Wind doesn't give up.
4. **Critical thinking** – Wind is capricious and full of surprises.
5. **Creativity** – Wind inspires and creates.
6. **Sensitivity** and closeness with other(s) – Wind connects (finale)

I found myself in a puzzle over a very complex task of translating these terms to music, actually

to musical motifs – and to avoid being banal and trivial, and not to quit on myself and my playful inner being which is in fact the one who knows how to compose music.

Wind (*whirling impatiently*):

"Compose me! – travelling and exploring, reaching high and far, and finally whizzing to the unknown...!"

With that whirlwind of thoughts, actually a new and different approach to composing was being born – which in fact got me back to my inner self as a

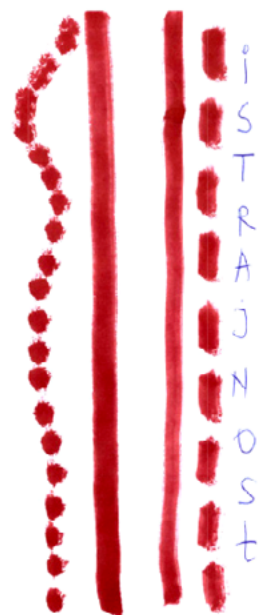
composer, from the period when I was just starting composing and knew nothing about composing techniques. At that time I was inspired by paintings and drawings and always sought inspiration in other arts. My first works always had drawings instead of titles, something similar to the image at the beginning of "The Little Prince", the drawing of "Boa constrictor digesting an elephant".

Me:

"Dear Wind, thank you. But I think I will go with drawing first."

### Curiosity and Courage





### Creativity and Sensitivity for Other(s)

... And yes – at that moment, I decided to draw. I actually drew the movements of my music before I composed them; and I will humbly share them here with you.

I applied this approach together with my children and we had lovely conversations while drawing curiosity, courage, perseverance, critical thinking, creativity and sensitivity and closeness.

One curve was a common motif in all the drawings, one winding line resembling a snail house. In some cases the line was longer and denser, and in others scattered all over the paper, especially in the case of critical thinking. The drawing that moved me the most was the one with closely placed circles intertwining and hugging each other...

I studied the drawings carefully and started playing music 'from' them. I was hoping to reach a leitmotif

– a one of the principal wind, the Wind of all Winds, a Proto-Wind, which would ignite all my creative processes.

Me:

"This Wind will be the mother of all Winds that would come to world later."

This idea connected well with the indications I had gotten:

Wind (*proudly*):

"Individual levels can function independently, they come together through the scenes until the finale, where the composition echoes in its entirety, symbolising the thematic unity."

### Persistence and Critical thinking

Me:

"Winds will evolve also on their own, but they will join together at the end, and they will become reflection of all my phases while growing up, as well as of all the feelings related to those phases."

And so it was.

The parts-scenes-movements are situations created by my Wind. Wind storms in, whirls, dances and breezes, drawing the thrilling journey of growing-up.

Let the child be guided by the Wind on this musical journey.

To listen to the music  
"Welcome of the World":







Creative music workshop “Worlds We Don’t Know” by composer Irena Popović at the BAZAART’s annual Conference 2022.  
Photo by Vesna Šojić



**Sunčica Milosavljević, Ph.D.**

Artistic director

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Creative producer of the theatre production "WOW!"

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## ABOUT THE CHILD AND THE WORLD

### Theatre production „WOW!”

Whenever a child is born, the whole world is born again with it.

The world arises in the perception of the child, in a variety of shapes, colours, sounds...

And through the child's experience of interacting with the world, the newly discovered faces of the world acquire meaning.

*What is this world like? Is it good and friendly to the child? Or is it the place full of danger?*

*What can we do to make the world a field full of opportunities and accomplishments, not just threats and limitations?*

We present you with a theatrical story woven from simple play and complex meanings that, together with the child, you can encipher, decipher and play more for a long time.

*A story about the visible and the invisible, tangible and intangible, hidden and silent.*

*A story about discovering the world through the creation of a fantasy world.*

*A game where two worlds merge into life.*

*A game which is important for all children and for all adults.*



theatre show "WOW!"  
Photo by Lidija Antonović

#### Credits:

**Director:** Miha Golob

**Assistant director:** Marijana Petrović

**Stage designers:**

Jelena Stojanović, Miha Golob

**Costume designer:** Dajana Ljubičić

**Sound designer:** Dragan Petrović

**Light designer:** Paun Pavlović

**Performers:**

Tatjana Piper Stanković,  
Lana Adžić, Maja Jovanović Spasojević,  
Miloš Anđelković, Mladen Vuković

**Production:**

BAZAART and the Little Theatre  
„Duško Radović“

**Premiere:**

8<sup>th</sup> December 2022, Belgrade, Serbia

# WOW!

**Curiosity...** I love that word! Curiosity about art.  
About theatre.

Because in art and in theatre – says Shakespeare  
– the whole world resides.

**For** curiosity, to fulfil it, to live it, it often takes  
courage. Do we have the courage to peek in, to  
go in?

The world had courage as well – to come into  
being.

**You** don't need courage just once. You need it all  
the time. More than once. All your life.

Without persistence, you would learn nothing –  
not even to walk.

**And** to dance! We all dance, each in our own  
way. The Wind also dances.

Look at the Wind! It is getting stronger and  
stronger. It is a tornado!

**Should** we tie the planet and the universe  
together, so the Wind doesn't blow them away...?

... Or we shouldn't?

That might kill the Wind... It could die... And we  
need the Wind...

**We** need the Wind to raise our sails and go... Into  
the world... Around the world...

Hand in hand. Together!



Director and actors at the rehearsal for the theatre show “WOW!”, coproduction of the BAZAART and the Little Theatre “Duško Radović”, Belgrade, Serbia, November 2022  
Photo by Sunčica Milosavljević





Theatre show "WOW!", directed by Miha Golob. Coproduction of the BAZAART and the Little Theatre "Duško Radović", Belgrade, Serbia, December 2022  
Photo by Lidija Antonović



# LEARNING FROM A FEATHER

## Drama workshop scenario

This workshop scenario has a purpose of processing the experiences of children audiences from watching the theatre show “WOW!”. The aim of the workshop is pedagogical – transforming the aesthetic experiences into learning. The methodology used is the children’s creative participation in a dramaplay.

‘Dramaplay’ – the word coined to denote this particular concept and distinguish it from any other meaning that the words ‘drama’ and ‘play’ can have especially in a theatre context – means exactly what its name says: playing the game of drama.

This game takes elements both from dramatic arts and from the children’s play. From drama it takes the way of playing – by enacting certain situations. From children’s play it takes imagination as a mechanism enabling the players to fully believe in the realness of the situation and engage in it with their complete cognitive, emotional, physical and action capacities.

In this way, dramaplay creates a framework for active learning on the safe plain of fiction. By participating

in imagined situations in a playful way, the children obtain (targeted) experiences and reflect on them with the help of drama pedagogues. Those experiences, reflections and conclusions are easily applicable in analogue situations in real life. This is why drama pedagogy (as well as any participatory and creative art pedagogy) is so important in the education and upbringing of the young.

### Pedagogy

In this drama workshop scenario, the pedagogical objective is the development of learning dispositions of a child. In the scenario, the learning dispositions are translated into exercises which invite children to engage in learning situations. The fact that the learning dispositions are also built into the dramaturgy of the theatre show enables us to use the symbols featured in the show and to elaborate the exercises around them.

In order for the learning dispositions to be addressed through dramaplay, their interpretation is adjusted to the perception and the worldview of young children – pre-schoolers and pupils in the 1<sup>st</sup> and 2<sup>nd</sup> grade.

### About the scenario

This scenario can be carried out in several ways:

- In the theatre space, right after the show “WOW!”, or
- In another very large space, with a bigger group of children, or
- In a smaller space (in a kindergarten or school, or another appropriate space), and with a smaller group of children.

The advantage of a large space is that some parts of the scenario can be carried out simultaneously, allowing for up to 30 children to participate. This version of the workshop should last for app. 60 minutes. The disadvantage of this approach is that it requires min. 4 facilitators and that children are divided in 4 groups, each of them partaking only in one out of four exercises elaborating on learning dispositions.

In a smaller space, the exercises would be carried out one after another, with a group of up to 15 children. In that case, the scenario would be broken

down into 4 workshops lasting up to 45 minutes each (in separate workshops, the introductory and closing parts must be added). The advantage of this approach is that one or two facilitators can carry out the entire workshop, and that all the children can partake in all the exercises.

We are hereby presenting the workshop scenario intended for implementation in the theatre. The teachers or drama pedagogues can tailor the scenario to their circumstances and needs respectively.

## Post-show workshop in theatre space

This scenario requires min. 4 leaders: the Facilitator and three 'Playleaders' (another coined word, for our use primarily).

'Facilitator' is a drama pedagogue who is the main workshop leader; sometimes there can be two Facilitators who share tasks. 'Playleaders' are actors, kindergarten teachers or schoolteachers. The Facilitators lead the workshop. Playleaders support them and independently lead some segments.

For the workshop leaders to be able to successfully conduct the workshop, it is necessary that they meet before the show and study the scenario, clarifying all details and dividing the tasks.

Preparatory activities in the theatre encompass welcoming the children and invitation to them to attentively watch the show.

Here is the description of activities which the workshop leaders can do with children after the theatre show "WOW!".

Exercise	Description	Duration
<b>Hello, Feather!</b>	<p>The Facilitator stands up from the audience and asks the children if everyone has received their feather. With the help of Playleaders, she distributes feathers to children who didn't get them.</p> <p>The Facilitator (who herself holds a feather) gives the instruction:</p> <p><i>The feathers are very powerful: they can fly, fall, hide, speak, be silent, sing, listen and who knows what else. Are you interested in what your feather can do? Look at your feather, carefully, listen to it, smell it, embrace it.</i> (Leaders do it first, giving an example to children)</p> <p><i>Play gently and slowly with it.</i> (The leaders and the kids give an example.)</p> <p><i>Now quietly ask your feather what game it would like to play.</i> (Possible examples: games of flying, hiding, blowing...)</p> <p><i>Close your eyes and listen carefully.</i> (The leaders and the kids do it.)</p>	7
<b>Playing with the feather</b>	<p>The Facilitator asks the children to tell everyone what they have learned – what games their feathers want to play. She listens to several answers (after each interesting answer, she asks the children if maybe someone else got the same answer from their feather).</p> <p>Then the Facilitator invites children and adults to play with feathers – to slowly get up and enter the stage. They can move around the whole stage, but they shouldn't touch the box.</p> <p>!!! The Facilitator emphasizes that we do not touch the box because there is another feather in it, which is asleep. Therefore, we need to be quiet, so we wouldn't wake up the feather.</p> <p style="text-align: right;">* This is the queue for the music movement "Curiosity", to be played.</p> <p>The Facilitator is the first to enter the space in the 'feather game', giving an example to children. Children are free to play with feathers on the stage.</p>	10

Exercise	Description	Duration
Secrets of the feathers	<p>After a while, the workshop leaders (Facilitators and Playleaders) take positions in the space, so that they occupy 4 parts of the stage.</p> <p>The Facilitator invites the children to listen to the proposal of a new game:</p> <p>Let's play <i>The Secrets of the Feather</i>.</p> <p><i>Each feather holds an important secret. The most important secrets, e.g., those by which birds can fly, are <b>courage, determination, cleverness and imagination</b>.</i></p> <p><i>There is a feather for every secret. We will now play with them and get to know these secrets ourselves.</i></p> <p>The Facilitator instructs the children where the games will take place and announces:</p> <p>The <b>red</b> feather is the feather of <b>courage</b> (The Playleader who has a red feather, raises it high).</p> <p>The <b>yellow</b> feather is the feather of <b>determination</b> (The Playleader shows the yellow feather).</p> <p>The <b>blue</b> feather is the feather of <b>cleverness</b> (The Playleader shows the blue feather).</p> <p>The <b>green</b> feather is the feather of <b>imagination</b> (The Playleader shows the green feather).</p> <p>She shortly explains the virtues that are at the centre of the games and invites children to think for a while what game they want to play with their feathers and their friends.</p> <p>After allowing children to make up their mind, the Facilitator invites them to choose <u>either a color, or a secret</u> and to slowly approach that group.</p> <p>She asks them to take good care of their feathers.</p>	5
	<p>Each group plays its own game which is explained and led by the Playleader*.</p> <p><i>* Depending on the game, the Playleader will instruct children to store the feather in some safe place (e.g. a pocket), or to hold it in their hand during the game.</i></p> <p><i>* If the space is large enough, each group can listen to the corresponding music movement while playing: the Red group: "Courage"; the Yellow group: "Persistence"; the Blue group: "Critical Thinking"; and the Green group: "Creativity".</i></p>	
Games with feathers	<p>a. <b>RED – Courageous feather:</b></p> <p>Members of this group know the secret of <b>how to be leaders</b>. The game is called the <b>King's Guard</b>, where everyone follows and imitates the movements of a person who leads at that moment i.e. the King.</p> <p>The game takes place in a circle. The Playleader first enters the circle and performs slow and gentle movements with the red feather. All the children imitate her movements.</p> <p>After a while, she approaches a child and hands him a red feather. That child should go into a circle and perform their own movements with a feather, and everyone else imitates them. Then the child hands the feather on another child, and so on until all the children have been at the centre of the circle as leaders, that is, Kings.</p>	20



Exercise	Description	Duration
Games with feathers	<p>b. <b>YELLOW – Determined feather:</b></p> <p>Participants in this game know the secret of <b>how to reach the goal</b>. We play a game of <b>Relays</b>, where children pass the feather to each other without dropping it. There are more ways to play this game, and the Playleader chooses the option according to the age and abilities of the group:</p> <ol style="list-style-type: none"> <li>1) Each child needs to transfer their feather in the palm of their hand from point A to point B.</li> <li>2.1) All children stand in a circle and pass the yellow feather from palm to palm. If the feather falls, everyone stops; the child who dropped the feather should pick it up, run a circle with a feather in his hand and return to his place; then the game continues.</li> <li>2.2) Another version of the game in a circle is that children pass all feathers to each other simultaneously, from palm to palm. In this case, we follow the yellow feather, so that we know when the feathers have gone full circle. The second round can be played in the opposite direction, and after that, the children can switch places.</li> </ol>	20
	<p>c. <b>BLUE – Clever feather:</b></p> <p>Group members know the secret of <b>how to do something best</b>.</p> <p>Participants play the game <b>Crossing the Bridge</b>, where they need to find a solution to the problem. There is a line on the floor (made with a tape) that represents a very narrow bridge over the river. All children stand on the line. The one who is standing at the end of the line should 'cross the bridge' and carry a feather (their own or the blue one) to the other end, but in such a way that neither the child nor the feather 'fall into the river'. This practically means that the other children – members of the group, must skilfully hold the child who is crossing, or even 'carry' it to the other side.</p> <p>The child who is crossing is allowed to step on the line and on the feet of other children; if the child misses the line, they 'fall into the river' and must 'swim' to the shore (with movements, through an imaginary river), but in such a way that the feather does not get wet.</p> <p>If this happens, the child who 'fell in the river' goes to the end of the line, and the next child 'crosses the bridge'. Children who successfully 'cross the bridge' stay at the other end of the line, and everyone moves one place at a time, so the next child starts to 'cross the bridge'.</p> <p>The game lasts until all the kids have crossed the bridge.</p>	
	<p>d. <b>GREEN – Imaginative feather:</b></p> <p>Participants in this group know the secret of <b>how to create something</b>. The game is titled <b>Turn into a...</b>, where children depict a given word with their body postures and movement.</p> <p>Children do this through the 'frozen image' technique: first individually, then in small groups, then only with feathers and at that point it is also possible to add movement.</p> <ol style="list-style-type: none"> <li>1) <i>Individual presentation:</i> At the sign given by the Playleader, all children close their eyes, listen to the word given by the Playleader, take the posture with which they want to express this word, and at the sign of the Playleader they open their eyes and look at each other. The Playleader briefly comments and praises all the presentations.</li> </ol>	

Exercise	Description	Duration
Games with feathers	<p>2) <i>Presentation in small groups</i>: The Playleader says a number and the children run into groups with the given number of members. When all the children joined one of the groups, the Playleader gives a word and the children in the group must quickly decide on an idea how to present that word with their body postures. At the sign of the Playleader, they look at each other. The Playleader briefly comments on the children's creations and praises all the groups.</p> <p>3) <i>Presentation with feathers</i>: The Playleader divides children into small groups in the same way as above. When the Playleader gives a word, the children in the group discuss and agree on a solution how to present that word with feathers. If a movement spontaneously appears here, this should be accepted and praised.</p> <p>Proposed words: raindrop, snowflake, cloud, sun, rainbow, river, flower, tree, forest, street, city, world... (The Playleader chooses the words – from this list, or some other words; it is best if the words are associated with the theatre show).</p> <p>The Playleader herself should estimate how many tasks she can complete with the children in up to 20 minutes. The game is played until all three steps are completed, or until the other groups have finished their games. In all cases, the children should be praised at the end of the game.</p>	20
Conversation of feathers (about shared secrets)	<p>While the children are still in four groups with their Playleaders, the Facilitator asks them if, through the game they played, they have learned the important secrets (how to be leaders, how to reach the goal, how to do something best, how to create something). The answers here should be simply YES or NO.</p> <p>The Facilitator reminds the children that there is another feather in the room, the one hidden in the box standing on stage.</p> <p>She invites the children to imagine this feather and how it is lying in the box: what it does, what it thinks, what it dreams about... Then she invites the children, one group at a time, to approach the box and whisper the secret to the feather in it. She explains that they should do this by whispering the secret to their feather first, and then letting their feather whisper it to the feather in the box. She shows to the children how this is done.</p> <p>Participants approach the box by holding their feathers, but must NOT touch the box themselves, because the feather in it is very tender.</p> <p style="text-align: right;"><i>*During this and next activity, the last musical movement, "Empathy", can be played.</i></p>	10
Courageously to conquering the World!	<p>When everyone is done whispering the secrets to the feather in the box, the Facilitator asks the children if they know where all the secrets are hidden now. When the children respond (with the feather in the box), the Facilitator praises them and instructs them all to stand in a circle around the box and hold hands.</p> <p>In this way, they will share their secrets with each other, because when we are together, then we know everything and can do everything.</p> <p>She invites them to say goodbye to the feather in the box. With the help of the Playleaders, children form pairs from the circle and, empowered with the knowledge of all important secrets, set out to conquer the World.</p> <p>The group leaves the theatre.</p>	5





Theatre show "WOW!", directed by Miha Golob. Coproduction of the BAZAART and the Little Theatre "Duško Radovic", Belgrade, Serbia, December 2022  
Photo by Lidija Antonović



## CREATIVE DRAMA AND DANCE PEDAGOGY IN THE SOCIAL-EMOTIONAL LEARNING OF CHILDREN

In the B-AIR project, the team of the BAZAART Association working on the program “Welcome of the World” placed a special focus on creative workshops for children, considering them as an important opportunity for the young to develop social-emotional sensitivity, dispositions and abilities which in the era of prevalent online learning and distanced communication, less and less develop spontaneously.<sup>1</sup>

At the core of our work is the trust in the power of creative arts pedagogy – dance and drama pedagogy in particular – to prevent, counter and engage in resolving the growing problems in the social and emotional development of children, promoting the significance of creative arts-based learning in formal and non-formal educational settings.

### The crisis of social-emotional development of children

The issue of social-emotional wellbeing of children was brought to the fore by the situation of the Covid-19 pandemic. Many researchers across the world pointed out that the Covid-19

lockdowns, urging children and students to learn and socialise online, have seriously endangered, even damaged their social-emotional growth, and this is the case also with their parents, teachers and other adults.

However, the need for support to children in socialisation **and** emotional development was perceived quite earlier. The decline in the development of social-emotional competences especially of the young became notable already since the online communication largely pervaded the social exchange of young generations (Rosanbalm, 2021). As the research in the previous decade shows, online communication is linked to lower self-control, more distractibility, less emotional stability, and more difficulty in making friends (Twenge & Campbell, 2018). It is quite certain that for building social and emotional abilities, online contacts cannot replace face-to-face interaction (Giedd, 2012; Uhls et al., 2014). As it is consented among the researchers, many systematic, intentional and intensive efforts are needed to restore social and emotional learning of the young, with and without connection to the pandemic.



Audience from the theatre show “WOW!”  
Photo by Lidija Antonović

1 A concise version of this article was originally presented at the International scientific conference “[Creativity and Innovation in Theater, Media and Culture Production: Visions and Values for the Future](#)”, organised online by the Faculty of Dramatic Arts, University of Arts in Belgrade, Serbia, November 17<sup>th</sup>-18<sup>th</sup> 2021.

## Social-emotional competences

Social and emotional competences (SEC) are regarded as a set of abilities to manage one's intra- and inter-personal dynamics. Well-developed social-emotional competences are essential for attaining personal stability, an integrated and active social position and also a number of life goals: school and civic engagement, health and wellness, academic and career success.

The Chicago-based association CASEL (*Collaborative for Academic, Social, and Emotional Learning*) distinguishes 5 basic social-emotional competences:

1. **Self-awareness:** The abilities to understand one's own emotions, thoughts, and values and how they influence behavior across contexts.
2. **Self-management:** The abilities to manage one's emotions, thoughts, and behaviors effectively in different situations and to achieve goals and aspirations.
3. **Social awareness:** The abilities to understand the perspectives of and empathize with others, including those from diverse backgrounds, cultures, and contexts.
4. **Relationship skills:** The abilities to establish and maintain healthy and supportive relationships and to effectively navigate settings with diverse individuals and groups.
5. **Responsible decision-making:** The abilities to make caring and constructive choices about personal behavior and social interactions across diverse situations.

SECs develop from childhood to adulthood. In education they are supported through the social-emotional learning programs – SEL.

## Social-emotional learning

In Europe, the SEL programs have been introduced since 2015 through the Organisation for Economic Cooperation and Development – OECD. In many less developed countries, to which Serbia also belongs, SEL has not yet been included in the educational system. Although it exists within the educational policy framework, in practice it is applied only at the personal initiative of teachers, or in non-formal education (Milojevic, 2020).

And while the SECs are perceived as transversal – to be developed through subjects across the curriculum – in pragmatic terms of educational systems and their daily practice, the question arises: what learning areas and frameworks should take over the task of developing the children's social-emotional competences?

In preschool education, social-emotional development of children is most often well recognized and adequately addressed with programs and activities. Creativity in the artistic media is regularly used to support this objective. Yet, it must be stressed that drama, and especially dance or creative movement, are not practiced as commonly as drawing, painting, sculpturing, and music expression. Reasons for the misbalance in the use of creative media are numerous – spanning from inadequate preparation of preschool teachers for leading or supporting drama and dance activities, to the lack of spatial and other facilities in kindergartens, which would enable free and safe moving of children.

In the school system, still focused on achieving academic results and organised along subject division with heavy curricular overload, it is much more difficult to find adequate space for social-emotional learning of students. Very often it is the Arts Education group of subjects – along, possibly, the Civic Education – which is recognized as a pillar area for social-emotional learning.

Such a perspective is, however, a subject to a paradox.

Namely, in the past decades, Arts are largely being pushed to the margins of the curricula across the world. The prevailing concept of new educational programs was based on the STEM subjects: Science-Technology-Engineering-Mathematics – as areas considered to be vital for the progress of societies in the post-industrial, digital era. Many world countries rapidly shifted from a more humanistic and holistic concept of education to the essentially neo-liberal, labour market-centred concept constructed around the STEM subjects, with Arts and Humanities being sacrificed in the shift. This has provoked protests of many educators around the world, but with minor results; the battle seemed to be irreversibly lost.

However, not long time has passed before it became clear that the effects of the rigid STEM education were far from expected. The outcomes clearly showed that without Arts and Humanities education, the students' creativity severely declined, disallowing the much wished-for innovations in the STEM area to take place.

Therefore, the STEM concept is currently being replaced by the STEAM concept which includes Arts among the key school subjects. As the Arts are regaining their high importance position in the curricula, it is more likely that they can fulfil the task of developing social and emotional competences of students.

### Creative arts and learning

And yet, the inertia of the school systems takes a toll. Too often it is only the Visual Arts and Music that are being taught in schools. Drama, theatre and dance are mostly not a part of the curricula, albeit their core focuses on human values and the fact that drama and dance communication is based on introspection, command of self-expression and sensitivity to the expression of others, on the abilities of identification and empathy, which are enlisted among main social-emotional abilities.

What schools should, but miss to do, is compensated by the activities of non-formal education organizations and platforms. One such platform is established with the creative-educational programs prepared and carried out by the BAZAART within the B-AIR project where creative workshops joining the fields of music, visual arts, and dance and drama were devised and conducted.

Creative arts programs differ substantially from subject-centred (school) arts education programs. They have different objectives they want to attain, methods they use and the content they propose.

While arts education in schools aims to introduce students to artistic disciplines, most often copying the objectives, methods and content of

those disciplines, while also sharply segregating between them, creative arts pedagogy regards the arts education holistically, as an area for critical contemplation and creative expression of the participants, with borders fading between the disciplines.

In other words, what art subjects in schools strive for is education *in* arts; in contrast, creative arts pedagogies endeavour to attain education *through* arts, which brings wider and lasting educational and developmental effects, notably in the area of social-emotional learning.

### Creative workshops

In creative arts workshops, young participants are invited to freely and creatively use sound and music, movement, corporeal expression and verbal narration, as well as any other art medium, in order to explore the phenomena of the world, encompassing their own emotionality and involvements in complex social situations. In particular, dance and drama workshops are about critical and imaginative examination of what we experience, or could experience, in life. Playing the game of life through drama and dance, in a social setting of a peer group guided by dance or drama pedagogues, children learn *from* and *with* each other and adults, developing in a balanced way the knowledge, skills and values of a culture, and co-creating this culture at the same instant.

A creative workshop agenda typically includes the introduction of children to a stimulating, most often artistic or culturally relevant incentive; creation upon that incentive; and discussion in the group about experiences and observations of creative elaboration and the performed results.

In this process which focuses on simultaneously expressing and observing one's self and the others, the participants learn to recognise and articulate the inner dynamics in themselves and in the others, regulate their conduct, apply positive and constructive behaviour in social relationships, empathise with others, consider phenomena from the perspective of others, seek various solutions to problems, set objectives and work towards their attainment, manage options and take a responsible stand in decisions affecting also their social context.

In other words, creative experiences strongly support children's learning and development across all social-emotional competence fields, and, what is more, making it possible in a natural, playful and fully engaging way.

The results obtained in creative music, dance and drama workshops designed and carried out within the B-AIR project confirm our initial thesis of creative activities strongly stimulating and facilitating children's social-emotional learning and even more – their empowerment for life.

The reports rendered by parents and preschool teachers who were present in the workshops, confirming individual and group social-emotional progress observed in children during and after the creative experiences, open the way to the creative approach to gradually enter the formal education of children and also win a more respected position among the extracurricular activities that parents encourage their children to attend.



Let us confer one such report:

From the comments by teachers and parents after the Festival of Radio Play for Children and Youth, 30<sup>th</sup> June – 1<sup>st</sup> July 23, Belgrade, Serbia

*I would like to express my sincere gratitude for the wonderful experience the children had when visiting your event. The dance workshop as well as the story of the Little Wind accompanied by live music performing, made a deep impression on all of us.*

*The children were delighted with the interactive and creative approach you conveyed through these activities. Each of them had the opportunity to express themselves, to explore and connect with music in their own way. Your commitment and passion on these subjects were truly felt throughout the program, which inspired the children even more.*

*I want to especially emphasize how much we liked the workshop with dance and music pedagogues who conveyed the message of overcoming obstacles through artistic music and dance. This was a special moment for our children, because they had the opportunity to see how art can transform and overcome all challenges.*

*The children got so involved in the dance movements that I, as a teacher who knows the children well, at some moments couldn't recognise them. I was astonished by their creative and artistic discoveries, body movements and facial expressions.*



Creative movement lab “Discovering the World” by Nataša Milojević at the Festival of Radio and Sound Art for Children and Youth, BAZAART and RTS, Belgrade, Serbia, June 2023. Photo by Marko Nektan

*The only thing I would add is that there should be a bit more dance and stage improvising adapted to boys, to inspire them too, because during dance choreography, the boys have withdrawn.*

*Thank you for allowing children to experience these unique moments. Your initiative and engagement in providing artistic and educational programs are invaluable for children's development. Their curiosity and interest in art can certainly be developed in this way.*

*We look forward to future cooperation.*

*Best Regards,*

*Gordana Kovač, preschool teacher  
“Ola” kindergarten, Belgrade, Serbia*

Collected by: Jelena Antić, drama pedagogue  
Little Theatre „Duško Radović“, Belgrade, Serbia



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Jelena Antić and Aleksandar Nikolić presenting “Audio Fairy Tales” by the Little Theatre “Duško Radović”, Belgrade, at the Festival of Radio and Sound Art for Children and Youth, BAZAART and RTS, June 2023. Photo by Sunčica Milosavljević



## TRANSLATING PEDAGOGICAL INPUTS INTO A CREATIVE TEXT: Writing a radio play for young audiences

I wrote the radio play “Welcome of the World” guided by the pedagogical goals in the development of children 3 to 5 years old, namely the development of their learning dispositions: curiosity, courage, persistence, critical thinking, creativity and sensitivity to others.

The pedagogical guidelines mark the field in which the effect of the dramatic text should take place – and that is to stimulate and facilitate the development of learning dispositions in young children. The aim of the play or a script, hence, and the task for me as a writer, was to structure the child’s experience during the performance, leaving space for different interpretations or experiences of each child in the audience.

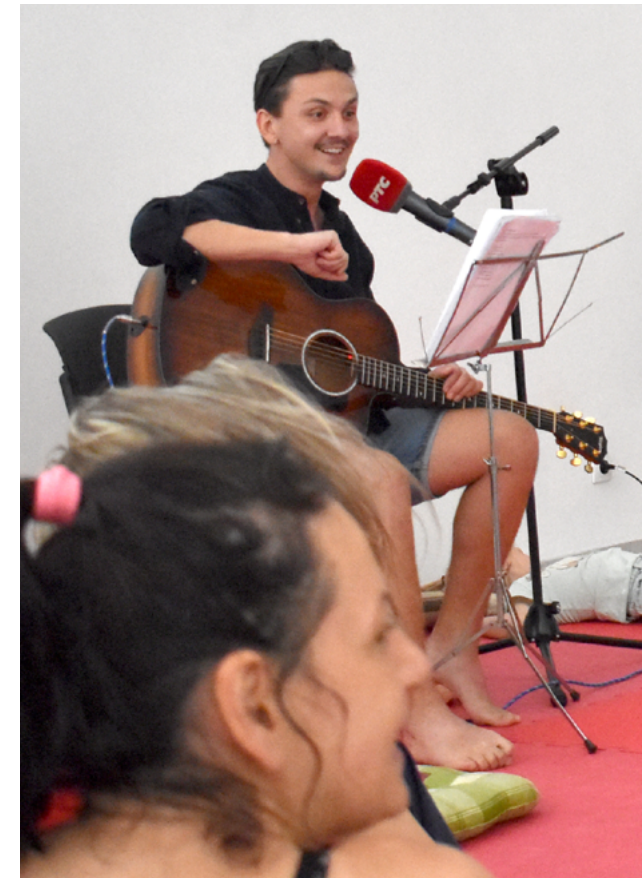
The play is constructed in such a way that each disposition corresponds to a chapter dedicated to a certain topic. The main character is the little Wind – a wind-child – who, while traveling with a human child through different landscapes and encounters, grows, and furthermore: grows up, by recognising and mastering the above-mentioned abilities and personal qualities.

Traveling with the Wind and listening to its story of growing up, the child is actually watching and participating in a reflection of their own

development. But the child is also a character in the play, a companion and an accomplice in the process of growing up. By shifting the narration from the first person (*I* – the child) to the third person (*it* – the Wind), the functional (didactic) aspect of the text is relaxed and the child is placed in the position of a witness-in-a-role.

The text is written in verse, as a poem for children, with the meter varying from chapter to chapter. Changing the meter, rhythm, tempo of the narration contributes to the dynamic structure of the text, which triggers different impressions and emotions in a child.

With elements of live performance such as music, acting, movement – this script is meant to produce an experience which doesn’t dominantly induce cognitive effects in the child (nor would such an approach be adequate for young children) but can spark interest and create a memory of a kind, which may prove to be a guiding force in the child’s later development.



Eldar Zupčević acting and playing music in the radio Play “Welcome of the World”  
Photo by Marko Nektan



## PROCESS DRAMA AND CREATIVE MOVEMENT IN PRESCHOOL CHILDREN EDUCATION

Within the “Welcome of the World” platform, the BAZAART team created a ‘music-in-education’ program with the aim of supporting social-emotional development of children of preschool age and spreading their experiences and openness for the unlimited possibilities which the world offers.

When the music composition was created by Irena Popović (related to learning dispositions delineated by the pedagogue Nevena Mitranić and poetically elaborated by the dramaturge Bogdan Španjević), the team of art pedagogues (artists-in-education) set off to test the children’s response to music.

### Method of Process Drama

In accordance with the overall program methodological approach, dance and drama pedagogues created a workshop-performance format using the process drama method applied in the medium of creative dance. Process drama (Gruić, 2002) is a participatory method which is often applied in Theatre-in-education for enhancing theatrical participation of young audiences (Jackson, 1993, 2011). It aims at helping children better accept and experience the artistic work, which, in our case, specifically refers to motivating and supporting children to listen to the music actively and engage in it with emotions and imagination.

We hence applied the basic concept of process drama featuring the actor-teacher, in our case dancer-teacher, who leads the children through the performative story. In this particular story, based on music movements corresponding to learning dispositions (curiosity, courage, persistence, creativity, critical thinking and sensitivity to others) the dancer-teacher invited children to travel by moving and dancing creatively and freely to the music.

The workshops-performances were conducted with groups of 10-15 children of preschool age, in the presence of their teachers. They were held either in a cultural venue, using the performing space, or in a large room in a kindergarten. In both cases, the room was unfurnished and the floor was covered with tatami, in order to make it safe for children to freely move.

### Creating experiences

As we will now describe the course of the workshop-performance, we are offering you to read this text as a guide book and join us on this journey.

*As usually when travelling, we have a tourist guide (dancer-teacher in a role). The journey starts with the Guide inviting children to find their place in space – any spot where they feel comfortable.*

*When all children settle, the music movement “Curiosity” starts. The Guide steps into the space and starts dancing around the children. As children are not given any prior information, such a puzzling beginning incites their curiosity and interest. When the music stops, the Guide tells children that they will travel together to an unknown place, very exciting and wonderful. Upon sparking their motivation, she highlights that she and nobody else knows what will happen, but everybody needs to be courageous.*

*Then the “Courage” movement is played. The Guide dances with children in expressive movements led by music, enhancing also children’s emotions, and suggesting with her own actions that dancers should copy each other’s movements. When the music stops, the guide asks the passengers how they felt. Upon getting the answers, the Guide summarizes them by saying that travelling through an unknown land can sometimes be a bit difficult or confusing and that they need to be persistent in exploring and traveling.*

*The movement “Persistence” is played. The guide starts leading the dance and then, without verbal explanation, only using an object which marks her as a Guide (a hat, an umbrella or any other*

object), passes the leading position to a member of the group. After some time, she helps the child pass it on to another child. She also takes care that this convention of rotating leadership is understood and followed by everyone in the group. At the end of the music, the Guide asks the leaders to describe where the journey took them and if something interesting has happened. When everyone has spoken, the Guide praises the children for courage and persistence.

Then the Guide gathers children along one side of the space and announces that they have reached the most challenging section of their journey. In front of them are many obstacles - dark places, difficult terrain, unknown vegetation full of scary sounds and noises... She instructs children to close their eyes and while listening to music, imagine what is around them. As they do so, they can start to very slowly and cautiously walk across the space (so they wouldn't bump into each other and get hurt).

When the children close their eyes, the movement "Creativity" starts. As they slowly cross the space, the Guide encourages them to draw the scenery in their mind's eye. She tells them that, when they are sure what is around them, they can open their eyes and face the imaginary impediments. She instructs them to find a way to surpass the obstacles (killing the enemy is not an option). They can keep trying for as long as the music is playing.

At the end of the music, the Guide asks children to share with the group what obstacles they have met and what solutions they have invented. Every creative solution deserves to be praised. As the children speak, she walks through the entire space locating selected imaginary obsta-

cles (maximum 4 or 5) in the space (here is a waterfall, here is mud, here a dense forest, here a cave maybe inhabited by wild animals, here it is raining heavily...). Then she addresses the whole group with a new task: all of them together need to find the exit.

As the group gets prepared, the movement "Sensitivity to Others" starts. The Guide joins the group to remind them about the map of obstacles, encourage cooperation and mutual help and together with children search for the way out of the unknown land. When the music stops, the Guide congratulates all the passengers on being solidary and cooperative and asks them to briefly tell their experiences.

In the closing part of the process drama, the dancer-teacher invites children to lie down and relax, listen to music and think about the whole experience. The "Critical thinking" movement is played and the children quietly listen. In the very end, the dancer-teacher and children sit in a circle and share their impressions and thoughts.

### Reflecting on experiences

As the workshops-performances had a purpose of testing the children's responses to the music, the program team worked on two combined sets of conclusions.

From the standpoint of a reflexive practitioner, the children's experiences were observed by the dancers-teachers who talked with children in the breaks between the music movements and in the closing session, and also by preschool teachers who were present in the workshop and who reported on children's impressions later to art pedagogues. From those observations and reports it

is concluded that most often, the whole group had similar experiences: they felt inspired to explore, curious, excited and scared in some moments. Especially interesting is the fact that every time children understood the idea of the music: their listening experiences largely match the script underlying the composition. In the reflection after the last music movement, the majority of children felt comfortable explaining their experiences.

The workshops-performances were observed and evaluated also by the pedagogical team. Based on their own observations and the reports by the workshop leaders and preschool teachers, the expert consultants confirmed the adequacy of participatory theatre for supporting the development of learning dispositions in children at young age. The special quality was recognized in the potential of process drama to open the space for every child to explore and realise its own ideas, creativity and emotions. The expert consultants recognised the effect of participatory experiences on children's creativity and imagination, and confirmed that the process drama provides an enhance framework for listening to music and developing children's auditory abilities and focus.

In that sense, it was concluded that participation in creative activities may prove beneficial also in developing children's general attentiveness. As nowadays children live surrounded by technical equipment and contents which take a strong effect on their concentration, majority of children cannot maintain attention for a longer time (Gottschalk, 2019). Participation in programs which help them actively listen to the music extends the periods of their attention, also with continuous movement and spatial orientation and in connection to social communication.



The particularly significant effect was noticed in the potential of artistic experiences to arise and articulate children's emotions in connection to the processes of exploratory learning in a peer/social context. In the process of emotional learning, children's overall mental flow is guided by body positions and inner impulses which are created by moving. This process could be explained as a psycho-physical activity that simultaneously supports the body, mind and emotions, and creates a specific experience that results in learning (Castellano et al, 2007). The other important advantage of moving with music and being led by emotions that it arises is spontaneity which encourages children to do something unexpected and collaborate with other children, or socialize, respectively (Tsompanaki, 2019).

Regarding the shortcomings of the program, it must be stressed that the conclusions stated above are valid for the majority of children, but not for those who cannot concentrate on non-attention-affirmative content or who cannot dance or don't feel comfortable with dancing or physical expression. Another weakness of our program is observed in non-equal response of girls and boys. The majority of girls were impressed by the program and enjoyed it, but a significant number of boys didn't feel comfortable with movement, physical expression or in general the expression of emotions and imagination. The result was that some boys felt as if they were forced to participate and quitted the program. Although the latter phenomenon is culturally conditioned and not exclusively provoked by our program, it must all the same be taken into consideration.

Using the aforementioned observations, we can conclude that all creative methods and media: dance, creative movement and process drama, have important roles in learning process of preschool children:



Creative movement lab "Discovering the World" by Nataša Milojević at the Festival of Radio and Sound Art for Children and Youth, BAZAART and RTS, Belgrade, Serbia, June 2023. Photo by Marko Nektan

- Children were attentive in listening to yet unknown artistic music and open to creating their own impressions about the listening content.
- Active listening and artistic participation helped children understand their emotions and collaborate with others.
- Creative movement helped children to connect mental, emotional and physical activities ('thinking through the body') and create spontaneous responses to music.
- Creative movement and dance have a better impact on the learning process in preschool girls, than in preschool boys.
- Process drama techniques can help in active listening of music, and through this, in improvement of general attentiveness and learning abilities of preschool children.



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“Music Art Project” in partnership with the Elementary School “Branko Pešić”, Zemun at the BAZAART’s annual Conference 2022. Photo by Marko Nektan



Siniša Marčeta, sound designer and musician, playing music live in the radio play “Welcome of the World”



“We Grow Together”, pupils and teachers from the Daycare “Naša bajka”, Belgrade, Serbia. Photo by Marko Nektan





Teachers and artists in the Symposium about Arts Education, BAZAART's annual Conference 2021  
Photo by Lidija Antonović



***PTC***

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# **CREATING RADIO DRAMAS FOR BABIES, TODDLERS AND VULNERABLE CHILDREN**





## CREATING RADIO DRAMAS FOR BABIES, TODDLERS AND VULNERABLE CHILDREN

Two production departments in Radio Belgrade took part in the production of radio pieces and creating sound art for babies and toddlers in the B-AIR project: the Radio Drama Department and the Educational Program for Children, Youth and Family. This package consisting of 11 radio pieces, expresses diversity in terms of genre, authorial poetics and their research frame.

Radio drama production – eight radio shows altogether – mostly focused on ‘docu-fiction’ and documentary narratives as well as *ars acustica* pieces recognizing those genres and formats as the most potent and most attractive for all the stories those authors needed tell. The stories conceivably negotiated notions of memory/remembrance/recollections (some of them reached even pre-natal period) and also tackled the issues of language, communication, folklore and oral history, and radio as a medium.

Those eight pieces are elaborated in the contributing text “Sound territories of childhood: Radio Drama Department production of radio shows for B-AIR project, 2020-2023” by Vesna Perić,



Visual Arts Workshop, Art Studio Artina and BAZAART

Editor-in-Chief of the Radio Belgrade Drama Department.

The second text, “Lyrical possibilities of two pianos – Bathing in sound”, is a special interview authored by Nikoleta Dojčinović, Editor-in-Chief of the Music Department of Radio Belgrade 1 and B-AIR program coordinator for Radio Television Serbia/

Radio Belgrade. She interviewed the author’s duo Sonja Lončar and Andrija Pavlović known as “LP Duo”, composers and piano artists who perform with their two hybrid pianos connected to synthesizers and percussion. Their contributing *ars acustica* piece named “Baby Blues” was produced as the Radio Drama Department’s production in the series of experimental sound named “Sound Workshop”.

Three radio shows in this package were produced within the Educational Program for Children, Youth and Family. The last text in this chapter, “WORD... AND...”, contributed by Vesna Ćorović Butrić, Editor-in-Chief of this Department and award winning author of children’s books, contemplates and poetically reflects on development of language in babies and children as well as one sensitive group (the children who stutter) which inspired the three-part series of radio shows: “Conversations of the first kind”<sup>1</sup>, “On birds and people”<sup>2</sup> and “Crosswords”<sup>3</sup> – in her words “that development sometimes flows like a river without stones to stop its flow. Sometimes, however, a word gets stuck in a river vortex”.

1 “Conversations of the First Kind” was presented by Radio Belgrade RTS at the PREMIOS ONDAS 2021, Radio Barcelona festival at the SONHR Radio & Podcast Festival 2022, in the documentary program category. The same show was translated and synchronised into Slovenian and broadcast on RTV SLO 1.

2 Shorter version of this show (9.42) represented Radio Belgrade RTS at the 10<sup>th</sup> Grand Prix Nova, International Radio Drama Festival, in the short form category.

3 “Crosswords” represented Radio Belgrade RTS at the Prix Italia 2022 festival in the category of drama program.

## SOUND TERRITORIES OF CHILDHOOD: Radio Drama Department production of radio shows for the B-AIR project

During three years (2020-2023), in the framework of the B-AIR project, production of Radio Belgrade Drama program consisted of eight radio pieces made about (and for) babies and children, and one piece dedicated to older population.

**“Archaeology of children’s memories”**, authored by Marija Ćirić (2021), for example, is a radiophonic essay which tells a story of bilingual girl named Julia. For this radio essay, the author used selected fragments of audio material collected over the past years. Whenever she had the chance, she recorded her niece Julia who grows up in a bilingual environment, where both Serbian and Dutch are spoken. Childhood is given as a fantasy, reverie with sound images of children’s world, presented through the study of expressive qualities of a child’s voice. Memories arise from the period (of development) of articulated vocal expression of the girl (her speech, babbling, humming). Stages of childhood reveries are combined with contemplations – ‘archaeological’ findings – about the territory of childhood, which are pronounced by the narrator (author).

### NARRATOR:

*Children’s memories are echoes of past events, absorbed and processed at the pres-*

*ent moment. Perceived as intimate hideouts, ‘treasure islands’, they truly are archaeological sites sui generis, ready to be borrowed anytime, whether for consolation or to incite imagination. And archaeology, beyond its literal meaning, is a metaphor for the exploration of childhood; a childhood – maybe just like the one we experienced long time ago.*

### JULIA:

(singing verses of the song she made up)

*There was a bug,  
It farted a lot,  
It got into Julia’s diaper,  
And wanted to bite her.  
Yuyu said: ouch, ouch!  
Come here friends,  
The bug bit me.  
Wow, wow, wow, wow,  
Choo, choo, choo, choo,  
Key, key, key,  
Now Yuyu can sleep.*

For the recording of the show „Archaeology of children’s memories“, the sound recording artist Milan Filipović was awarded the first prize in the documentary-drama category at the 18. TaktoNS international

festival in October 2022, where public media service sound recordings compete. Representatives of public media services from Romania, Montenegro, Slovenia, Bulgaria, Slovakia, Bosnia and Herzegovina, Republika Srpska and two media institutions from Serbia participated in the festival. The jury evaluated spatial impression, stereo impression, transparency, sound balance, sound colour, noise and interference, effects, as well as general impression.

**“Mother – child: Prenatal conversations”** authored by Melina Pota Koljević (2021, dramaturge Vesna Perić) also negotiates the phenomenon of memory but it is the mothers’ recollections that are highlighted, contemplating on mothers’ first communication with their unborn babies, their fears, anticipations and their bonding with their babies *post-partum*. This is docu-fictional study of the communication between a mother and her child in prenatal period which explores various themes such as: motifs of potential fears, intuitive connection between mother and child, sources of inspiration for communication with the help of music, human voice, conversation, various parental expectations, hopes, beliefs, and viewpoints. Besides documentary material, the play also features a fictional part which represents memories of the mothers whose children have grown up.

## VESNA'S MEMORY:

*When she was born, I felt as if a small alien had moved into my life. An unusual creature whose movements, glances, smells and sounds are yet to be decoded. And I had to adjust my language to hers. We didn't speak each other's language.*

*People say it all comes from intuition.*

*Perhaps, if you are not already burdened with interpretations, analyses, linguistic structures.*

*You are not born as a mother. You learn to be a mother. There were times when I was afraid that she could read my mind.*

*My mind used to be filled with fears and anxieties. Are you breathing? Are you alive? Are you sleeping? Are you hungry? Do you feel cold?*

*I never remembered to ask her in my mind how she felt. I only asked about physiological needs. The first period when she was born was like a delicate trembling membrane – it reminded me of the time when she was in my belly. That was our relationship. Relationships are not a matter of space, but time.*

*The sound is also a matter of time, not space. An image is space. Sound is time.*

*When a doctor makes an ultrasound scan of your unborn baby, you get an image. That image is often the first proof of our contact. The second is the one that only the two of us can feel.*

*When the heart starts beating.*

**“How we grow up while listening to radio”** authored by Melina Pota Koljević (2022) – this documentary-feature is specific since there is a meta-level – it explores the contents that make radio attractive to the children of today, but also what radio as a medium meant for us, adults, in our early childhood and youth. Through conversations with kindergarten children and adults' memories (presented as monologues) we discover the impact that music, fairy tales and stories have on children. This programme also features some of the most beautiful children songs.

## MELINA'S MEMORY:

*I bury my head into my mother's blue coat, I cry and hold it tightly because mom has to go to school and Nada is already here, the girl who is looking after me while my parents are at work. In my mind, I believe that if I cling to this coat, mom will not be able to put it on and she won't be able to go to school to teach. Mom is in the bathroom; the door is open, I can hear water running from the tap; I can't see her, but I know she is washing her face and teeth, combing hair. I cling to her coat like a little animal, like a fox on the collar of the coat. Then comes Nada; she puts her arms around my waist and lifts me up, I'm still holding the coat, my mom is opening my fists tenderly, kisses me on the cheek, once, two times, many times and I forget about the coat, she takes it, puts it on, then kisses both of my eyes, I still feel the fur on my face as I watch her leaving through the door, my eyes all watery. Whenever she leaves, I am afraid I won't see her again. All of a sudden, I hear some music, Nada turns on the radio, she holds it under her armpit, and takes me off the couch with her other arm. She walks through the apartment carrying the radio under one arm*

*and me in her other arm, singing to the sound of music. She dances all the way through the kitchen, hall, bedroom, living room, and back. Finally, she gets tired; she puts me down on the floor, takes my hand and drags me to sing and dance with her. I always stumble, because I am clumsy and too small, but Nada lifts me up, encourages me to follow her while she is dancing. The radio is shaking, Nada's arms are shaking, and my entire body is shaking in this merry-go-round. I stop crying. Nada plays some ear-splitting folk music that she likes, something merry and catchy. She drags me around like a puppy, I start laughing, I find Nada's loud singing funny; our flying around the apartment is also funny, the music is funny. I don't know what is louder – the music or Nada's singing. I forget about my worries, the radio is playing, feels like we are flying through the apartment, Nada is dragging me like a balloon, moving easily from one room to another in the rhythm of the music.*

**“Golden hour: Radio-mom”** authored by Vesna Perić (2022) – this documentary programme is made in a simple interviewing form with one interlocutor, Milijana, who works with parents and babies by teaching them to acquire communicational skills through the program “Musical Baby Bonding”. She started the prenatal music workshop program designed for pregnant women and their partners and now works as a prenatal and perinatal educator. Milijana reveals to us how moms, with her support, create a ‘womb song’ – a personalized song for their baby; how a baby in the womb hears sound; what it looks like and why the birth cry is important; how the baby connects with mom's and dad's voice; how to provide vocal support to the baby during birth, which for babies is always a traumatic event of leaving the comfortable womb.



## MILIJANA:

*Every one of them is making a personal song for her baby, so-called 'womb song'. That is something beautiful, but they're like: "I can't do it"; but each and every one of them is delivering a song, and that is amazing. As a matter of fact, every woman can give birth by herself. They have some kind of chip which is, sadly, erased from their memory. They aren't aware what they're capable of. They make a song, and they sing it in front of the group. That song stays with them like some kind of inheritance. They should sing it till the end of the pregnancy. If you make a song, you should use it. Babies must learn it, and they do that if moms repeat it over and over. When you have spare time, you sing that song to your unborn child. You communicate with your baby. Baby in uterus can recognize colour of voice, rhythm; words not just yet. Not until first year baby is able to distinguish meaning of the words, their semantic. So, in uterus, focus is on the feeling, what message you're sending. Music is an instrument to do just that. For the baby, it's like some kind of inheritance. A lot of moms sang to themselves during the delivery, which is wonderful. The most charming way to greet your baby is through your song. Some researchers suggest that baby remembers the song a year after being born if you continue to sing it. That particular song is connected to the baby, it is a personalized song. With it you communicate with your child, you make a bond. And when a baby is born, you already have an instrument ready for use.*

*Live singing is very important for babies. If we use radio as an analogy, we could say that the best radio-station is mom's voice.*

The radio show "Golden hour: Radio-mom" competed in the radio reportage competition at the 27th International Reportage and Media Competition (INTERFER) in October 2022.

**"Emerging Trilogy"** consists of three radio pieces: **"Dr mudash"**, **"Consciousness"** and **"Te-Ri-Rem"** following pre-natal, birth and baby's first sensations, drawing upon pre-Christian and Christian songs as well as abstract musical forms.

1. **"Emerging – Mythology – Dr mudash"** authored by Predrag Stamenković (2021) is a documentary piece that focuses on Dr mudash, a pre-Christian, Slavic deity who used songs – lullabies and stories to put kids to sleep and take them to the fantastic realm of dreams. Besides the mythological entry Dr mudash, the programme narrates of other mythological creatures from the Slavic Pantheon – about fairies, the Fates, Fairy Mother, with an abundance of folk traditions related to the childbirth and the first forty days of the child's life. Folk singer and narrator Svetlana Stević-Vukosavljević tells folk tales, magic spells, tongue twisters and sings lullabies, shaped in a radiophonic composition in the music form of rondo. Through free artistic transposition, the show reconstructs and processes mythological tales, folk traditions, and songs by using the radiophonic method, followed by natural and ritual effects.

## NARRATOR (Svetlana):

*If fairies breastfed someone, it was believed that this man would be healthy and that he will become a great hero, and according to the beliefs related to milk, the child would receive some of the qualities of the woman who breastfed him, so she would be considered his relative and protector. According to the tradi-*

*tion, fairies would get pregnant from the morning dew in the summer, and in the winter, they gave birth only to girls. Constant milk production suggests that fairies are always pregnant and their motherhood was considered miraculous.*

*When a child is born, granny, or the child's grandmother, says:*

*"Welcome, white bee!"*

*"Welcome, little white bee!"*

*And immediately, after giving him or her a drop of honey, continues:*

*"Be healthy and pretty, hero!"*

*"Be healthy and pretty, girl!"*

*"Thank God and this day and this happy hour that you arrived in this world, and into our home, and for putting you down on Earth."*

*Child is bathed and dressed and a plough or some other tool is hanged next to the headboard and child's head is touched by the plough or some other tool, while saying:*

*"Here's a plough, be a plougher, man of the house"*

*"Here's a hoe, to work in a field, a garden, be a gardener and a sickle to reap, be a housewife."*

Sound workshop "Emergency – Mythology – Dr mudash" represented Radio Belgrade, RTS at the Competition/Festival 9<sup>th</sup> Grand Prix Nova, Romania; in the documentary program category in September 2021.

**2. “Emerging – Consciousness”** authored by Milenija Ristić (2021) is a second part of trilogy, an *ars acustica* piece presenting how a new-born perceives the world, starting from its earliest moments of consciousness that is awakened while the baby is still in the mother’s womb, to the way babies get to know the world after they are born. Author used sound images to introduce us to the baby’s original perception of the world, which is the foundation of the subsequent consolidated consciousness and new knowledge. The time babies spend in amniotic fluid is similar to the movements and sensations in the primordial ocean, which stands for the earliest origins of life on Earth. This show was broadcast on RTV Slovenia<sup>1</sup>.

**3. “Emerging – Te-Ri-Rem”** (Stamenković, 2022) is a final part of the trilogy, a story of origin of the Christianity presented through a kind of triptych audio fresco about the Nativity of Theotokos and the Ever-Virgin Mary, of the Holy Glorious Prophet, Forerunner and Baptist, John, and of Our Lord Jesus Christ. The programme is based on fragments from the initial chapters of the Gospels of Matthew and Luke, the lives of Saints (Joachim and Anna, Zechariah and Elizabeth) and religious poetry (*troparia* of Theotokos, Saint John, Jesus Christ and Archangel Gabriel interpreted by our famous vocal artist and conductor Katarina Božić). Shrouded in the Lord’s Prayer, which pulsates as *ostinato* throughout the play; effects of symbols of life: wind (breath and space), water (passing of time and John’s baptism on the river Jordan)

and fire (light, enlightenment and purification); and ambient music of the French acoustic artist Mark Chouarain (experiences with instruments of water and glass). A special component of this radio piece is a church chant – Kratima TE-RI-REM in its variants of a mother’s lullaby to the newborns (Mary, John and Jesus).

**“LP Duo: Baby Blues”** authored by Sonja Lončar and Andrija Pavlović (2022) is an *ars acustica* composition written in a form of six short minimalist hybrid-piano pieces (*Birth, Cradle, And now what?, All about You, Teach me to Breathe, Lullaby for Vigilance*) with recognizable musical poetics of LP Duo. With these compositions, the authors tried to evoke emotions related to early childhood, getting to know the world and first experiences. Music is intended for babies as well as adults, who will be taken by compositions on an imaginary journey to the earliest memories, forgotten experiences or already repressed subconscious.

This show represented Radio Belgrade at the *Prix Italia* 2023 festival in the category of music program<sup>2</sup>. Also, this show was a part of “Séance d’écoute” at the 18<sup>th</sup> Biennale of Architecture in Venice, in the pavilion of the Republic of France<sup>3</sup> and was broadcast on RTV Slovenia<sup>4</sup>.



Vesna Perić presenting the production of the Radio Belgrade Drama Department at the Festival of Radio and Sound Art for Children and Youth, BAZAART and RTS, June 2023. Photo by Marko Nektan

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Festival of Radio and Sound Art for Children and Youth, BAZAART and RTS, June 2023  
Photo by Marko Nektan

## LYRICAL POSSIBILITIES OF TWO PIANOS – BATHING IN SOUND

### How did you approach composing “Baby Blues”? What was the basic idea?

We wanted to use music to tell a story related to the sensitive topic of coming into the world, giving birth, early childhood and first experiences. We tried to imagine ourselves in such a position musically. In a way, it requires a kind of slowing down and acceptance of uncertainty, both in the experience itself and in the process of music creation. One could say that the musical process is analogous to the life process (and *vice versa*). This can be felt in the piece “Baby Blues” both in the choice of instrumentation and in the fabric of the music. The piano plays the role of ‘narrator’ of a continuum, and the other instruments (synthesizers, percussion) represent a metaphor for some of our first sensations, which our senses receive very sensitively in the initial days of our stay on this planet. So what and how do we hear for the first time? What do those first tactile experiences sound like? How do we feel about all this? Those were some initial questions from where we started composing, which is not only an intellectual but also a strongly intuitive act.

### Did you intentionally use certain tonalities, melodies, rhythms, harmonies? What were the solutions?

The intention was to evoke a different, more care-free world as we remember or imagine it. It is a

world full of tenderness and support. A world of discovering the unknown. And our early musical memories, lullabies and children’s music that was of high quality when we were growing up in Yugoslavia in the 80s of the 20<sup>th</sup> century certainly helped us here. We took a tonal approach to the harmonic and melodic composition and even the use of synthesizers and sound effects, because we believe that the tonal way of ‘composing’ is the best way to express and associate different spectrums of the deepest emotions.

As for the rhythm itself, it is continuous and as such gives support to the flow. Rhythm is life in itself and that rhythmicity with the unusual sounds of a vibraphone or synthesizer attracts attention and brings the focus back to the music itself. Because we know how difficult it is to maintain focus and presence, especially in the earliest years. We conceived the whole work so that the listener is completely surrounded by music, as if he is ‘bathing’ in sound. We thought a lot about a new ‘immersive’ way. And it would be interesting if this music were mixed just like that, so that babies (and adults) listen to it first spatially, and only then linearly.

### About the instruments used – two pianos... Is that retro for the 21<sup>st</sup> century?

For us, the piano is a percussive instrument, but it has very lyrical possibilities. Actually, this is a

suite for piano, electric piano, vibraphone and synthesizers. It is our hybrid musical language. In the 21<sup>st</sup> century, the piano itself gained a new popularity and a new musical expression, which within the music industry was supported by a new musical genre (21<sup>st</sup> century neoclassical). However, the grandfather of this genre is Eric Satie, who far-reachingly anticipated music and society, more than a hundred years ago. And behind Satie are Debussy and Bach, his musical ancestors. After Satie, John Cage and the minimalists. We are all connected, and these are some birth new cycles of life and new music.

### And why is there no text?

Text enforces the programmatic character of music. Text was not necessary here, but we think it is important that children (young and old) develop their imagination by listening to instrumental music and the sounds around them.

### Is the work genre-oriented (folklore, Balkans, jazz...) and how?

It’s not. Musically, we never think within a certain genre; we rather let the musical thought go outside the preset genres, so that the hidden, inner world gives birth to music. We try not to interrupt the natural flow of music and afterwards also not to ‘bother’ the



music too much with our interventions. We create through listening and playing and that is the most natural way of composing. Music comes and goes, it is up to us to try to 'catch' it and record it. Which does not mean that we do not have our refined musical language that we have been researching for years, trying to get to know ourselves.

**What did you want to achieve with the piece?  
What reaction did you expect? And have you  
tested/received it?**

First of all, it was important for us to create a quality piece of music and create an authentic world of support for individuals and families. A world of safety, tenderness and trust, and we all lack that. We mostly received exactly such comments: about the necessity for such an approach and composing music for the youngest, where that music actually becomes a joint, family act/ritual of listening.

**Based on this idea/composition, did you get  
an idea for further creation in that direction?**

This process was very inspiring for us and we will certainly continue to create in this direction. We think this kind of innocence is needed today more than ever.

**Perhaps the question is – how does the world  
sound today, maybe also from the perspective  
of children...**

Maybe it's best to ask them first. Today the world is very noisy, completely cacophonous. That's why we try to provide a counterpoint to that and organize with our works small 'musical enclaves' where a different world is possible.



Live recording of the radio show "Respected Children", at the Festival of Radio and Sound Art for Children and Youth, BAZAART and RTS, June 2023. Photo by Marko Nektan

## WORD... AND...

# Development of language in babies and children

“... Grandma taught him many things. She sang to him and told him long stories...

Talked and talked:

- Mom, he doesn't understand you, look how small he is – I would tell her.
- He understands me – my mother would answer me, holding the baby in her arms, which curiously looked at her with big black eyes. The baby was reaching out to hug her.
- Ba-ba!- was heard.

We were speechless – speechless in the face of the first word!

- You see – said my mother – he understands everything...”

This is part of the story from my book “Street on a swing” (*Ulica na ljuljaški*).

To write this book of less than sixty pages, it took me several years... The book, like these words that I am writing now (to remain only at the beginning), is a personal story (and confession) about one word.

The first word!

The baby is six months old...

The WORD has always been my main goal: how it is created, what can be done with it.

What can it turn into and what will happen when it is gone...

I brought psycholinguists, neurologists, paediatricians... to the shows: they denied the possibility that my baby spoke her first word at only six months!

“From cooing to singing combinations of vowels and consonants, your baby's vocalizations and verbal experimentation can sound as adorable as they sound meaningless. But listen carefully, and one day you will hear it: the first real word... By nine months, your baby will probably start stringing together “ma-ma” and “ta-ta” sounds without needing to know what they mean. But when those sounds start to turn into words with meaning, it's a turning point that feels like magic.

Babies begin to speak – that is, to try to express themselves in meaningful words – between 9 and 14 months...”

That's what they told me.

That's how I read it.

I will reserve the right to believe that my baby spoke at six months.

And, I'm sure my baby understood what grandma was saying and singing to her.

Grandma, somehow, managed the best: she always had the right word – even for the first word, the right song, the right facial expression...

And that counts as a ‘conversation’!?

Words are given to us.

We get them at birth, as a species, as human beings, in some record that we discover throughout our lives. That ‘hologram package’ can remain locked or be illuminated by a beam directed at the right time, in the right place.



The word, one, only, is singled out ... “a complete and independent linguistic unit created in the conventional combination of sound and meaning... The vocal side can also be symbolized graphically and then we talk about the written word...”

It seems complicated because it is complicated!

Better yet – it is complex.

Both in phylogenetic and ontogenetic development.

This time, ontogenetic is our interest: both prenatal and postnatal part of it.

“A child feels everything... It’s cellular memory, cellular memory... it doesn’t need a brain, it doesn’t need neurons... to remember...” said professor doctor, neuropsychiatrist and academician Vlada Jerotić, one of the first scientists who dealt with prenatal life...

An anecdote related to Yehudi Menuhin is also recounted about that prenatal life.

One day, by some chance, the notes of a sonata came into the hands of the famous violinist. He saw those notes for the first time, but he had the whole sonata in his head – he played it right away! He was very surprised and for a long time tried to understand what it was about, until one day he told this story to his mother. The mother almost cried and said to him:

- Well, I played that sonata almost every day while you were growing inside me...

It could have been like this. The facts are that Maruta Menuhin was a linguist, but also musically

educated. Together with Yehudi’s father, she taught Yehudi and her two daughters, who became pianists, in their home.

In a 1991 interview with “The Chronicle”, Mrs Menuhin recalled introducing her son to classical music when he was eight months old.

- I took him to concerts carrying him high on my shoulder, she said. -

... Yehudi never cried. He was ‘wrapped up’ in music; he would even refuse his warm bottle of milk...

Maybe you remember whole sonatas, maybe words, whole sentences from that mother’s inner Universe in which new life grows!? If that little (or big?) miracle of life, which is born anew every day, could tell the story of that inner life, because it certainly is life, it would make things easier for parents and science.

Many parents put headphones on their stomach during pregnancy so that their baby can listen to music. It is known that babies usually start hearing during the third trimester. We also know that babies begin to develop language at a very early age, and as more and more research is conducted, it is quickly becoming clear that they are anything but passive listeners. It turns out that while in the womb, fetuses nearing birth can absorb and learn some parts of language and use it when they are born!

In one of the many studies, author Eino Partanen, a Finnish neuropsychologist, sought to answer that question: how babies can store memories and patterns in their brains related to auditory learning before they are born. In their study, Partanen et al. gave pregnant women a recording to play several

times a week during the last few months of pregnancy. The video also included an invented word “tatata” which was repeated many times. After they were born, the babies were tested using an EEG sensor to see if their brains would respond to a made-up word as if it were familiar to them. Babies who heard “tata” (*daddy*) recognized the word and its variations, while babies who did not hear the made-up word during pregnancy did not respond. In addition, the babies who heard the recordings also recognized the sound changes in the invented word, and the more their mothers played the recording, the more their brains responded to these changes, meaning that their experience before birth was very important for their language processing after they were born!

Is that how the first word sounds?

First word: Revelation! The universe opened up and *It* timidly enters, not even aware that it exists....

The series of shows “Conversations of the first kind”, “Crosswords” and “On birds and people” is dedicated to the development of language in babies and children.

That development sometimes flows like a river without stones to stop its flow. Sometimes, however, a word gets stuck in a river vortex (the Serbian language offers many stylistic possibilities: word-river (*reč-rečno*), but if we were to invent a possessive adverb for the word REČ (*word*), it would be the same as for the word REKA (*river*).

Words!!!

That word, like a small bone or a sip of water, gets stuck in the throat.

Most often it gets stuck in parents' throats. Or, at least, a long time ago, it did in mine. As in the story from the beginning of this text, you remember, only that beginning is a personal confession of one word.

The first one.

Grandma took on the role of narrator of the words...

A lost word, the right one, 'born' in the right place, at the right time, can hardly be compensated. Some other important ones will come across... But, where the lost one stood, a small hole will remain...

And if a lot of small holes accumulate?

.....

We get to know the child in many ways.

With what he draws, for example.

'Readers' of children's drawings must be top masters of their science.

We find out by what he keeps silent or what he says. To our parents, sister... friend... teacher...

But that first 'reading' of the conversation happens while playing. Even today, children play with toys. I'm going to make a grammar mistake, break a grammar rule about the use of prepositions in Serbian language, and use the preposition 'with' for something inanimate.

I will say:

- A child is playing with a doll!

In Serbian language, namely, the preposition 'with' is used to denote the company of a living being.

I would get a bad grade in a written exam because of this mistake. Unless I rebelled and explained to the teacher (and, for example, I'm in the first grade) that my doll is alive to me! That I can, sometimes, (just) talk to her without limits, that she always listens to me...

- Yes, teacher, I certainly know what the word (again the word!!!) KOBAGAJAI (imagination) means. You don't have to call my parents to "talk to them about my wild imagination..."

The child knows that the toy is an inanimate being. (An oxymoron – a little more grammar!) Guided by that knowledge, and *I know, I know that*, I did the first show from this cycle. With the former baby who (a long time ago) was six months old when she said her first word: "GRANDMA"! We were doing a show: today's expert in animation, sound, IT technologies, he was helping me – checking the tones that arrived by phone (Covid was taking its toll, in full swing). Mom Maja Radović, a wonderful mom and an excellent teacher of Serbian language and literature (grammar stalks me – I'll have to think carefully about those holes that appear when a word is 'swallowed'... it seems that grammar is 'giving me a blow'...) - so, that mom was filming her second child, the second boy, from the moment they arrived home from the maternity hospital. Vidak's first speech was not included in the show because the deadline for the submission of "Conversations of the first kind" was set. However, that does not diminish the preciousness of sounds, intimate moments in the Radović family... We had something unique!

Because I write texts for children, I wrote a story that is 'inserted' into the documentary material...

The toys talk, yes, yes, (and) to each other. Little Robot, a gift to baby Vidak, and Big Bear, a family heirloom – are the main characters of that story.

'Reading' the conversation between the toys and the child is a source of knowledge!

Three families became involved in the show: the Radovičs; mom and daughter who play Robot and Big Bear - Marina Đurđa Stojanović and Matija and Vesna!

Family weaving!

"Conversations of the first kind" are also a kind of family dictionary of verbal and non-verbal content.

Did I make a lexical mistake again?! A DICTIONARY is a printed book, an internet page, a whole that contains a list of words... Does it have to be a "printed book full of words"?! Could there be, for example, a compendium of non-verbal communication?! When non-verbal communication already exists, there should also be a non-verbal compendium that would compose grimaces, individual voices, groups of voices by which their creator – primarily the Child, successfully communicates with the environment...

The show "Conversations of the first kind" in a way denies the definition given by the experts. Because mother and father know what their baby 'says' even before the first words recognized by science...

Have you ever asked the parent of a 'talky' baby:

- What does it say? What is it saying?



It sure is. And the parent, for sure, knew what the baby was saying. Of course, the parent who speaks, finds out, invests in this almost crucial communication.

Those parents know their babies. And science has also discovered this: babies have a greater imagination than previously known!

New research in the field of neuroscience (Philosophical Transactions of the Royal Society B) and scientists from Vienna have established the foundations of this knowledge: children as young as 14 months can independently consider several contents if they are shown an object that is not clearly recognizable and leaves several interpretations open.

By measuring pupillary diameter in infants, research by Nicolo Cesana-Arlotti (Johns Hopkins University), Balint Varga and Erno Teglas (both of Central European University) “provided evidence of increased mental effort when infants were exposed to situations compatible with several variants of the hypothesis.”

These results indicate that the basis for our imagination and the ability to think about different possibilities is present very early, before babies speak.

It is precisely in this context that the “Crosswords” show fits in.

And in “Crosswords”, it’s about words!

Of course.

But, above all, about that part of communication with the child when the parent(s) and the child communicate by reading.

- Read *with* your child! - that is the basic message of psycholinguist, Nada Ševa, Ph.D. expert consultant for this show.

We followed that trail.

Nada Ševa, Ph.D. explained to us that “...children can hear what we say even in the prenatal period, in the stomach... How do they hear us? For example, if we put our hand over our mouth, what we are saying will not be understood very clearly. That’s how babies hear us snuggled up in mom... It’s also a fact that in that prenatal period, parts of the brain develop, the so-called Wenicke’s area, which is also later responsible for the ability to hear voices, to hear combinations of voices that will be realized as some words, some simpler statements... which lasts until maturity when it is possible to express oneself....

...We don’t know, in fact, how many words babies can remember, conditionally speaking it is rather the rhythm, some tones of voice, some characteristics that are specific to the speaker who addresses them the most, and these are, in fact, most often mothers because they carry babies for nine months, but they can also hear dads and all the family members...”

To move on, you’ll have to close your eyes and ask someone to read this to you:

“I crossed three countries,  
and ran over three more,  
and sailed three seas –  
until I caught it  
blue rabbit,  
strange rabbit,  
the only one in the world.”

(there are more...)

The poem “Blue Rabbit” by one of the most important authors of Serbian children’s literature, Duško Radović, was our guide and connective tissue for this show. The poem – made up of a kind of cross-word puzzle, is one of the most demanding (if you are not a child!) for the interpreters of children’s literature!

You don’t have to search for what ‘the writer wanted to say’ (this item should be removed from all interpretations of the text! Both at home and at school, and at universities...). Listen up!

Or, read with your child some text that you know the child likes, and talk.

Like Anja and her dad, Pedja:

Pedja:

You know what these hurdles are? These are small fences that horses need to jump over when they race, you can see in the picture. Ready, Magic?

Anyja:

Why do they call her Magic?

Pedja:

So that’s how they named that horse. What is the name of the horse you rode, this last horse?

Anya:

North.

Peja:

North. And what were the names of the horses you rode before?

Anya:

Gaitana, Clara, Petra and Little Star (*Zvezdica*) and Little Clara (*Klarica*).

Pedja:

Indeed.

---

What is the ultimate goal of reading, listening, talking?

First of all, with babies and children?

Probably to get to know (our) child. Because words (spoken and written) are – for now – the only way to do that. To get to know that Universe, to help the child become what that Universe offer them as a possibility. Or, to learn about some impossibilities through words, to make them possible...

The third project “On birds and people” started from that task:

A boy told us:

- My stuttering started a year ago. Then I started to block in sentences. I couldn't speak a sentence properly...I used to cry and shake. Because I was saying to myself: Why me, why me...

Nikoleta Stevović devoted her professional work to studying stuttering. In the manual (passive exhalation technique) intended for people who stutter, parents, experts, she states that “the cause of stuttering lies in the genetic but also neurological basis and predispositions and can be activated with triggers from the environment in the form of external and internal psycho-social factors.”

Stuttering will not go away on its own. Attention must be paid to it; expert assistance is needed, various techniques must be learned:

“There is no guarantee that stuttering will not occur sometime during the life period; but such a possibility exists. No one can tell you that.

I teach children that stuttering is not terrible, that we should not be ashamed of it, we have to practice a lot...” says Nikoleta Stevović.

Stuttering is not terrible.

Aleksandar Petrović and I started ‘writing’ this show long before it became part of the B-AIR project. Colleague Petrović brought from the kindergarten precious material for the show “Confusion Book” (*Zbunovnik*) (everything that comes from the kindergarten is precious!): the boy stutters! For the first time, we had to ‘synchronize’ him, but we regularly played “The Stuttering Boy” on our radio shows. The boy’s friends did not differentiate between their speech and the boy’s. The children and the Boy were children from kindergarten! Without difference!

The broadcasts from the B-AIR project were made for a radio program, the Educational Program for Children, Youth and Family. Radio as a powerful medium, in a multitude of possible types of

communication between children and people, provides the possibility of trust, giving in and learning. Radio as a medium has a great influence on the development of a child’s thinking. Excited by new phenomena in the media of various kinds, the radio program awaits – and will welcome – its return in a selection of many possibilities.

I hope that at that moment the show “Good morning, kids”, which has been on the airwaves of Radio Belgrade since 1955, will still exist and that the accomplishment of that show will continue. Why exactly this show and why is it special? Because the show ‘reads’ with children and adults, it’s always there when they want good words, and because, with the credits at the beginning of the five-minute ‘constellation’ of words, music and sounds, something chirps.

What is that!?

Is that a bird?

Many listeners would say yes.

It’s not!

The inimitable actor Mića Tatić, whose birth centenary we celebrated this year, 2023, is chirping.

That chirping is also important to us, among other things, because, as new findings say, “there is an instinctive, primordial connection that, immersed in rhythms, unites people and animals, birds above all...”



In the latest study, a team of biologists and psychologists from the American National Academy of Sciences came to very interesting results: birds and humans have comparable ways of recognizing songs, based on their rhythmic patterns.

It is precisely the problems arising from disturbed rhythmic patterns that are associated with numerous language and speech disorders in childhood.

Even stuttering.

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In Serbia, in the city of Belgrade, in the “Vladislav Ribnikar” Elementary School, this spring (May 3<sup>rd</sup> 2023) one of the greatest tragedies that can happen to a society, a civilization, happened: a student (13 years old) killed his peers and a security guard and seriously wounded a history teacher with his father’s gun.

Where did this terrible fact in the show about words come from?

We are yet to fully find out about that terrible event. Some words, spoken, but, what is much more important, *unspoken* between this thirteen-year-olds (is there a *word* to name him and what he committed?) and his environment, above all his parents, may help in discovering a way to prevent this from ever happening again.

Words. A few letters, a small item in the dictionary. But, without them, abysses arise. Sometimes only one heard or written word – is enough.



Vesna Ćorović Butrić and Aleksandar Petrović, creative team behind “Crosswords” and “On Birds and People”, in the editing room



# AUDIBILITY: APPROACHING DEAF EXPERIENCE(S) WITH SOUND ART





## TO AUDIBILITY AND BEYOND

Within the B-AIR project, TWIXTlab's core contribution was entitled "Audibility", and was concerned with the experience and the ways of the Deaf<sup>1</sup> with music and sound art. The project engaged in three interrelated fields: research, pedagogy and public intervention, using inclusive artistic learning-through-making as a vehicle for bilateral inquiry (for both adult researchers and pedagogues, as well as teenage students), and ultimately as a medium for creative expression and the promotion of public awareness. In this chapter we will be laying out the contents of the three-year long endeavour, documenting our activities while reflecting on our research questions, our educational approaches and the processes we initiated and facilitated.

In a nutshell, the "Audibility" core team<sup>2</sup> worked on formulating the plan of action and promoting it through the channels of Deaf education and beyond. On one front, we introduced an educational program aimed at acquainting Deaf and Hard-of-Hearing children with sound art, radio art and music. The second thread of the project was based on multi-layered research, within the framework of multi-modal ethnography. Using participant observation within

and outside the classroom, discussing with specialist pedagogues and art practitioners, 'interrogating' technological applications, and also reflecting on our own art-pedagogical methodologies, we sought to shed light on the Deaf experience with sound and music. Last, we aspired to foster connections among cultural and educational stakeholders, institutions, or individuals affiliated with these fields. The ultimate objective was to promote Deaf accessibility, inclusivity, and active participation in the creative process, breaking down cultural constraints and stereotypes regarding this particular social group's exclusion from sound-based artistic fields.

Particularly, the program consisted of four semesters of creative workshops – three of which were held in a High School for Deaf and Hard of Hearing, and the fourth one in the prestigious setting of the National Opera of Greece. In parallel, our stakeholder engagement plan brought together creative individuals, organisations and institutions from various levels (from the classroom to the Ministry of Culture) in the creative educational process. Further, our dissemination strategy brought us to present our research and



Audibility logo designed by Melissanthi Saliba & Myrto Delivoria

its artistic outcomes in academic settings, peer-reviewed journals and publications, conferences, workshops, seminars, and exhibitions, both in the framework of the B-AIR partnership and outside of it.

Our aspirations towards the legacy of the project span beyond the time-limits of the Creative Europe co-funding scheme: one of the key goals is to design a methodology for teaching music and sound art in a more inclusive way, sensitive to neuro-diversity, and propose it to the central educational authorities in Greece to adopt it in the school curricula.

1 In this text we will be using the conventional distinction between 'Deaf' (with a capitalised 'D') and 'deaf' ('d' in lowercase) to signify the conceptualization of deafness as cultural and linguistic diversity ('D') in contrast to hearing impairment ('d'). In brief, the Deaf partake in the so-called Deaf culture and community, and constitute a linguistic minority – using Sign Language(s) as their primary means of communication, whereas the vernacular term 'deaf' signifies 'hearing impaired' individuals who are not necessarily members of the aforementioned community.

2 About the "Audibility" core team, please see at the end of this chapter.

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## AUDIBILITY:

# Cross-disciplinary approaches on scientific research, education and pedagogy, and social intervention, through artistic creation

Within B-AIR, TWIXTlab played a role with its “Audibility” initiative, which delved into the relationship between sound art and music and the experiences of Deaf and Hard-of-Hearing individuals. The project encompassed a series of creative encounters between sound artists, musicians, Deaf and Hard-of-Hearing students, and their educators. These encounters, which consisted of workshops and presentations, initially targeted Schools for Deaf and Hard-of-Hearing individuals in Athens, Greece, with the potential for expansion beyond the school environment. These interactions shaped an educational and creative research framework, where invited artists, educators, and students collaborated on the creation of artistic works facilitated by our expert collaborators each semester.

We should note that our general strategy in regards to artistic making was to think beyond the concept of ‘accessibility’, and design our approach in terms of ‘inclusivity’. From this perspective, students were



Invited artist Tatiana Remoundou presents in School, November 18<sup>th</sup> 2021. More info on Tatiana's series of workshops in the “Unicorn” article. Photo by Yorgos Samantas



involved through workshops in the process of artistic creation, and into a collaborative framework with the invited artists, rather than solely as end-users or spectators. Respectively, our observational focus was put equally to the artworks as final outcomes, as well as in the processes of collaboration and collective creation. This would provide participants not only with the joy of creation and the benefits of artistic education, but also with insights to the applied knowledge that underlie each process and artwork. In order to highlight the processual dimensions of the endeavour, and also for extending our reach to specific audiences, we documented the workshop activities in video or audio recordings.

As general and educational coordinators of the project, for us these activities were not only a framework for teaching, but also for learning in terms of research. Within the methodological framework of ethnography, we applied long-durational observation on the field (for over a year and a half), gradually getting acquainted with the community, having recurring discussions with the participants in the workshops (be it teenager students, their educators, or young adults), and facilitated focus groups with expert interlocutors, grounding our research in qualitative data collection and analysis.

On one hand, ethnography as the key method of anthropology helped us understand, among others, the diversity of Deaf experience at the particular age group, to experience the educational framework and the group dynamics, and to have an insight within the young Deaf community in Athens, to which we are outsiders. This helped us to better understand the context in which we were acting and the impact we generated. We should add that the proliferation of a variety of media in ethnography,

the questioning of power asymmetries between the observant and the observed, as well as the so-called ‘crisis of representation’ (Clifford et al., 1986) in social sciences has led to epistemological reflections about who can produce knowledge for ‘the Other’, in what terms, and in which ways. Therefore, our aim was not to speak on behalf of, or represent our interlocutors to the hearing majority, but rather to ‘make sense’ together with them on the premises of sonic expression. Informed by methodologies on how to ‘make sense’ with a variety of media, but also by the critical approaches on knowledge production, “Audibility” project aspires to register into this newly formed domain of multi-modal ethnography (Dicks et al., 2006).

On the other hand, we also deployed an ‘object-oriented’ ethnography, a framework often used in the field of applied arts (i.e. arts and design), which helped us tailor particular art processes. Introducing props, such as transducers/exciters (vibrational speakers), or various modes of visualising sound, we questioned: What works, and what doesn’t? What if we *translate* this sound in this colour, and not the other? What makes sense for our collaborators, and how does it come in negotiation with our own – and our invited artists’ – initial aspirations and aims? As our main group of interest were primarily teenage students, we deployed *playfulness* as a central strategy for introducing our questions, props and methods.

A major part of scientific research focusing on deafness is currently powered by the so-called ‘medical model’ for disability<sup>1</sup>. This perspective focuses on deafness as a hearing impairment or deficiency, and thus as a condition to be ‘corrected’. Cutting edge technology, like cochlear implants and up-to-

date hearing aids appear in the market as a ‘remedy’. This approach represents only one of the ways one can understand deafness, or even experience oneself and dwell in the world as a Deaf person. Albeit very effective in making individuals’ lives better, these medical-technological applications are, at the end of the day, dependent on individual financial capacity, access to the respective technology, or state policy support – not to mention critical stances or resistances towards one’s life pathologisation.

With those controversies in mind, our approach within “Audibility” embraced the so-called ‘social model’ for disability. In a society planted with various barriers, it is not the individual that needs to be ‘fixed’ or a diversity to be suppressed in order to fit in; it is the societal structures that should change, discriminatory attitudes that should be deconstructed, exclusion barriers to be eliminated. The social model stemmed from the Disability emancipation movement during the 1990’s and resulted in the UN Convention for the Rights of People with Disabilities (2006). The Convention serves as a major catalyst in the global Disability rights movement enabling a shift from viewing persons with disabilities as objects of charity, medical treatment and social protection towards viewing them as subjects within society, full and equal members with full human rights.

Furthermore, our aim is not to understand ‘deafness’ per se. It is to put the understanding of sound and hearing (and not hearing) into a new perspective, by looking into what our Deaf interlocutors, as a socially excluded group, are doing with it. And, for the interventional aspect of our work, to map these potentials and propose them as a new methodology for more inclusion, both in art education and artistic creation.

1 For the various ‘models for disability’, see, for example, the UNHCR edition in the following link: <https://www.unhcr.org/media/handout-2-models-disability>

For this purpose, “Audibility” brought together a working group of expert collaborators from a range of academic fields and practices, forming a cross-disciplinary approach from the fields of anthropology, artistic pedagogy, radio production, music and sound art, socially engaged art, innovative technology, architectural design, and Deaf and Disability studies. Initially addressing Schools for the Deaf and Hard-of-Hearing, the project evolved to include young adult Deaf participants outside the school framework.

Through our project, we aimed to challenge the *naturalised exclusion* of the Deaf from sound-related educational and creative activities. We use the term ‘naturalised’ in order to highlight the fact that it is based on the common-ground misconception that sound is absent from the world of the Deaf. Based on this pervasive stereotype, a whole educational system – with perhaps few exceptions – understands musical education as futile for Deaf students. But sound and music is there for everyone; one can say that the Deaf have a different relation with it, than the hearing.

Our primary goal was then to expand the realm of the sound experience for all participants. By emphasising the concept of ‘audibility’ – a rendering into sonic terms of ‘visibility’ for marginalised groups – we delved into the theoretical and practical implications of integrating the educational system for the Deaf and Hard-of-Hearing individuals with that of music education. We also developed a systematic educational approach that explores new avenues of interaction between sound art and the Deaf experience.

Our initial research questions revolved around devising alternative means of accessing sonic media when guided by the experiences of Deaf and Hard-of-Hearing individuals:

1. **Can we experience sound beyond the realm of hearing? What alternative pathways to sonic media access can we devise when informed by the experiences of Deaf and Hard-of-Hearing individuals?**
2. **In what ways can we conceptualise these alternative sensory channels and employ them artistically to promote the inclusion and audibility of the Deaf as a ‘silent minority’? How can musical and sound art education contribute to deconstructing stereotypical, normalised exclusion from specific artistic fields?**

3. **What insights can we gain through the act of creating art?**

We strived to reframe sonic perception in various ways, incorporating elements pertaining to the materiality of sound and the phenomenology of perception, such as vision, vibration and touch, physicality, spatiality/spatialisation, proprioception and kinaesthesia, but also respective media that can bring together those understandings: language and vocal performance, narrative, drawing and technological applications. These elements served as tools to further explore the Deaf experience and the perception of sound beyond conventional hearing.



Students watching Lambros Pigounis presentation (in the background), as he refers to the vibrational qualities of voice, May 5<sup>th</sup> 2022. The banner above the screening reads “Role Models - We are imitating them”, accompanied by religious iconography. It is indicative of the various models of disability that act upon the educational framework



Based on contemporary technology, we examined the use of easy, free and accessible applications that offer the possibility of visually *translating* sounds and waves, (like spectrograms, oscillograms, etc.), bearing in mind that Deaf communities adopt respective applications with huge benefits. For example, the hearing majority can only imagine what innovations text messaging, and later video calling, brought to Deaf telecommunication. These technologies are enabling sound processing software to act as a communication channel for a 'listening' experience with visual aids and media.

Further, we looked into vibro-tactility, as a corporeal way for sensing sonic signals, through the use of transducers/exciters, that were used in many of our artistic applications. This entailed a specific research on vibrational conductivity of materials and an assessment of equipment for particular use, powering, and health and safety issues.

A particular focus was given to the Deaf voice, namely the individual voice of our interlocutors, which diverges from the norm of 'correct' articulation – because in most cases the Deaf cannot hear others nor their own voice, and as a matter of fact, the oral/spoken language is usually a second language particularly for people who were either born Deaf or experienced the hearing loss in early childhood, before developing speech. In accordance with the pervasive stereotype we wish to deconstruct, in the hearing majority's imagination the Deaf are not only unable to hear, but also to speak (encapsulated in the fix-phrase *kofálos* in Greek,

equivalent to *deaf-mute*, a term obsolete in English as derogatory). This entails further exclusions that extend from the metaphorical understanding of voice as a means of political agency, to very tangible and everyday issues, like the diversity of voices articulated in public. The encouragement of Deaf voices served as a bridge between different forms of artistic oral expression, and can be understood as a space where physical expression, linguistic expression, and aurality intersect. However, as it became clear to us that not all of our interlocutors were comfortable with using their voice, we insisted on encouraging and empowering vocalisation, rather than making it compulsory, to further avoid the canonistic paradigm of the Oralist tradition in Deaf education, which at past times accompanied the ban of Sign Languages in pedagogical settings.

In our research, we also drew inspiration from attempts to negotiate between sound and imagery in various historical art movements. On one hand, it was the modernist approaches that used distinct elements such as colour, point, line, plane, sound, and timbre as educational tools. The modernist project developed between Wassily Kandinsky and Arnold Schoenberg to make music more "descriptive" and painting more abstract was put into artistic use. And on the other hand, particular Deaf art manifestations, prominent to the early Deaf rights movement (like the works of Betty Miller, Susan Dupor and Anne Silver, or the De'VIA initiative, among others<sup>2</sup>) contributed to the conceptualisation of key arguments in the arts towards Deaf empowerment

and political visibility, as well as visual tropes for understanding sound and voicing at large.

By employing these methodologies and proposing sonic media to students in Special Schools for the Deaf and Hard-of-Hearing, our project sought to broaden the scope of sound perception, moving toward an inclusive understanding of the sonic that would transcend the limitations of conventional hearing, and question *the ear* as its epicentre. Through material experiences, sensory exploration, linguistic diversity, and technological tools, we aimed to explore new dimensions of aural diversity<sup>3</sup> and heterogeneity.

Reflections on our cross-disciplinary approach were presented in the context of "Radio Utopia – News from the World", within the Ball Theatre program in the French Pavilion of the 18<sup>th</sup> Venice Biennale of Architecture, in the form of a 3-ply podcast, with the participation of scientific advisor on "Audibility", Panayotis Panopoulos (Anthropology of Sound, Music and Dance, University of the Aegean), educational coordinator Dana Papachristou (New Media Aesthetic Theory, University of Thessaly / To Aesthate), expert collaborator Eva Fotiadi (History and Theory of Art, CARADT / OtherAbilities project) and the "Audibility" project coordinator Yorgos Samantas (anthropology, sound studies, TWIXTlab).

To listen to the podcasts:



2 An extensive catalogue of the genre can be found here (<https://www.museumofdeaf.org/de-via>, and <https://deaf-art.org/>). Curator and visual artist Ourania Anastasiadou (community liaison in "Audibility") delivered a keynote speech on the subject, which you can access here: <https://b-air.infinity.radio/en/learning/audibility-inclusivityandsoundart/sound-art-education-and-inclusivity-for-deaf-and-hard-of-hearing-adolescents/> (video in Greek, with a transcription translated in English).

3 The term "aural diversity" was coined by John L. Drever and Andrew Hugil in 2019 and was put in practice in the same-titled project the following years in the UK (<https://auraldiversity.org/>). The term clearly points to "neurodiversity" [neurodiversity], coined by sociologist Judy Singer in 1988, which became particularly popular in the decade that followed, spearheading the autism rights movement and the emergence of the social model of disability.

**SOUND ART  
BEYOND HEARING:  
PARTICIPATORY  
ART IN SCHOOLS  
FOR DEAF AND  
HARD OF HEARING**



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## PEDAGOGICAL APPROACHES ON DEAF (SOUND) ART EDUCATION

The historical exclusion of d/Deaf and Hard-of-Hearing individuals from the realms of music and sound art education, as well as their representation in the medium of radio, had been perceived as a seemingly 'natural', often framed within the context of pathology. This misconception, akin to a pervasive stereotype, had found its place even within educational systems, perpetuating a deprivation of access to a rich domain of cultural manifestations, as are music and the radio, for Deaf and Hard-of-Hearing students and adults.

In our endeavour, we wished to challenge this 'naturalised' exclusion through a fusion of emerging approaches in contemporary art, artistic education, Deaf studies, and Sound studies. We based our research and practice in highlighting the engagement of students with music and the arts in general, as it is generally accepted that this engagement yields a multitude of diverse benefits. Participation in music and the arts, as part of the educational process, provides a platform for personal and artistic expression. It allows students to merge sensory perceptions, become familiar with public performance, and partake in collective creation. Furthermore, it enriches their expressive toolkit, offering a means to externalise emotions. Additionally, music, as an art and a science, unfolds as a realm of extensive knowledge, touching



Workshop on web-based tools for musical creation via visual means.  
Google provides some of these tools in a very comprehensive Graphic User Interface,  
on <https://musiclab.chromeexperiments.com/>. Photo by Themelis Rizos

upon various disciplines such as physics, history, philosophy, and anthropology.

Starting from these theses, and based on educational research in various eras and environments, our team was determined to take these educational benefits for granted for our students in the Deaf and Hard-of-Hearing schools as well, regardless of the existing exclusion in our educational systems. Our curriculum was structured around workshops based on contemporary art education practices, facilitated by education experts. The framework emphasised on fostering dialogue and hands-on interaction with the subject matter, rather than one-way knowledge transmission. Artists, educators, and students were encouraged to contribute with their individual knowledge, expertise, and experiences, all while learning from one another in an immersive and participatory manner.

“Audibility” project served as a platform for artistic processes and production, with music, sound art, and artistic education as its central themes. The research component of the program delved into the impact on Deaf and Hard-of-Hearing individuals, while the intervention aspect primarily targeted students in Special Schools for the Deaf and Hard-of-Hearing in Athens, but also extended beyond these schools through activities carried out in the National Opera of Greece.

Renowned artists from the fields of Deaf Studies, Sound Art, Performance Studies, and New Media were invited to share their knowledge and collaborate on artistic endeavours with students and workshop participants, both within and outside the school environment. These artists experimented with the phenomenological dimension of sound,

and explored the cross-sensory dimensions of auditory experiences. The focus was not on the limitations of auditory perception, but on the numerous alternative ways to engage with sound stimuli. Vibrations, visual translations, and various other methods of sensory transfer, translation, or representation became integral to this exploration. The collaboration between students and artists, along with their shared experiences, inspirations, and insights, stood as one of “Audibility’s” primary aspirations throughout its implementation.

More specifically, our research drew on the works of contemporary Deaf and Hard-of-Hearing artists that explore Deaf experience(s), as well as insights from the fields of Deaf studies, anthropology, and art. We also explored the history and theory of art, especially in relation to artistic genres and forms, such as music, painting or graphical scores. Technological applications that facilitate ‘sensory translation’ further informed our approach. Our research extended beyond theory to the practical domain, where participant observation within workshops continually informed and refined our methodological approaches, contributing to the existing body of knowledge in the aforementioned scientific and humanities fields. Last, given the B-AIR’s focus on radio, we explored the potential of radio as both a medium and a concept, adaptable through digital technology to provide more accessible multimedia content. Our aim was to unite audiences through its warm, emotional, entertaining, and informative characteristics.

An essential challenge faced by “Audibility” was the development of a framework for training and generating socially engaged and participatory art. Here, the artwork was not regarded as a final prod-

uct but as a dynamic process. Socially engaged art was envisioned as a means to intervene and establish frameworks and relationships that could positively impact the social sphere (Bourriaud, 2001)<sup>1</sup>. The ultimate aim encompassed social inclusion, the deconstruction of stereotypes, the enhancement of participants’ lives, the cognitive development of students, the introduction of innovative educational tools for professionals, and the promotion of visibility (or rather, audibility) through art within the broader public sphere.

To summarise, the “Audibility” project was an exploration of the intricate interplay between modes, tropes, concepts and methods that stem from the sonic arts, with the Deaf experience with sound and music. It unfolded in a structured program of creative encounters between sound artists, students, and educators within Schools for the Deaf and Hard-of-Hearing in Athens, Greece, and a final series of workshops in the National Opera of Greece. This endeavour sought to impart the realm of sonic art through a succession of presentations and workshops, cultivating alternative avenues for the perception and engagement with sound as an artistic medium. Within the crucible of these workshops, a convergence of artists, students, and teachers ignited the collaborative creation of one or more artistic pieces, fostering a symphony of creative expression. Simultaneously, the project delved into reimagining sound perception, transcending the conventional confines of sound, beyond hearing. Its aspiration encompassed the formulation of a comprehensive curriculum and educational methodology, specifically tailored to enrich the musical and sonic education of Deaf and Hard-of-Hearing pupils and young adults. The ultimate ambition extended beyond the confines

1 Bourriaud, N. (2001). *Esthétique relationnelle*. Les Presses du Reel.



of the immediate context, with the intention that this pedagogical framework may find relevance and application in a broader educational spectrum.

Our initial engagement involved working with the acclaimed artist and pedagogue Tatiana Remoundou. In the subsequent semester, Lambros Pigounis, a composer and sound artist, took the role of the invited artist. Further, we delved into the realm of radio, both as a technological medium and an art form, through the project named “Tangible Radio – Class on Air”, with Kalliopi Takaki, Petros Flambouris, George Mizithras and Orestis Karamanlis. Last, we extended our activities beyond the school environment, adapting our methodological approach to adult audiences. Under the banner of “Sound art and Deaf experience: hearing as an embodied experience”, we conducted a series of workshops organised in the framework of the Educational and Social Actions of the Greek National Opera. This initiative culminated in a relaxed performance featuring Deaf, Hard-of-Hearing, and hearing musicians, accessible to the general public, with the facilitation of Dana Papachristou, Yorgos Samantas and Orestis Karamanlis.

### The art of workshops

In the inaugural series of workshops, the project extended an invitation to artist Tatiana Remoundou. Collaborating closely with the children at school, she sought to craft a sonic composition based on the distinct frequencies outlined in their individualised audiograms. This perspective extends to the Deaf community, underscoring the rich possibilities within the varying frequency domains on which Tatiana Remoundou worked her creative magic. Ta-

tiana’s input was essential; being Hard-of-Hearing herself, she was also ideal for inaugurating the series, making it relative and comprehensible to our students’ experience. Following an educational logic of *role models*, Tatiana as an art professional would introduce key concepts of her work, ways of rendering her own experience into her artworks, and insights of her professional life, as a Deaf artist working on art production and education.

The second series of workshops was led by the sound artist, musician and musical instructor Lambros Pigounis. Labros was already known in the Deaf community in Greece, as his durational performance ‘Micropolitics of Noise’ (2016)<sup>2</sup>, within Marina Abramovic’s “As One” exhibition in Athens, attracted significant attention. Anecdotally, during the show, a Deaf attendant told Lambros “you are Deaf and you don’t know it”, leading us to an open-ended question: is there a particular domain into appreciation, enjoyment, perception of sound in the arts that exceeds our own understanding and presuppositions as ‘sound experts’?

Working with vibrations, somatic response and physics became the leading themes of Lambros’ contribution, linking the arts-class with other fields in the school curriculum. The artist ventured into the realm of experimentation with sound as a phenomenon in physics, linking it with artistic applications. Collaborating with the school’s physics instructor, Pigounis brought in class, and re-assembled a prior work of his, the vibrational kinetic sculpture titled “Immaterial Bodies” (2017), and exemplified the physics that govern its function. He then explored hands-on with the students the resonance of surfaces, exemplifying the formation of

patterns in Chladni’s plate, with substances such as salt and sugar on vibrational platforms. “Could this be the *taste* of the sound frequency?”, one of the participants asked humorously. Finally, Lambros introduced a DIY sound and laser projection system, based on the aforementioned disciplines in a hands-on application.

The third series of workshops consisted of a two-fold project and the collaboration of a team of expert designers, pedagogues and sound artists (Kalliopi Takaki, Petros Flambouris, Orestis Karamanlis and Giorgos Mizithras). On one hand, a prototype vibrating radio device called “Tangible Radio” was developed by architectural designer Petros Flambouris, based on vibro-tactility, rather than the propagation of sound through the air. In parallel, actor, radio producer and pedagogue Kalliopi Takaki facilitated a series of workshops titled “Class on Air”, within which she introduced radio-storytelling techniques. Based on these workshops, Deaf and Hard-of-Hearing participating students made a radio story to be tested and played through the “Tangible Radio”. In this case, our approach included an adaptation of the ‘sound diary’ methodology (stemming from the Acoustic Ecology toolbox<sup>3</sup>) to our *sound beyond hearing* framework, in order to emphasise corporeal (vibro-tactile or other) sonic stimuli perception. Students were invited to identify tangible sounds in their everyday life, which in turn became sonic themes and events for making up a narrative. It is noteworthy that the broadcast was recorded, featuring an audio narration delivered in the distinct Deaf voices of the pupils, voices often marginalised in the diversity of contemporary media’s linguistic tapestry.

2 <https://lambrospigounis.com/micropolitics-of-noise/> and [https://www.youtube.com/watch?v=XH\\_1kYIle7s](https://www.youtube.com/watch?v=XH_1kYIle7s)

3 [https://www.researchgate.net/publication/304146420\\_Sound\\_diaries\\_A\\_method\\_for\\_listening\\_to\\_place](https://www.researchgate.net/publication/304146420_Sound_diaries_A_method_for_listening_to_place)

“Tangible Radio – Class on Air” central themes and application were strongly informed by our two resident artists from Canada, Leslie Putnam and David Bobier, who have been working on the field of accessibility, inclusivity, and artistic pedagogy for over twenty years. In both artists’ work, vibro-tactility features as an expressive medium in a variety of ways, either in the form of sonic sculptures, vibro-tactile installations, or in workshops concerning accessibility to sound and musical spectacles. Their week-long residency bore fruit in the form of a master class and a collaborative workshop, uniting practitioners and artists in Athens under the banner of shared creativity.

The fourth workshop, a longer-term seminar that addressed adult audiences, was conducted at the National Opera in Athens, within the enchanting confines of the Stavros Niarchos Foundation, summoning a researchers’ group consisting of Dana Papachristou, Yorgos Samantas, and Orestis Karamanlis. This group facilitated a year-long seminar based on sound as an embodied experience. Here, the exploration spanned from composing through vibro-tactility, to reading and sketching graphical scores, ‘translating’ voice and other sounds into different sensory modalities and media, discussing (and composing) soundscapes from a Deaf person’s perspective, and thematising accessibility and inclusivity. The learning experience culminated in a structured improvisation, with the participation of Deaf and non-Deaf individuals, amateur and professional musicians.

In its entirety, the “Audibility” project was a dedicated practical study of the relationship between Deaf and Hard-of-Hearing individuals with sound and music. It endeavoured to uncover the common ground that unites the hearing and the Deaf individuals in their experiences of music and sound.

An additional objective was the formulation of an educational methodology and curriculum, informed by the Deaf perspective on the field – a field from which the Deaf are largely excluded from. This educational resource is intended for dissemination to the authorities responsible for shaping the curricula of Special Schools. The project fostered a milieu of co-education and participation, with the introduction of educational tools that have, until now, been sparingly employed in similar educational contexts.



# UNICORN

## by Tatiana Remoundou

For the inaugural series of workshops with the students of the Argyroupolis' High School for Deaf and Hard-of-Hearing we invited visual artist and pedagogue [Tatiana Remoundou](#), who eventually created a mixed media installation together with the participating students, based on their own perception of a musical piece they contributed to.

According to the artist:

*There are some questions that I am concerned with in my artistic making. Mainly, how to share in a visual way my experience as Deaf, to convey what it is like to be a deaf person.*

*Together with TWIXTlab we sought to make a musical composition with the children, which is adapted to the unique hearing of the Deaf and Hard-of-Hearing teenagers we are working with. As much as every person is different and unique, so is their hearing. It is even more so for people who perceive sound neither with the same volume nor with the same frequencies.*

*So the purpose of the project is to make, through different musical experiments and games, a musical composition, so that the children will contribute to the music making and the musical experience, and eventually to enjoy a piece of music together, without obstacles and interruptions, either in tactile, aural or visual modalities.*

Tatiana Remoundou, December 2021



Instance from the final "Unicorn" installation, April 30<sup>th</sup> 2022: Speakers, microphone, spectrogram projection, paintbrushes, watercolours, and vibrational benches were the composites of a multisensory musical environment which invited students to interact with it. Photo by Yorgos Samantas

Tatiana's approach unravelled in the course of four meetings of an educational and artistic character. The workshops included:

1. Introduction to "Audibility", to the legacy and importance of Deaf art for the Deaf community and beyond, as well as an introduction to various playful applications of *sensory translation*, between sound, music, visual stimuli and technological interfaces.
2. Introduction and meeting with invited artist Tatiana Remoundou. Tatiana's work largely aims at creating common understandings of hearing and oral/aural communication from her perspective as hard-of-hearing, to hearing audiences. Tatiana also communicated her central approach for creating a collaborative artwork with the students, namely to identify how individual participants hear, and to compose a musical piece based on the respective frequencies.
3. A game "Choreographic audiography" (or "Audiographic choreography"). In our approach we aimed at de-medicalising the process of the audiogram, which was initially thought it would provide us with the knowledge of how the participants perceive sound individually. Instead of conducting individual medical tests (a process that would generate misunderstandings on our approaches), we designed a game with no 'winning-clause' (no winners or losers): as we played sound frequencies through the speakers, participants were invited to move in space according to what they heard or didn't hear, and to identify their response to the stimuli with gestures. Through this process we mapped out frequency and amplitude response, but also realised two more things:

we can understand hearing as a collective process; and that tactility plays an important part in sonic perception.

4. Based on the knowledge we obtained before, we selected various musical samples that responded to various frequencies, tempi, and musical preferences, and we brought them in class. We displayed a simple Digital Audio Workstation (DAW), explaining the visual interface that represents sound frequency and amplitude (waveforms and spectrograms). Based on deliberation and voting, we put the samples together in three distinct musical pieces, orchestrating them in a way that, if played simultaneously, they would constitute a fourth musical piece. Each sample was associated with colour, and each participant would make a palette of three colourised sample packs that would constitute their individual tune.

The last day, the artwork was installed in the School's theatre, and was experienced by all the students and educators. It consisted of the musical piece(s) arranged in a 3-channel installation, a microphone that would 'hear' all the sounds in the room (including the music and the students' interactions with it) and 'translate' them real-time into a spectrogram projection on the wall in the theatre of the school. Two benches were enhanced with transducers/exciters, a particular technology that propagates sound through solids (rather than the air) in order to bring forth the tactile element. And last, a large work desk with painting materials invited students to 'translate' the experience themselves, and create artworks that were part of the final outcome.

To see the UNICORN process:



### Credits:

#### Original artwork:

Tatiana Remoundou and the students of the Argyroupolis' Special School for the Deaf and Hard-of-Hearing

#### Artistic curation (painting):

Tatiana Remoundou and Vaso Plaskasoviti

#### Music curation:

Dana Papachristou

#### Workshop design:

Dora Kaneloglou

#### Audio production support:

Themos Rizos

#### Executive production:

Yorgos Samantas



# IMMATERIAL BODIES AND THE SOUND VISUALIZER

## by Lambros Pigounis

Next semester, “Audibility” welcomed sound artist, composer and educator [Lambros Pigounis](#). The artist re-constructed and presented his vibrational kinetic sculpture “Immaterial Bodies” (2017), and exemplified the physics that govern it, namely the Chladny’s plate principles. Using the artwork as props, he explored together with the students the physics of sound, translating sound into physical shapes in salt and flour. Based on the same principles, the artist then made a DIY ‘sound visualizer’ using everyday materials, to apply this knowledge into a handcrafted artefact which he donated to the School’s physics laboratory.

According to the summary provided by Lambros Pigounis:

*The materiality of sound. Sound as a creative energy-tool for the Deaf community.*

*The central idea of these workshops was to describe and demonstrate through experimentation non-obvious sonic qualities of sound, through the processes that seek to intensify frequency vibration as a technique for transforming energies through sound.*

*More specifically, considering that this topic was addressed to a large number of the Deaf student community in secondary education, the above idea was presented in two axes:*

*First, the basic principles of the physics of sound were presented and were taken further to explain*



Various ‘sensory translation’ tools were deployed by Lambros Pigounis during his workshops at School, May 2022. His “Immaterial Bodies” sonic sculpture was brought to class as a prop, to playfully examine real-time produced spectrograms, waveforms, vibrations and tactility. Photo by Yorgos Samantas

*that sound is primarily a phenomenon of contact with the human body. How can we experience the sonic event as a physical tangible force in our environment? Density, mass, and physicality are creating vibrational atmospheres that can become a force of social transformations. It is in this very context that the human body is*

*experiencing a shifting acoustic ecology.*

*Secondly, we demonstrated the practical and creative ways that help us enter a new experience and perception of sound, as well as different ways the human body can relate to the sonic energy.*

*Utilising the theory and experiments of Chladni's Plate, the students had the chance to discover the visual materiality of sound and a new way to participate in the sonic discourse in which hearing is not that necessary.*

*The author presented his own sonic sculptures in order for the students to interact in two forms:*

- A. A vibrational plate is driven by frequencies coming from a computer.*
- B. A vibrational plate is driven by the voices and the crowd's noise in the room. In this case, the real-time recorded sound of the room was causing a vibrational impact on a metal plate.*

*The students had the opportunity to touch and feel the actual room's resonant frequencies as well as to transform their own voice, or any other sonic gesture, into visual vibrational information.*

*On the last day of the workshop, the author presented a different approach to sonic visualisation by presenting a DIY construction that worked as a sound visualizer including a laser light, a plastic bucket with a stretched balloon across the top of it and a small mirror attached to it.*

*The Sound Visualizer is used to show how vibrations from sound waves are able to create a simulation of an analogue oscilloscope using a few simple pieces of equipment. The user can create vibrations by his/her own voice, or by placing the sound visualizer next to a speaker. As compression waves from sound hit the balloon surface, it may cause standing waves to form. The mirror attached to the surface has a laser aimed at it; the reflected beam is then aimed at a wall and a pattern will form due to the way the surface*

*deforms due to the standing wave. Changing the pitch will cause the surface to distort in different ways causing new patterns to be seen. As combinations of tones are played at the same time, more complex patterns will be formed."*

Lambros Pigounis, May 2022

#### Credits:

**Original artwork and workshop facilitation:**  
Lambros Pigounis

**Installation software development:**  
Yannis Kranidiotis

**Educational coordination:**  
Dana Papachristou

**Executive production,  
audio-visual documentation:**  
Yorgos Samantas

To see the IMMATERIAL  
BODIES process:





twixt<sup>lab</sup>



# **VIBRO-TACTILITY 'ON AIR'**



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# TANGIBLE RADIO – CLASS ON AIR

## Exploring radio through vibro-tactility as an expressive medium with Deaf and Hard-of-Hearing students

The third workshop series took shape as a two-fold endeavour named “Tangible Radio – Class on Air.” Within this sphere, we embarked on a re-evaluation of radio, not merely as a technological medium but also as a narrative art form. In this transformative context, Deaf and Hard-of-Hearing students emerged as the expert interlocutors and creators of radio content, breathing new life into a conventional medium re-thought and re-invented.

This project comprised two distinct yet interconnected facets:

- **“Tangible Radio”**: This facet revolved around the development of a prototype for an accessible radio receiver, founded upon the principles of vibro-tactile sound propagation through solids (in contrast to the conventional speakers’ function of air-pressure oscillations). This innovative device was introduced to the classroom, serving as a conduit for students to ‘touch the sound’ and explore its expressive potential



Tangible Radio transmitter and receiver, during playback of “On the Planet” radio show, December 20<sup>th</sup> 2022. Photo by Yorgos Samantas

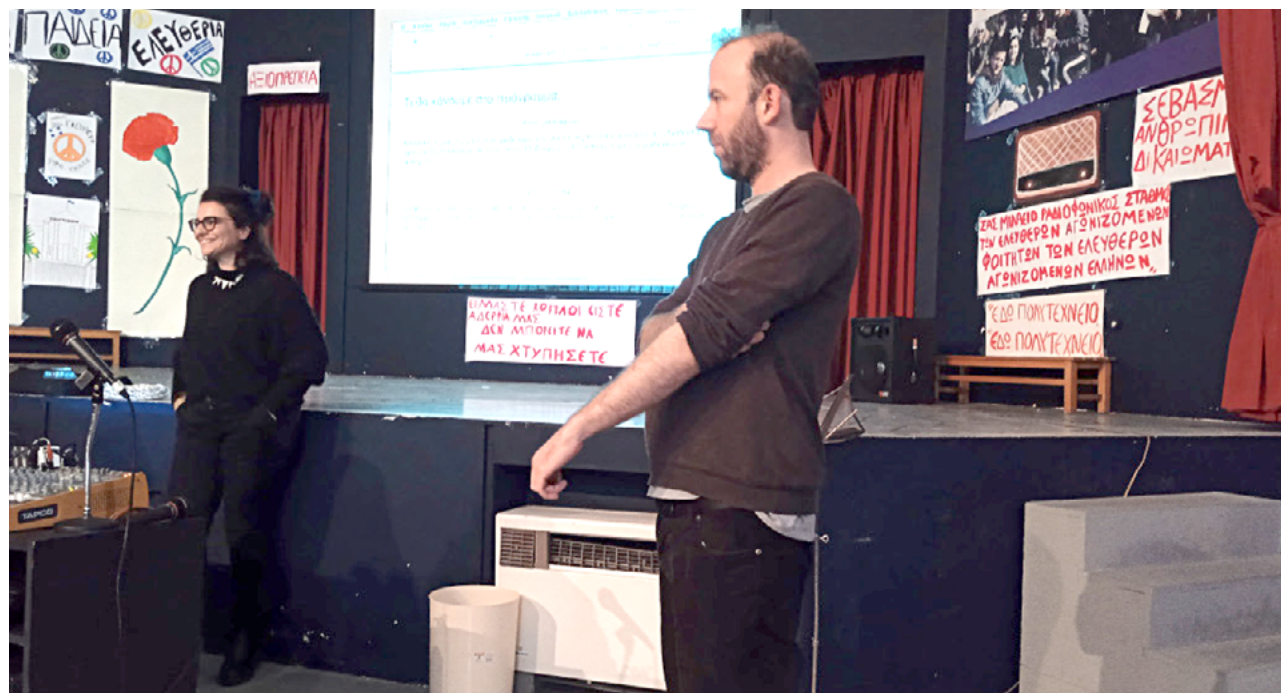


through tactile engagement. The invaluable feedback and insights provided by Deaf and Hard-of-Hearing students guided the refinement and incorporation of essential features, following a participatory design approach thoughtfully tailored to the unique requirements of a high-school environment.

- **“Class on Air”**: This dimension of the project was dedicated to the production of a radio show, written and narrated by the students themselves. This radio show, that was eventually titled “On the Planet”, was broadcasted live and subsequently made available as a podcast, accessible primarily through the “Tangible Radio” device, and also through conventional audio systems.

In order to achieve these goals, TWIXTlab assembled a team of four new expert collaborators: actress, pedagogue and radio producer Kalliopi Takaki (Hackademy, radio bubble); architectural designer and modular synthesiser enthusiast Petros Flabouris (AAS, PhD candidate, University of Thessaly); sound and radio artists Giorgos Mizithras (aka MIZI, Loscop radio and PhD candidate, Ionian University); and musician/composer Orestis Karamanlis (Kapodistrian University of Athens).

This collaborative endeavour unfolded within the school itself, with a keen focus on adapting to the unique experiences of Deaf and Hard-of-Hearing students. The initial objective was to investigate how vibro-tactility could either ‘substitute for’ or complement the sense of hearing, thereby expanding our comprehension of the perception of sonic stimuli. The project also sought to delve into how vibration and tactility could be seamlessly integrated into our creative toolkit, especially when guided by the perspectives of Deaf and Hard-of-



K. Takaki and Y. Samantas presenting the project in the School's theatre. The presentation day coincided with the national commemoration day of the Polytechnic Uprising on November 17<sup>th</sup>, where the radio features as a political protest medium (relative imagery and text in the background on the right wall). This enabled the team to create links with the school's educational curriculum in regards to History class. Photo by Dana Papachristou

Hearing individuals. The idea of the ‘substitute’ was quickly discarded, as the senses, or perception in general, work in a much more complex way than the Cartesian compartmentalization and categorization implies.

However, out of the workshops a new question emerged: can vibro-tactility become an expressive medium in itself?

The answer was given by the production of the radio show titled “On the planet”, which is composed from vibrations chosen by the students, and narrated by themselves. The ultimate aim was to create radiophonic space for Deaf voices to not only

be heard but also felt, transmitted, and extended to a wider, more inclusive audience.

The piece is meant to be played-back through the “Tangible Radio” device, but one can follow it by ear, as mixed by MIZI (Giorgos Mizithras) for conventional speakers, and recorded by the CRESSON team during a broadcast within the “Radio Utopia” event (Ball Theatre, at the French Pavilion of the Venice Biennale of Architecture, with an introduction by Nicolas Tixier).

To listen to ON THE PLANET within the “Radio Utopia”:



# FLYING WITH RADIO

## by Kalliopi Takaki

Workshop facilitator, actress and radio producer Kalliopi Takaki provided us with her insights of the experience:

*"When in spring last year I started talking with Dana Papachristou and Yorgos Samantas about our upcoming collaboration in the project "Tangible Radio – Class on Air" in the framework of the B-AIR project, there was, at least from my side, enthusiasm. I had already been working for five years with children and teenagers, conducting radio workshops in public schools.*

*Coming from a background in theatre and radio, in working through workshops with children, I used tools I had mastered as a professional. But it soon became clear that in order for children to be able to create, to be 'heard', you need to allow yourself to 'forget' what you know, to move, so that you can listen to their rhythms, their emotions, their thoughts and let yourself go along the path they eventually open up for you.*

*So, when I was asked if I had a ready-made presentation on what radio is, at first I was surprised and then, embarrassed. I answered negatively. I don't use presentations; there is no lesson in the workshops, no specific methodology. I open the microphone and start the dialogue. I allow children to express themselves freely, to introduce themselves, to play with their voice. We meet equally and discuss what the voice is, what sound is and, ultimately, what radio is.*

*We ask questions such as: why did I choose these words and not some others? Why did I speak in this voice and not in another? How many voices can a person speak in? How is anger and how is joy captured aurally? What do I want to talk about and, most importantly, why do I want to speak into the microphone?*

*All of the above has happened and is happening in workshops involving hearing children. 'Improvisation' in this group of children is always achieved. Most of the times we don't even need editing; we keep the mistakes as part of the narrative. But here, in this project, we had children and teenagers who have never listened to radio and probably don't know its importance and usefulness. How to capture the voices of Deaf and Hard-of-Hearing children? With what methodology? How would we explain and ask children who have never heard radio to do a 'radio' show?*

*A considerable amount of literature was uploaded to our team's thread. Some of it I read with interest. The first and, perhaps, the most important step in understanding this new world for me, occurred in the master class with David Bobier and Leslie Putnam. The discussions and presentations that occurred that September at TWIXTLab were a useful and enlightening introduction to what followed in this collaboration. Then, the conversations I had with Xenia Nikolakopoulou. The words of a teacher and sign interpreter Xenia, after the first meeting/presentation with the group of teenagers at the Highschool*

*of the Deaf and Hard-of-Hearing, helped me to understand their differences, to understand their relationship with each other, their problems and their conveniences in order to decode, among other things, their unexpected enthusiasm. To find my own place and pace, on an equal footing, in the group of children so that I can continue. As the content manager, my anxiety and constant personal question was whether I would be able to help them create their own story.*

*As we proceeded in the second meeting, we 'offered' them the environment and the main idea:*

*We cross the park in order to take our rocket to our planet. There, only Deaf and Hard of Hearing people can feel the sound. We started with a basic question: what do we observe in the park?*

*The children wrote and/or drew the sounds they perceived on a walk in the park. After we collected their words, we asked if anyone wished to stand in front of the microphone and describe in their voice the sounds they wrote/drew on paper. It was touching to see the children's participation. Quite a few children stood up. Lots of sounds. Animals, cars, trains. Compressors, rustling leaves, human voices, Super Mario, the moon.*

*I returned from this second meeting more confident. We heard their voices. We talked with the group and I wrote a pilot story with their sounds.*



[illegible]

Tangible sound diaries by the students. November-December 2022. Photos by Kalliopi Takaki

Tangible sound diaries by the students, November-December 2022. Photos by Kalliopi Takaki



# CRAFTING THE TANGIBLE RADIO

## by Petros Flambouris

On the other fold of the project, that of the prototype device development, the invited designer Petros Flambouris provided us with his critical reflections:

*“The construction of the “Tangible Radio” was based on applied design practices mainly on the design traditions of ‘inclusive design’, ‘universal design’ and ‘design for all’, and more particularly to their effective application and their critical comparison.*

*The design approach avoided relying on standards and guidelines, thus advocating design as a tool to create a dynamic relation with the user. A typical pitfall that generic design approaches tend to fall into is following expected methodologies during the design process, without actually meeting the requirements of all the target user groups or, on the contrary, not meeting the needs of the other groups, making a design ineffective for all.*

*On the other hand, a design process that systematically takes user participation into account has often proved to be effective. However, difficulties in the process are expected, particularly when the user group is diverse culturally, neuro-physiologically, or otherwise. During the design and the use process, issues arise concerning exclusion of users. These can arise for disabled people or people regarded as able-bodied or neuro-typical (in our case Deaf, deaf, Hard-of-Hearing, hard-of-hearing, hearing), at all levels of use to anyone.*



Petros Flambouris at work: basic circuitry, receiver and amplification channeling, October 2022  
Photo by Yorgos Samantas



*In the design process, exclusion is often treated as a 'necessary evil' phenomenon. The need for diversity in design – aural diversity in this case – and avoidance of exclusion, highlights the specificity of each subjectivity, i.e. how one perceives stimuli, depending not only on the physiology and function of one's sensory organs but also on cultural background and personal experiences. In this case, this is the reason we decided to embed in the device both a set of transducers, attached to each side surface of the artefact, and a conventional (cone) speaker at the base.*

*Inclusion policies cannot be limited to vulnerable social groups; they must involve a holistic process and therefore the possibility of changing the ethics of design by creating multimedia objects and easily accessible features in them at a universal level, regardless of the medium and field (auditory, visual, spatial, etc.)*

*Thus, the methodology of radio design/construction was based on the theories of acoustics, ambiances, prototyping and object design and primarily on the methodology of 'research by design', which is a research methodology for design that involves putting forth a design product (in this case the "Tangible Radio" artefact) and elicit answers for its amelioration by observing, interrogating, participating in its application on the field of study. By understanding and integrating sound in its various forms and diffusion media in the early stages of design, we explored how to respond to issues of scale, shape, materiality and use.*

*As a result, the goal of the device was the design and construction which would enable dynamic communication and expression of the user through the generation of vibrations and/or*

*sound and the passive acoustic properties, and which would at the same time be accessible to all users or, at least, to the widest neuro-diverse or aurally-diverse spectrum possible.*

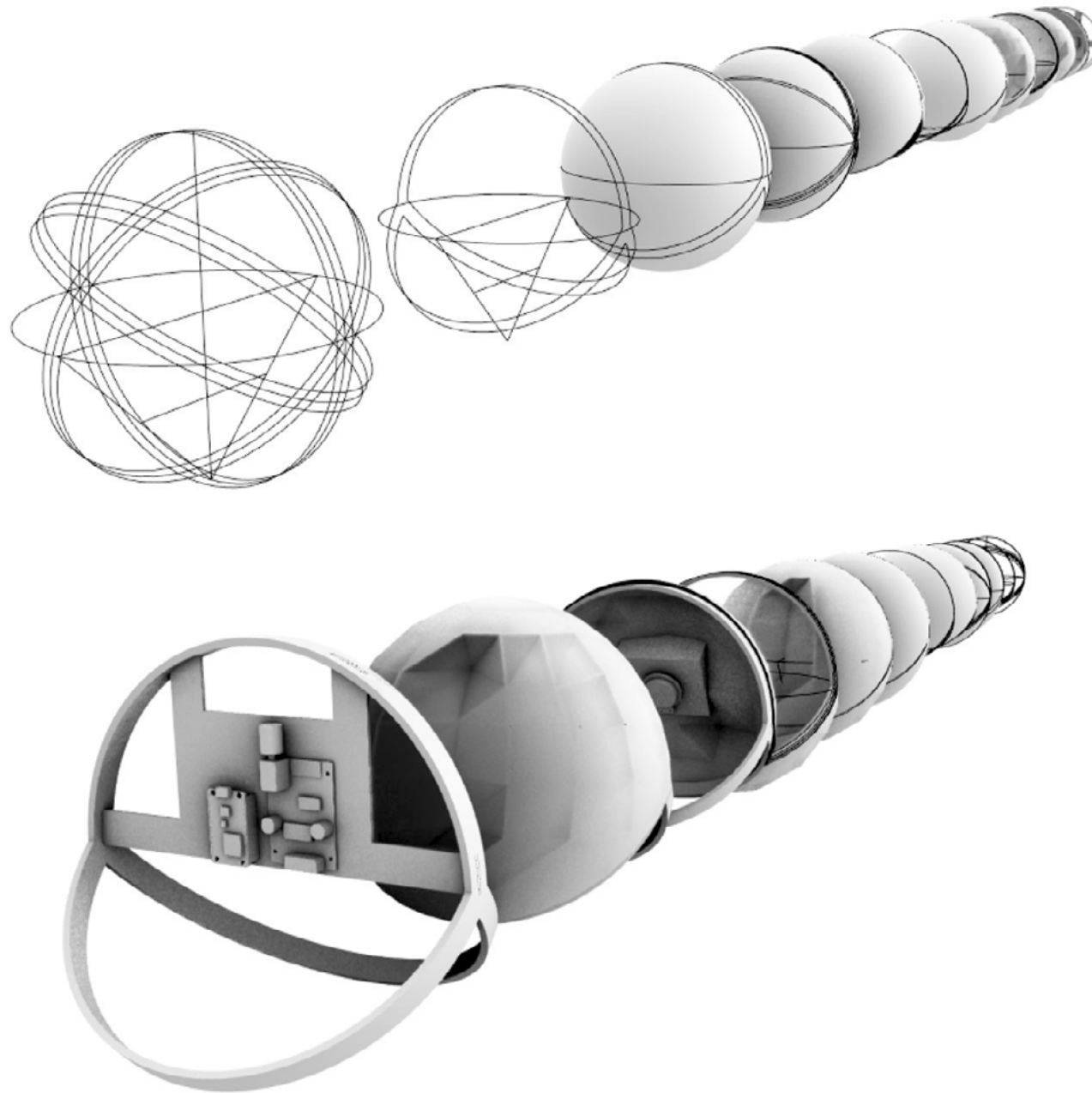
*Expectedly, during the design process of an object, there is a dynamic feedback relationship – necessities arise to readjust and parameterize the approach to it, and especially so when the project has a simultaneous educational and didactic character. Therefore, hourly workshops of the working group with the school children had to be formed, along with seminars and parallel workshops, in order to approach the 'tools' and 'methods' of communication.*

*The first mock-ups of the radio were constructed through 3D Nerbs modelling software and with the help of parametric design applications. Through the building process, different configurations were tested regarding the electromechanical aspects, all influenced by DIY culture. The act of rapid prototyping by creating a physical model quickly, reduced the gap between the project and its execution. A direct tangible (απτό in Greek, from which 'haptic' is also generative) outcome could immediately be used by the users without aiming at the final outcome, but the process itself. Of course, different configurations were tested material-wise. The interaction of different materials with the transducers was experienced by all individuals in the research group. Glass, liquids, building materials, ceramics, metal plates and more. The final choice of the wooden shell was made due to the durability of the material along with its response to the widest vibration spectrum.*

*The electromechanical parts consist of two radio receivers, four mono audio amplifiers, three exciters/vibrating speakers and one woofer*

*speaker (as well as a lot of wire and soldering). In this way, it is possible to group two sets of independent receiving radio transmissions playing simultaneously. The shell is constructed by laser cutted plywood of 3mm thickness by the method of unfolded geometry, which is supported together by a plastic net reinforced with liquid resin. The tangible radio is controlled through a controller that consists of two FM transmitters."*

Petros Flambouris, March 2023



Work in Progress, Tangible  
Radio 3D printing models,  
November-December 2022,  
by Petros Flambouris



# PERFORMING DIVERSITY



# PERFORMING DIVERSITY: AUDIBILITY IN THE GREEK NATIONAL OPERA

## Music and Deaf experience: Sound art as an embodied experience

For the last series of workshops we changed settings in order to address wider audiences and a different age group, as the prestigious Greek National Opera incorporated the project into its [Social and Educational Actions](#). The seminars/workshops were led by TWIXTlab's key researchers and coordinators for "Audibility", Dana Papachristou and Yorgos Samantas, with the collaboration of composer Orestis Karamanlis.

The project unravelled into 20 seminars/workshops with the participation of Deaf and Hard-of-Hearing young adults. The series ended with a relaxed performance of an ensemble consisting of Deaf and hearing members of our workshop, in collaboration with members of the Transcultural Orchestra of the National Opera.

The participants performed the piece "Radar", a structured improvisation piece composed by Karamanlis. The piece was based on the homonymous original digital tool for conducting, developed for the purpose by the composer on the coding language of Supercollider. The piece was presented in the format of a 'relaxed performance' in the National Opera's foyer, which was accessible and

easy to attend for individuals of all ages, and neuro-diverse.

In this series of seminars, the methodological approaches that were developed originally for adolescent participants in their school setting, were now adapted to an older audience, and to the highly prestigious setting of the Greek National Opera.

The following questions were key in the development of the curriculum:

- Can we review the history of contemporary western music from a Deaf person's perspective?
- What's the role of emerging technologies in the appreciation of music for Deaf subjectivities?
- Can we deconstruct the stereotype of 'naturalised exclusion' of Deaf and Hard-of-Hearing individuals from music, by simply playing music?

To listen to the recording of "Radar", as performed in the GNO, April 29<sup>th</sup> 2023:







Relaxed performance of “Radar”, Greek National Opera, Athens, April 29<sup>th</sup> 2023. Composition and programming by Orestis Karamanlis, performed by the Deaf Ensemble, in collaboration with the Transcultural Orchestra of the GNO. Photo by Valeria Isaeva, courtesy of GNO



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## PARADOXES OF NORMALITIES

### Curatorial text

The key word of the year-long seminar “Sound Art and Deafness: sound and music as embodied experiences” in the framework of the educational programs in the Greek National Opera would be the word ‘paradox’. Dealing with Sound Art and Deafness, our team was often confronted with surprise, curiosity and admiration.

We started discussing with the institution, but soon the questions took a more substantial turn: Can a dazzling institution devoted to fine listening, such as the Greek National Opera, open its programs to the Deaf Community and the numerous deaf and hard of hearing individuals of Greece? Can accessibility work in favour of those with different listening experiences, when music and sound are the main element? Can we use technology to our favour? Can we educate the deaf and hard of hearing to listen? Do we need to educate them or should we instead learn *from* them, and create a whole different listening methodology? Do we know what it takes to make this possible? Is it truly a paradox? Is a concert, opera or musical performance really all about sound?

These were the questions that we were trying to answer, not only for our deaf and hard of hearing participants, but for ourselves as well. Coming from

music and sound art education, we have mastered a great deal in this domain: pitch, timbre, performance, technique, history, affect, technology, musicality. But what do we really know about those things? Are these common for all individuals?

If a person that has not studied music or musicology can enjoy the opera, so can a deaf or hard of hearing individual. The average listening capacity, the unattainable golden ear, the ‘normality’ does not exist. So, we delved into this endeavour, hoping to learn as well, to share and to shift our own perspective of what music is, of how it can affect us, and what it means in a multimodal and multi sensorial way.

We started from vibration as a tactile way of understanding sonic phenomena without the mediation of the cochlear. We used colours, visual translations and drawing. We learned what a score is and how it can be read with the eye, getting all the information necessary for performing. We managed to create our own scores and compose our own pieces. We edited the sound looking at its waveform. We performed music together, overcoming our differentiations in hearing capacities and musical education.

“Radar”, a specially designed ‘maestro’, coded on SuperCollider by Orestis Karamanlis, functioned as a communal hearing-aid for all participants – Deaf, Hard-of-Hearing and hearing musicians, regardless of their musical skill and background. We presented what we learned together in a concert, also reflecting on how to make a show that would be more accessible to everyone, addressing aural diversity, neurodiversity, and situations that would otherwise appear as constraints (e.g. attendance by toddlers and their custodians), as new paradigms through which we can re-think spectatorship.

And then we knew, we understood from our experience, that listening is a complex process we should continue to expand if we want to grasp it in its entirety. For it is not confined to the ear anyway.



# RESIDENCY PROGRAM

Throughout “Audibility”, our inquiry and practice was greatly inspired by the TWIXTlab’s two resident artists from Ontario, Canada, David Bobier and Leslie Putnam from the [vibrafusionlab](#) and [o’honey collective](#).

During the residency period in Athens, in September and October 2022, David and Leslie presented their work on vibro-tactile installations, sound sculpturing and art education; met our working group and our scientific advisors, and delivered a master class. During their stay, among others they met with our scientific, educational and artistic personnel and visited other cultural and research centres.

In two artist talks on the 28<sup>th</sup> and 29<sup>th</sup> September, open to the public live and on Zoom, and with a parallel interpretation in Greek Sign Language, they presented their work on vibro-tactility as an expressive medium, on sonic sculpting, and on artistic educational approaches. And in a master class, on the 1<sup>st</sup> October, open to professionals, in TWIXTlab’s project space, they exemplified devices, applications, approaches and thoughts, in a creative encounter with members of the soon-to-be the “Tangible Radio – Class on Air” working group.

**David Bobier** is a self-identified Hard-of-Hearing media artist with a mental health diagnosis, parent of two Deaf children. His work has been exhibited internationally and has been the focus of prominent touring exhibitions in Ontario and the Atlantic provinces in Canada. Bobier has received grants from Canada Council for the Arts, Social Sciences and Humanities Research Council, Grand NCE, Ontario Arts Council and New Brunswick Arts Council. He has partnered with Inclusive Media and Design Centre at Ryerson University, Toronto and Tactile Audio Displays Inc. in researching and employing vibro-tactile technology as a creative medium. As an extension of this research, Bobier has established and is Director of VibraFusionLab in London, Ontario, Canada. The Lab emphasises a holistic approach to considering vibration as a language of creation and exploration and to investigating broader and more inclusive applications of the sensory interpretation and emotionality of sound and vibration in artmaking practices. Through VibraFusionLab and in his own art practice Bobier aims at creating opportunities of greater accessibility in artmaking, art appreciation and in viewer experiences of art practices and presentations. Using performance and interactive installation Bobier explores the bridging of methods of communication and language and ways of interpreting or transforming one modality to another. His work is engaged in a multi-sensory approach and experimentation that allows for the transitioning and re-interpreting of content and experience from one medium to another with particular emphasis on the tactile as a form of creative expression.

To follow David’s artist talk:



**Leslie Putnam** is a London, Ontario based artist and educator. She earned her BFA from Concordia University in Montreal, Quebec, with a Major in Studio Art and Bed from Western University in London, Ontario. Putnam’s early work included exhibitions in France, Portugal and Luxembourg. In Ontario, her work has been presented in solo and group exhibitions including Canadian Clay and Glass Museum, Electric Eclectics, Museum London, *Nuit Blanche*, JNAAG and Hard Twist Textile Exhibition in Toronto. As a multi-disciplinary artist, her studio production ranges from explorations using sound within sculptural pieces to large installation works made from natural materials. In 2010 she and David Bobier formed the *o’honey* collective as a platform for explorations between the natural world, and the way we have come to experience it through our own constructed realities.

To Leslie’s artist talk:



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## Credits and acknowledgements

**TWIXTlab** is a non-profit organisation from Athens, Greece, active in the fields of contemporary art, anthropology and everyday life. Our fields of action include art-and-humanities lifelong education, research and artistic creation. During the COVID pandemic, we sought to take our actions into telecommunication media, introducing our experimental twixtlab-radio. TWIXTlab was established in 2014 and is currently run by founding members **Elpida Rikou** and **Sophia Grigoriadou**, with the addition of **Eugenia Vacalopoulou** and **Yorgos Samantas**. The latter contributed to the project as a manager, general coordinator, researcher, and in some cases as an executive manager.

TWIXTlab's contribution in the B-AIR project wouldn't have been made possible without the invaluable guidance of our scientific advisor for the project, anthropologist and prolific writer **Panayotis Panopoulos** (University of the Aegean). Our community liaison, visual artist and curator **Ourania Anastasiadou** (Head of the Accessibility Department of the Athens School of Fine Arts), provided us with key insights for the Deaf community in Greece, and the worldwide scene of Deaf arts. Our educational coordinator, musicologist, sound artist and pedagogue **Dana Papachristou** overtook the key task to develop our educational methodology and coordinate the school work.

Our art education activities would be poor if they would not have been welcomed with the enthusiasm of our invited artists: **Tatiana Remoundou**, **Lambros Pigounis**, **Kalliopi Takaki**, **Petros Flambouris**, **Giorgos Mizithras** and **Orestis Karamanlis** were constantly providing us with rich input, while negotiating their ways with sound and music with our students-participants.

Further, we would like to thank the educational staff and management of the **Argyroupolis High School for the Deaf and Hard of Hearing**, who welcomed us in their school setting and facilitated a flawless collaboration with them. We would not have achieved any depth without the essential help, input and mediation by English teacher and SL interpreter, **Xenia Nikolakopoulou**. Along with them, the invitation from the **Educational Department of the National Opera of Greece** provided us with the opportunity to enrich our approaches and address them to young adult participants.

Parallel to the workshops, we further pursued best practices exchange and learning from international interlocutors, who were also engaged with approaches on Deaf accessibility and inclusivity in the arts. **Eva Fotiadi** from CARADT, Amsterdam, co-curator of the Dutch initiative "**Other Abilities**" by **Adie Hollander**, and **David Bobier** from "VibraFusionLab" in Canada, **Leslie Putnam**, with her affectionate display of her sound-vibrational sculptures, and **Nicole Watson** from **Surface Area Dance Theatre** for her approaches and practice on wearable technologies for Deaf inclusivity in dance, all offered invaluable knowledge, advice and thoughtfulness towards the endeavour.

In addition to the fields directly related to Deaf arts and culture, we would additionally like to thank our academic network, within whose frameworks we had the opportunity to discuss our theoretical concepts, methodological approaches, and outcomes. Our partners in B-AIR created sharing opportunities with local and international networks of experts, like the **CRESSON's 9<sup>th</sup> and 10<sup>th</sup> Winterschools**, **B-Air Days at Cuneo Conservatory**, '**How does the world sound**' in Cerisy Colloque as 'a castle of crossed disciplines', and the invitation to a "**Ball Theatre**" in the French Pavilion of the 18<sup>th</sup> Biennale of Architecture in Venice, and **BAZAART's "Centers and Margins - Forces of rapprochement"** conference in Belgrade, and **Sound and Music in the Lived Experience of Infants, Babies and Vulnerable Groups** Symposium in Ljubljana organised, among others, by **RTV Slovenia**. Further extending the direct network of B-Air, **MUTE project's** lead investigator **Anna Papaeti** and the research team, prolific writer and sound theorist **Brandon LaBell** from the Listening Biennale and the '**Listening as Witnessing Symposium**', and **Arjang Omrani's 'Multimodal Storytelling'** from University of Gent, provided us with new insights related to our approaches, and a safe ground for developing, discussing and reflecting upon our practice.

## SONIC REMEMBERING





## SONIC REMEMBERING: RECREATION OF LIFE

Part of the activities of the B-AIR project focused on sonic memories, by paying special attention to the acts of remembering, and to the ways in which sonic memories are narrated. In our work we have paid special attention to the cultural, social, and aesthetic nature of sounds, aiming to raise awareness of polyphonic histories and values, thus enhancing the understanding of the Europe's acoustic heritage.

One of the important objectives of the activities has been the promotion of agency, and social inclusion of the vulnerable groups, including the oldest radio listeners in Europe – groups in the 'third' and the 'fourth age', and people who have experienced war traumas. In the following sub-chapters of this publication, we are listening to processes and makings of both the "Evenings of Sounds" broadcasted via three national radios in Europe – in Finland, Serbia, and Slovenia – and the joint venture of making the "European Evenings of Sounds". Thereafter, the Bosnian B-AIR sub-project on sonic war memories is discussed.

### Sonic remembering as a dynamic process

When defining concepts such as social, collective, and cultural memory (Järviluoma, 2009a, 2020; see also Assman, 2008), it seems obvious that social

memory stands out as the comprehensive concept. This is especially the case if it is defined as consisting of memories shared by a group – or at least memories that are jointly agreed upon. Even personal memory often has a shared framework (Boym, 2001; Misztal, 2003). The past is always mediated and produced through memory work, and it is through the acts of remembering that we present ourselves to ourselves and to others (Misztal, 2003; Järviluoma, 2009a, 2009b, and 2020).

Therefore, the term 'social remembering' is an even more advantageous concept than social memory. Indeed, it grasps the dynamic nature of the phenomenon much better. The first sociological theories of collective memory constructed social and group memories as static and have therefore been subject to considerable criticism (Misztal, 2003). Such theories fail to capture the dynamism and transience of our media-saturated contemporary culture, the time lived and forgotten, the clashes between different social and ethnic groups and the ever-fragmenting politics of memory (Huyssen, 2003).

Memories, including sonic memories, do not remain the same all the time, they live: new elements are added to them over time in the processes of understanding (cf. Misztal, 2003). What makes these active processes of remembering particularly

interesting is that the past and the ways in which it is remembered are influenced both by the state of mind of the rememberer, and by the situation in which he or she is currently remembering (Schacter, 2001; Järviluoma, 2009b, 2020). Chaudhury and Rowles (2005) have analysed ageing, place and remembering, and found that when an individual remembers, they recreate the original experience using both memory and imagination (p. 11). This re-creation is influenced by the physical, psychological, and social changes that have occurred to the individual over a lifetime. For example, older people's experiences may take on new meanings, as a result of retirement, physical frailty, or environmental change (ibid. pp. 11–12).

It takes sophisticated concepts and methods, as well as a great deal of imagination to evoke and explore sonic memories. The production of memories through the processes of personal and communal storytelling has provided us with a lot of very interesting things to reflect on and analyse in the B-AIR data.





Organist Esko Juntti, age 92, being interviewed by Helmi Järviluoma, October 2022. Esko remembered his days in woods with cows, and forest soundscapes, as a shepherd boy in 1930s in Oulunsalo, Finland. Photo by Jouko Varjos





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# EUROPEAN EVENING OF SOUNDS

## EUROPEAN EVENINGS OF SOUNDS

“European Evenings of Sounds” is founded on a series of radio programmes “Evening of sounds” (*Äänien ilta*) broadcasted by the *Yleisradio* – Finnish Broadcasting Company. It was initiated in the year 2012 by the radio host Jukka Mikkola and two soundscape scholars and professors, Helmi Järviluoma and Heikki Uimonen.

The idea for the programme was to construct new content for contemporary radio by introducing environmental sounds and related narratives and discussions. It instantly became evident that sounds and soundscapes were eliciting emotions and recollection and that radio listeners were willing to share their memories and experiences with their fellow listeners. A three-hour call-in live show had approximately 220 000 listeners, representing 3,7 percent of the country’s population of 5,4 million (Uimonen 2019).

The “Evening of sounds” radio programme stemmed partly from the pedagogic goals of early soundscape researchers in the attempt to make radio audience to listen to their environment attentively. At the same time the programme popularised scholarly research and developed dialogue with the audience. The feedback has evoked new research tasks and research questions among the scholars. Live shows also raised questions – if public service radio should be responsible for taking care of the sonic cultural heritage by

preserving, creating and maintaining it in the context of contemporary transforming soundscape, and which would be the means for these actions (Uimonen 2019).

With the radio programme “European Evenings of Sounds”, within the B-AIR project, we strove for making our philosophy and radio practices transnational, through collaboration with Finnish Broadcasting Company and the broadcasters RTS in Serbia and RTV Slovenia. By creating a collaborative link between the intangible sonic heritages of the continent, the aim was to increase understanding and awareness of both the common European intangible heritage and the specific characteristics of its diverse acoustic heritage.

“European Evenings of Sounds” focused on sound memories by paying special attention to the acts of remembering and the ways the sound memories were narrated. It targeted to further develop the concept and practices of the electro-acoustic community, which was constructed during the live broadcast by the studio hosts and the audiences. The programme paid particular attention to the cultural, social and aesthetic nature of the sound requests of the callers, considering them to be parallel to those of music call-ins in sharing music and experiences related to them.

Within the general aim of raising awareness of the Europe’s common history and values by enhancing the understanding of its acoustic heritage, the objective of promoting the agency and social inclusion of the oldest listeners appeared as particularly important. In preparation of the “European Evenings of Sounds”, in order to collect material for the research of sonic remembering and for the programme, the Finnish team visited three care homes and interviewed elderly citizens on their sound-related memories. What they have found was strongly in line with the project focus. Namely, while reaching the ‘fourth age’ has sometimes been considered to mean solely that an old person has become frail and dependent, we subscribe to the idea that this does not necessarily mean that she or he has no agency in society (Grenier 2012). In the end, the programme contributes to social inclusion and agency of exactly the population living in this stage of their life course.



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Sound workshop in Peurankallio care home led by Heikki Uimonen and Helmi Järviluoma, April 2023  
Photo by Helmi Järviluoma

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# FINLAND: EUROPEAN EVENING OF SOUNDS

## Production of the Finnish Broadcasting Company (YLE)

What kind of meanings and memories do sounds and soundscapes carry with them? How do different countries and cultures sound like? What kind of sounds do different countries offer to European radio listeners? Do different countries have some unique sounds that others have never heard and don't know of? Are there some undoubtedly common sounds and soundscapes, some shared sound-related meanings that are known all around?

We had to think about those questions when we started planning the broadcast of the “European Evenings of Sounds” – a special live radio show that would bring together voices, sounds and soundscapes of three countries: Serbia, Slovenia and Finland. The broadcast was done in cooperation of the three national broadcasting companies: RTS Serbia, RTV Slovenia and YLE Finland.

The “European Evenings of Sounds” was broadcasted on Monday 29<sup>th</sup> May 2023 at 16.05 - 17.20 UTC, simultaneously on three different channels, from three different cities: Belgrade, Ljubljana and Helsinki. The broadcast was divided into three 15-minute episodes, as follows:

16.05 – 16.20 UTC, on air: Serbia, Slovenia, Finland  
16.25 – 16.40 UTC, on air: Serbia and Slovenia  
16.45 – 17.00 UTC, on air: Serbia and Finland  
17.05 – 17.20 UTC, on air: Slovenia and Finland



Jukka Mikkola at the B-AIR Days in Cuneo, Italy, October 2022. Photo by Helmi Järvioluoma

In the RTS studio in Belgrade the host was Nikola Dojčinović. In the RTV Slovenia studio in Ljubljana the hosts were Anamarija Štukelj Cusma with her radio colleagues Mojca Delač and Maj Valerij. In the YLE studio in Helsinki the hosts were Jukka Mikkola with professor emerita of Cultural Studies Helmi Järvioluoma and professor of Cultural Studies Heikki Uimonen.

The “Evening of Sounds” broadcasts previously made in Finland since 2012, have brought out sounds from the past as well as the present: from a cabinet clock to an effervescent tablet, from a pack of wolves to roaring frogs, from a steam engine to an old time car, and from a planer to a dental drill.

With the idea of the “European Evenings of Sounds” we wanted to explore how does it sound when voices from further afield, from a wider area, both geographically and culturally, come along? On a practical level, this all was done by partners broadcasting sounds to each other, discussing and reflecting on cultural meanings of sounds and soundscapes, and popularizing scientific knowledge about sounds and the study of soundscapes. The countries participating in the broadcast were sending each other sounds and telling stories about the soundscapes of each country and culture.



The sounds, soundscapes and sound postcards heard during the “European Evenings of Sounds” broadcast were for example:

- 
- Snow dropped from the roof with a snow pusher (from Finland)
  - Wood stove, roasting peppers for ‘ayvar’ (from Serbia)
  - Sharpening a scythe (from Slovenia)
  - Carpet washing by hand with a brush on the Helsinki seashore (Finland)
  - Belgrade bus station soundscape, recorded in the early 1970’s (Serbia)
  - Jackals of Bela Krajina howling (Slovenia)
  - Extracting water from the well in the village of Jelovik (Serbia)
  - Sound of the mining trolley in Slovenian mine Mežica (Slovenia)
  - Gaming with an old slot game machine “Pajatso” (Finland)
  - Ukrainian war refugee telling about her experiences of being clinically dead (Finland)
  - A soundwalk recorded at the EXIT music festival in the Petrovaradin Fortress (Serbia)
  - Reindeer round-up in Northern Finland, the Saami-area (Finland)
  - A Thai women, settled into Finland, listening and singing music from her home country while using a sewing machine (Finland)
  - Dripping water in Postojna stalactite cave (Slovenia)
- 

The basic idea of the “European Evenings of Sounds” was to play emotional and conversational, varied and interesting sounds to the listeners, and thus to draw attention to everyday sounds as well as to the already lost sound environments. The aim was also to highlight the radio basic material, which is sounds, and trust in what is the most characteristic and historically essential thing about radio: how the sounds create imagery, speech, stories and conversation.

Of course, problems and setbacks arose when such a joint broadcast by three countries and three radio stations was planned. One question rose above the others: what language will be spoken in the broadcast? Even though English was the only common language for all the participants, it was decided that we will not broadcast in English, but on the contrary, we want to highlight the participants’ own languages: Serbian, Slovenian and Finnish. Our shared view was that languages carry culture with them, and besides, it could be fun to hear three different languages on the broadcast, despite the fact that the participants of the broadcast do not understand each other’s languages.

But how to carry out a live radio broadcast without a common language? The solution was found in precise advance planning and a joint script. The working language of the script, which was prepared jointly online, was of course English, but the actual parts of the broadcast were spoken by each host in their own language. The idea that seemed confusing at first turned out to be a very functional, vibrant and interesting sounding option.

The condition for the flexible progress of the broadcast was that each of the hosts knew what the others were saying and could participate in the conversation in their own language. This required

close monitoring of both the script and the broadcast, but it worked. The hosts of the broadcast held numerous rehearsals online in advance, during which the script was specified and the rhythm of the broadcast was considered.

Yet another concern was the real-time connection between the radio studios. How would the simultaneous radio broadcast of studios located in three different countries work out? In this regard, the worry was pointless, because with modern technology, it is easy to build a simultaneous network-based radio connection, especially when all the countries participating in the broadcast were members of the European Broadcasting Union (EBU). So the hosts didn’t have to worry about the technology during the broadcast.

To read about the “European Evenings of Sounds”:



To listen to the programme, see podcast “European Evenings of sounds”, with Štukelj Cusma, Rakef, Delač and Valerij as hosts, produced on May 29<sup>th</sup> 2023:





Workshop for the “European Evening of Sounds”, Ljubljana, Slovenia, May 2022. Photo by Helmi Järviluoma



# SERBIA: EUROPEAN EVENING OF SOUNDS

## Production of the Radio Belgrade 1, RTS

One of the main objectives of the Creative Europe program is “to preserve, develop and promote Europe’s cultural and linguistic diversity and heritage, and to increase the competitiveness and economic potential of the cultural and creative sector” (Creative Europe, 2014–2020).

It is safe to say that the programs supported through Creative Europe are part of cultural diplomacy and its ‘soft power’. Over time, cultural diplomacy has gained a wider meaning in terms of mutual understanding between nations and their peoples, and through the exchange of information, ideas, art and other forms of culture. Also, as David Clarke reminds us, “besides art in the narrower sense, ‘cultural’ in cultural diplomacy also includes radio and television, exchange programs and language education” (2020, n. p.).

And actually, is language an obstacle in the production of international radio shows? And how to promote language diversity through radio broadcasts?

Unlike television, where subtitling of content is possible, and thus auditory accessibility to linguistic diversity, for radio as a medium, foreign languages are essentially a barrier.

Radio and Television of Serbia, like many other radio stations in the world, decide to synchronize foreign radio broadcasts – primarily to preserve the original duration of the broadcasts, its tempo and form.

In the joint show “European Evening of Sounds” which was realized on May 29<sup>th</sup> 2023<sup>1</sup>, it was the language barrier that was the most difficult to overcome.<sup>2</sup> While the Serbian and Slovenian languages can be mutually understood, for the Finnish colleagues the realization of the show was impossible without simultaneous translation or a pre-agreed and translated text. With this, the conversations between the presenters could not be spontaneous, but prepared and ‘acted out’. Also, any text possibly changed on the spot would go on air without translation.

Radio and Television of Serbia, in accordance with its production standards, for all the aforementioned reasons, decided to synchronise<sup>3</sup>, edit and subsequently broadcast the “European Evening of Sounds” show, while the partners from Finland and Slovenia decided to consecutively translate presentations in direct transmission. As it is impossible to have both simultaneous translation and ‘idle running’ of consecutive translations in the same show, Radio Belgrade 1 participated live in the realization of the RTV Slovenia and YLE/University of Eastern Finland shows at 19:00 EST, while broadcasting its edition of the show with a delay, at 21:00 EST. Since consecutive translations, repetitions of texts in different languages were unnecessary in the broadcast of Radio Belgrade RTS, the total duration of the edited broadcast was much shorter, about 35 minutes in total.<sup>4</sup>

1 Director: Ljubinka Dobrilović, sound recorders: Damir Gođevac and Katarina Kolar, music editor: Snežana Stanojević.

2 The international mission of the “European Evening of Sounds” was preceded by two ‘national’ shows. In the 90-minute debate show „Creative Europe: Sounds and Memories“, broadcast on February 25, 2023 on Radio Belgrade 1 RTS, at 8:30 p.m., live broadcast recordings/conversations with elderly people were commented on by anthropologist MSc Sara Nikolić, psychologist Bojana Škorc, Ph.D. and Mirjana Nikolić, Ph.D., media theorist and rector of the University of Arts in Belgrade, with the editor and show host Nikoleta Dojčinović. The documentary show “Sound and Recollections: Pearls, Witches and Other Fables” (author Nikoleta Dojčinović, director Vesna Perić) broadcast on April 29, 2023 on Radio Belgrade 2, RTS is a skilfully designed kind of fabric of sound and memories, often on the same topics, of different people, of different memories. The documentary show represented Radio Belgrade RTS at Prix Italia 2023 (p. 147) and broadcasted on RTV Slovenia.

3 Translator for Slovenian language: Tanja Tomazin, for Finnish language: Jasmina Teofilović.

4 RTS+RTV Slo+YLE about 14 min, RTS+RTV Slo about 10 min and RTS+YLE/UEF about 11 min.



Broadcast of the “European Evening of Sounds” national edition – “Creative Europe: Sounds and Memories” with Mirjana Nikolić, Ph.D., Sara Nikolić, MSc, Nikoleta Dojčinović, Bojana Škorc, Ph.D., February 25<sup>th</sup>, 2023, Radio Belgrade 1, RTS.

The planned broadcast time on Radio Belgrade 1 was 60 minutes, so that time slot was during the show filled with the songs representing Slovenia<sup>5</sup>, Serbia<sup>6</sup> and Finland<sup>7</sup> in the 2023 Eurovision Song Contest<sup>8</sup>; after the end of the show, songs from some of the earlier editions of the Eurovision Song Contest, selected by the music editor, were broadcast. Heikki Uimonen and Helmi Järviluoma-Mäkelä, based in the studio in Finland, featured as guest-hosts for Radio Belgrade. Given that the “European Evening of Sounds” show was preceded by the editions of two ‘national’ shows – a debate with guests in the studio in February 2023 and a documentary broadcast in April 2023, the last show in this triptych of a kind had no need for interlocutors in the studio of Radio Belgrade.

Finally, the language barrier in the Radio Belgrade broadcast was overcome by delaying the beginning of the translation, which allowed the listeners to detect the origin of the language and hear its ‘native melody’ (Aleksić, 2019). Conditioned by the broadcaster’s planned times and simultaneous/consecutive translations, the show “European Evening of Sounds” gave birth to three completely different shows, both in terms of duration and content, original, national and international, but also united the three partners of the B-AIR project in field exploration of sounds and memories.

To listen to the “European Evening of Sounds”:



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5 Joker Out – „Carpe Diem” (<https://www.youtube.com/watch?v=3LXIPviGiWc>)

6 Luke Black – „I’m Just Sleepy” (<https://www.youtube.com/watch?v=E89gtz9rdBM>)

7 Käärijä – „Cha Cha Cha” (<https://www.youtube.com/watch?v=rJHe-iZ5HSI>)

8 The final of the Eurovision Song Contest was held in Liverpool on May 13, 2023.



## SLOVENIA: EVENINGS OF SOUNDS

### Production of the Radio Slovenia, RTV SLO

As a part of the B-AIR international project, a series of evenings dedicated to sounds and memories was aired on the programs of Radio Slovenia.

The first evening show, hosted by Mojca Delač, took place on Monday, 15<sup>th</sup> May 2023, on the First Program of Radio Slovenia.

The second, hosted by Anamarija Štukelj Cusma, followed the next Monday evening on the “ARS” program.

The third, internationally themed, produced collaboratively by the First Program, Val 202, and the program “ARS”, with Anamarija Štukelj Cusma, Saška Rakef, Mojca Delač and Maj Valerij as hosts, was broadcast on May 29<sup>th</sup> 2023.



On this and next page:  
Broadcast of the “European Evening of Sounds” national edition, Radio Slovenia, RTV SLO

## HOW DID YOUR CHILDHOOD SOUND?

Our brains have a unique way of processing auditory information and storing sounds. For many, sounds are the key information, the most important stimuli that shape the picture of the world, the surroundings, the objects, the people. Furthermore, our worlds are shaped by sound in a way we might not even recognise or appreciate enough in a visually oriented society. We aimed to understand this field more thoroughly with the “B-AIR Evening of Sounds” series, which started on the First Program of Radio Slovenia – with the episode: “What are the sound memories of your childhood?”

Nostalgia is often triggered by sensory stimuli, and this brings various thoughts, ideas, and feelings to the surface. Motivated by the years of expertise of the Finnish public radio crew, we agreed that we wanted to engage with the topic in a way that isn't too narrow but inspiring enough for a wide range of listeners to participate in. This proved to be the right decision, leading us to quite a unique, memorable radio show.

The radio library of sounds, called “Mediateka”, is an important source of different auditory stimuli. It played a crucial role in making ‘memories come to life’ when our listeners called in and shared their stories and memories. As explained by our special guest in the studio, Špela Loti Knoll, musician, music therapist and the director of the Institute Knoll for music therapy and supervision, “sounds are a



language without limits”. I believe that sometimes, being focused on the verbal expression and words, we tend to forget about this. Seemingly bombarded with stimuli of all sorts, our focus and patience are put to the test.

All the above represented a challenge for a two-hour show where no music was played; all we had were words and sounds. I am proud and happy to say that the premiere of this show format attracted many listeners, who shared some incredible stories. From the sound of a worm chewing the wood of a bed in the sleeping room, to the sounds of the railway engine, bora wind, and horseshoes on the gravel road. All these were not ‘just sounds’, they were significant auditory memories connected to a determined place and time. Listeners remem-

bered the pitch and the tones, the exact characteristics of the sounds that were long gone. Sounds triggered emotions (mainly very positive) and still relate to past experiences that the callers did not mind sharing with us and the rest of the audience.

Following positive feedback and wide interest from the audience, I do believe that the “Evening of Sounds” deserves continuation. Carefully selected topics and the cooperation of the entire crew: sound engineers, hosts, special guests, show director and the assistants who are searching for the sound requests, are then indispensable, the solid foundation of the palace. An on-air palace of sounds and stories holding the promise of something that is at the core of radio as we knew it. It might also be its future.



# SOUND MEMORIES OF CHILDHOOD

## From the email response of listener Blaž Mihelič to the host Mojca Delač

“Thank you so much for such a brilliant show! You couldn’t have thought of anything better! I was really surprised by how many listeners called in and how many memories and associations they shared. Very spontaneously, a tremendously colourful show was created, in which everyone could enjoy from start to finish without getting bored in any way. Of course, your broad knowledge and excellent ability to empathize with the interviewees/listeners, even though you cannot see them, and the thoughtful comments of your special guest, Mrs. Loti Knoll, contributed to all that.

Kudos also to your entire technical team, especially for being able to find the appropriate sounds and recordings that the listeners’ memories related to so quickly! I would especially like to thank Mr. Matej Rus for a truly vivid and experienced reading of my own memories, which you nicely supplemented with that ‘antique rattle’. I felt as if I had just stood in front of our garage at home, basking in the sun and looking at the sky, saying to myself: “A few more days and we’re off to the seaside” Like those nearly 55 years ago.”



“European Evening of Sounds” national edition visual, Radio Slovenia, RTV SLO

## TO HEAR YOUR LIFE AGAIN

First experiences of the “Evenings of sounds” showed that this open radio communication form is extremely welcome for listeners, because a contact radio show connects the radio creators with listeners in a creative way. In this open broadcast, listeners choose a specific sound that is particularly meaningful to them and wish to hear it again via radio waves. With each sound, a story is then developed about what this sound means to the listener and what it reminds them of. At the same time, individual stories are accompanied by a conversation with guests in the studio, which embeds the “Evening of sounds” into a new whole each time. The sounds of the past, nature, environment and special memories create a unique and unrepeatable atmosphere. Through live conversation, in which a completely new, fresh image of life unfolds, a new context is created, which in a unique way invokes familiarity as well as openness to experiencing and remembering for each one of us.

Those evenings could be called ‘evenings of echoic memory’. Namely, the sound opens the space for memory. More than that, it reveals the depth and meaning of memory, and its healing value.

Memory is one of the most interesting cognitive functions, and much more than a mere collection of old photography. As the neuroscientist D.

Siegel puts it, “Memory is more than what we can consciously recall about events from the past. A broader definition is that memory is the way past events affect future functions. How we recall the past will be determined by which components of the massive network of the brain are activated in the future” (Siegel, 2020).

Memory is closely connected to stories which our brain created out of our experiences, especially our relational experiences. In that sense, live radio broadcasting is valuable in creating stories out of the remembered sounds.

A live contact between the listener and the medium enables this access to echoic memory to be meaningful and to serve its purpose – interpersonal contact. When a listener expresses a desire to hear a certain sound, the most important thing is that someone else is also interested in their story, because it is only within the conversation and storytelling that the memory is really retrieved and reshaped. Radio, on the other hand, becomes more dialogical and present in the individual’s experience.

A child remembers a lot of details without knowing it, encapsulating the feelings about a certain event, person, and himself according to how they

interpreted them at the time. When the memory is reawakened, however, the story it brings is also reassembled. By sharing the story with others, in a social environment, the connections they experienced at the time are revived. The emotion that sharing of the story evokes is pure joy and happiness.

Echoic memories, stimulated by music or sound, more often come from certain years in our lives, than from others. Most people tend to excessively report memories from when they were approximately 10 to 30 years old (Jakubowski et al, 2021). Psychologists have called it the ‘reminiscence bump’. Sounds and music from the reminiscence bump period can be associated with more memories than sounds and music from other periods in our life. Our teenage years and twenties are especially important and exciting times in our lives, as we experience things for the first time.

Echoic memory has a special way of being imprinted, depending on the meaning that a certain sound has for us. When our ears hear a sound, they transmit it to the brain where echoic memory stores it for about 4 minutes. In that short time, the mind makes and stores a record of that sound so that we can recall it after the actual sound has stopped.



This process is ongoing, whether we are aware of the sounds or not. Within the short time the memory lasts, the brain decides to discard or store the echoic memory. If the sound indicates an important context, the brain will move the information to short-term memory. Here, it will stay for about 20 minutes before being deleted or moved to the long-term memory part of the brain. The length of stay of any echoic memory in long-term memory depends on how often you replay that information in your mind (Nunez, 2019).

This is the reason why we remember only sounds that had special meaning for us, being important for our life and relationships they convey. It depends on the specific situation. Because echoic memory is short-lasting, our brain can record many echoic memories throughout the day. If two different pieces of audio information overlap and reach our ears at the same time, the brain automatically recognizes the two separate pieces of information, or a change in information. It relies on the echoic memory to hold these two pieces of information simultaneously, enabling us to combine sounds and to make our own narrative out of the soundscape we were immersed in. That is why the impairment of the echoic memory affects our quality of daily life (Thaut, 2014).

Sensory memory, of which the echoic memory is a part, is a largely implicit memory, which could become explicit only if it is a part of the story which has been narrated (Kinukawa, et al., 2019).

Designing the “Evenings of sounds” took place as action research, each evening bringing its own experiences and sounds. The story of the evening each time developed differently. The listeners’ need for their story to be heard and accepted, for their memory to be complemented, was revealed very strongly.

We were mainly looking for sounds that are no longer there (e.g. a sound of analogue telephone ringing), but that carry a whole range of experiences. Reviving those sounds was like a search for a special period, a gentle awakening of childhood and a longing for that most precious, innermost experience that is deeply inscribed in our inner being.

All sounds we were listening to triggered very strong emotional reactions in listeners mostly because echoic memory is in a large part implicit memory. Implicit memory is a type of memory with a function of classical mental conditioning. An event, an emotion, and a sound get connected through implicit memory. When a special sound or piece of music is paired with a very emotional event, hearing it can be an effective cue to bring back the strong emotion that was felt at that moment.

Our long-term memory can be divided into two distinct types, namely implicit memory, and explicit memory. Explicit memory is a deliberate, conscious remembering of the past; it involves things like textbook learning or experiential memories, things that must be consciously brought into awareness. Implicit memories, on the other hand, are our unconscious and automatic memories. For example, playing a musical instrument, or recalling the words to a song when someone sings the first few words. A large part of memory takes place in the unconscious mind.

Implicit memory can be formed by passively listening to background sounds or music. We may even develop a preference for certain soundscape or music pieces simply because they have been repeatedly played to us in the background. This psychological phenomenon is known as the ‘mere exposure effect’. People tend to like best what is most familiar.

Explicit memory fades in the absence of recall, while implicit memory is more enduring and may last a lifetime even in the absence of further practice. Explicit memory systems could become damaged by conditions such as Alzheimer’s disease, while implicit memory remains almost intact.

Another spectrum of sounds that spoke to us came from nature – the sounds of animals, the wind, the sea and raindrops, the sounds of summer and the sounds of winter, autumn and spring. All that is authentic, unadulterated, and organic. Everything that directs us to beauty, to life and the infinite mystery of creation.

It is as if we are looking for contact with ourselves, with life, which does not steal attention, but directs it to where we are most alive and present. Sounds from nature are also sounds that often lead to the memory of someone who shared these sounds with us, who walked with us in the snow and listened to its creaking, who alerted us to the buzzing of bees, watched the birds with us and listened to the waves.

The relationship between sound, music and memory is powerful. Sound evokes powerful emotions that then bring back memories. When we listen to a special sound or a piece of music from years ago, we seem to travel back to that moment. We can feel everything as if we were there (Siegel, 2020).

One of the more interesting listeners’ responses was when the sound they wanted to hear was not exactly what they expected. At that time, there was a sense of disappointment, as if some living memory had died or could not be fully awakened, as if a part of the listener’s inner self had perished. This once again confirms the fact that memory is not static,

not always objective, but is tied to countless small details that are imprinted in our experience.

The richness of the show was precisely in the fact that for everyone who listened to the show, a space was opened for browsing through their own memories, for directing attention to the sound, listening and at the same time eavesdropping on one's own inner self and longing to get closer again to people and events who built our inner life.

That is another reason why evenings of sound should help us remember, help us connect and help us remain attentive to the soundscape around, between and within us. It will help us restore our past and regain our dignity as human beings.

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Immigrant ladies' sound workshop in Turku, Daisy Ladies Memory House, Muistola, Finland, September 2022  
Photo by Helmi Järviluoma

# **SOUNDSCAPE OF WAR**





## SOUND LIFELINE – SONIC MEMORY OF WAR

As outlined in the introduction of this chapter by Prof. Helmi Järviluoma-Mäkelä, part of the activities of the B-AIR project focused on sonic memories centring around the acts of remembering, and on how sonic memories are narrated.

At the International Burch University (IBU), our research has been focused on the sonic memories of war, or more specifically of the siege of Sarajevo 1991-1995 as experienced by fifteen survivors. We seek to understand how the collective sonic memory is shaped through individual memories and as a means to understand we conducted interviews with the survivors. The semi-formal interviews were filmed, transcribed and analysed through an academic prism supported by current sonic theory. The academic research was also used in the creation of three artistic works as a means of addressing the sonic war memories which include aspects of sonic trauma.

At the core of the project lies the exploration of the relationship between sound, space, memory and war. We applied a research-to-create approach to producing three artistic components – a documentary film, an electro-acoustic sound installation and a sound composition – which were

presented to the public under the same name as the project “Sound Lifeline” in the exhibition at the Historical Museum of Bosnia and Herzegovina in Sarajevo.

In addition to this summary of our research-to-create approach that resulted in the realization of the “Sound Lifeline” project, a more detailed publication has been produced by IBU and can be found on the B-AIR project website.

### Architecture and sound

In sonic studies, ‘aural’ and ‘acoustic architecture’ are two terms that are often used, but it is important to understand their distinctions. Acoustic architecture is concerned with the tangible, physical aspects of sound within an architectural context, aspects that can be empirically measured and assessed. In contrast, aural architecture encompasses the more intangible elements: the emotional, behavioural, and physical reactions elicited by sound within a space. This research is anchored in the aural dimension of architecture and its influence on sonic memory, both at individual and collective levels. Current academic discussions

about sound are rich with spatial ideas that extend across physical, sensory, geographic, social, and political dimensions. Frequently encountered terms include ‘acoustic spaces’, ‘soundscapes’, ‘aural architectures’, ‘auditory perspective’, ‘acoustic communities’, ‘urban ambiances’, and ‘acoustic territories’, among others<sup>1</sup>.

R. Murray Schafer, a Canadian composer, ecologist, and author, initially used the term ‘soundscape’ to describe the auditory landscape or transient composition of layers of acoustic data within an area (1977/1994)<sup>2</sup>. Whether they are purposefully created, aural architecture and soundscapes nonetheless exist. The built environment and soundscapes are inextricably linked to one another since the latter amplifies and modulates the former, while the former is made up of the accumulation of daily activities, which together make up the ‘soundscape’. So, in addition to being a representation of a place, a soundscape can also be conceived of as an expression of its social structure and physical environment.

1 Refer to, for instance, concepts such as ‘acoustic space’ (Carpenter et al., 1960; Truax, 2001), ‘aural architecture’ (Truax, 1978; Blesser et al., Salter 2007), ‘soundscape’ (Schafer, 1977/1994; Thompson 2002), ‘aural landscape’ (Thompson, 2002), ‘auditory landscape’ (Corbin, 1998), ‘urban ambiances’ (Thibaud, 2011), and ‘acoustic territory’ (LaBelle, 2010).

2 To see the whole website of “World Soundscape Project” at Simon Fraser University: <https://www.sfu.ca/sonic-studio-webdav/WSP/index.html>

Here a soundscape is positioned as ‘an environment of sound’ (or sonic environment), with emphasis on the way it is perceived and understood by an individual or by a society’.<sup>3</sup> In this regard, space is in the sounds, at least in a manner perhaps not too far removed from Henri Lefebvre’s conception of space as a function of social production (Lefebvre 2019). Therefore, in order to understand any given sonic environment, one has to understand the semiotics of sound which functions through the experience of the auditor, who interprets meaning within their environment through the act of listening.

### Soundscape of the siege

Fifteen participants were interviewed about their sonic memories of the siege period. The participants ranged in age and occupation, and they also lived in different parts of the city during the siege. All the witnesses are aware of the soundscape of Sarajevo before, during, and after the siege. The interviews were conducted in a semi-formal style in the studio environment at the International Burch University, either in Bosnian or English. Albeit informal, the questions were structured to reflect the multitude of spatial scales and variety of daily experiences, or sonic environments, during the war. The questions did not explicitly focus on ballistic sounds or ‘sounds of terror’ but rather tried to understand how the siege affected spatial morphology and the daily routine conducted in it, and how that was reflected through the soundscape and what physiological effects it had on the witnesses both during and after the war. For this very reason, the name of the project is “Sound Lifeline”.

The interviews have been conducted with the incredible generosity, openness and honesty of the following fifteen participants: **Adela Jusić** (visual artist), **Adi Sarajlić** (sound producer), **Dina Memić** (historian and curator at the Historical Museum of BH), **Džemil Hodžić** (video editor/founder of Sniper Alley project), **Enes Zlatar** (musician), **Enrico Dagnino** (photojournalist), **Husein Mahmutović** (musician/artist), **Mirsad Tukić** (sound engineer and artist), **Mirza Ćorić** (musician), **Nermina Zildo** (art historian and curator), **Nihad Čengić** (architect and professor), **Nihad Kreševljaković** (historian and director of MESS festival), **Paul Lowe** (photojournalist and lecturer), **Sabina Tanović** (architect and researcher), and **Zoran Doršner** (architect).

The interviews were transcribed and analysed as a means of understanding the war soundscape and its impact on the witness. The analysis relies on the current war theory studies (Velasco-Pufleau, 2021; Goodman, 2012; Daughtry, 2015) as well as relationships between music, sound and violence (Daughtry, 2015; Gilman, 2016; Grant et al., 2013; Nuxoll, 2015; Ouzouniann, 2021; Rice, 2016; Velasco-Pulfeau, 2020; Williams, 2019). However, while most of these studies have focused on wartime and detention contexts and the experience of the soldiers (with the exception of Velasco-Pufleau, 2021, who interviewed civilian victims of a terrorist attack during a rock concert), this research explores the particularities of listening to the experiences of people – civilians – who were exposed to long-term sonic violence during the siege of Sarajevo. Through the individual testimonies, many collective patterns emerge within the sonic remembrance of the witnesses.

### Addressing sonic war memories

Although our investigation lies at the intersection of sonic memory and the architectural/spatial realm of wartime Sarajevo, it is also influenced by anthropological, artistic, therapeutic and musical spheres. The goal of the project was to investigate alternative models of addressing sound memory/trauma by resting on current warscape theories as examined through the interviews, but also through the production of the three artistic components mentioned above: an electro-acoustic sound composition, a documentary film and a sound composition.

The examination of the testified war sounds was approached in a very similar manner as one would with an architectural project – starting with the city scale and working our way down to the street level, followed by interior spaces and finally looking at it from a human scale. All three artistic components were also conceptually arranged in this manner and each has its own specific purpose within the project. For the exhibition, rather than drawing scientific conclusions about the nature of auditory experience in wartime, we asked the visitor to participate in the witnessing, experiencing the restorative nature of the sonic realm through active listening.

The three artistic components which resulted from this research: a documentary film, an electro-acoustic composition and a music composition, have been exhibited at the Historical Museum of Bosnia and Herzegovina in Sarajevo (26. 4 – 10. 5. 2023) followed by an exhibition at the Research Centre of the Slovenian Academy of Arts and Science as part of the Global SpecifCity Festival in Ljubljana organized by Radio Television Slovenia (15–18. 6. 2023).

3 ISO 12913-1:2014(en), Acoustics - Soundscape - Part 1: Definition and conceptual framework, available online: <https://www.iso.org/obp/ui/#iso:std:iso:12913:-1:ed-1:v1:en> (accessed 1 September 2022).

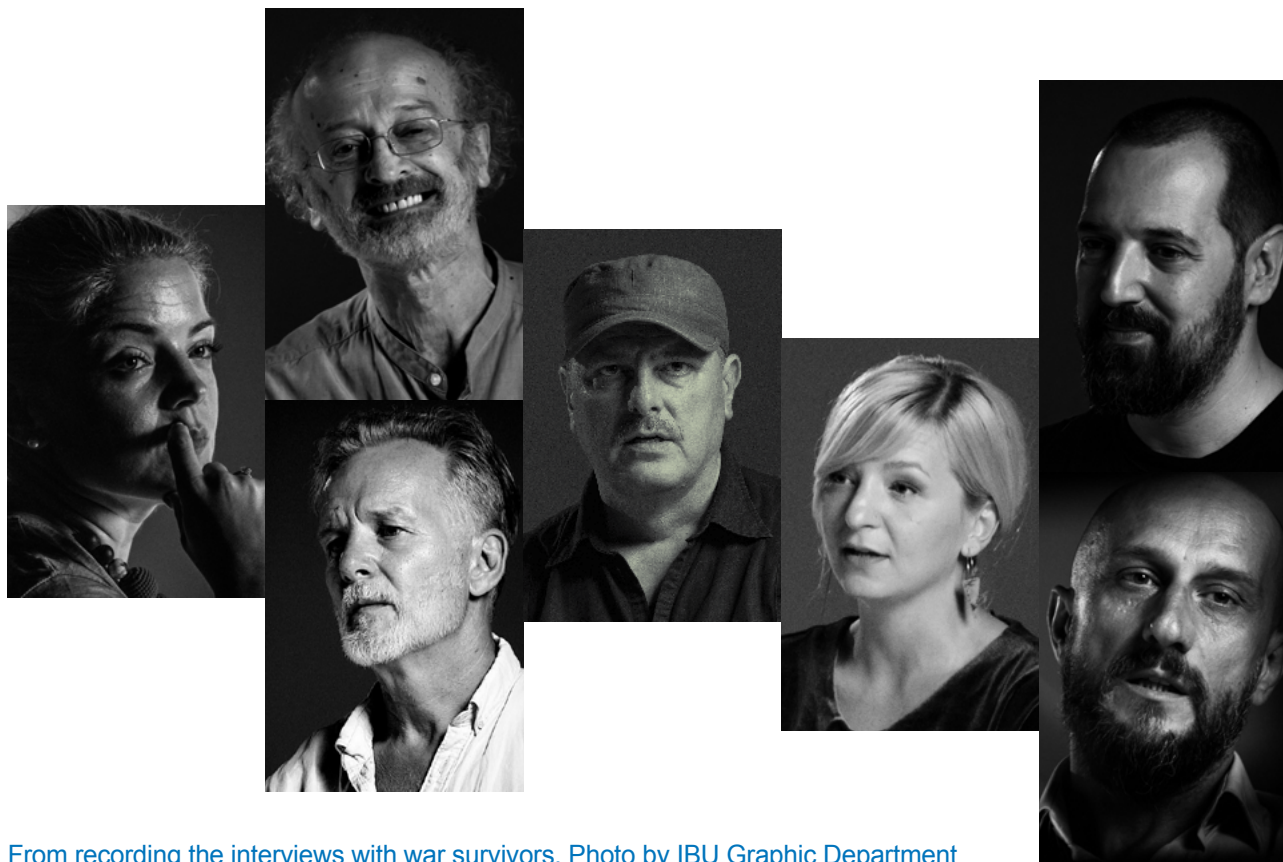


## “Narrating the Siege” Documentary film

Since the act of witnessing publicly becomes a testimony, the documentary film “Narrating the Siege” (2023) by Lejla Odobašić Novo and Emir Klepo is the spoken testimony of the fifteen witnesses interviewed for the project. The film focuses on sonic memories of the siege as the central element of the war experience. As Anna Papaeti asserts, the process of witnessing, “emerges as an ethical moment that calls us to make sense and respond to these stories, their multiple versions and voices, in ways that open up the debate about the violence and abuse of the past and the present” (Papaeti, 2020).

Odobašić Novo and Klepo’s documentary film “Narrating the Siege” and Sahačić’s electro-acoustic composition “Symphony of the Siege” are complementary. The documentary film contextualizes the electro-acoustic sound composition through the testimonies. In terms of the sonic narration, both pieces are arranged in the same spatial sequence, starting with that of sounds at the city scale and moving down conceptually to the sounds of the street level, followed by the sounds of interior spaces and finally ending within the human scale and the sound of intimate personal experience. Much like “Symphony of the Siege” composition, the film “Narrating the Siege” begins with the sound of a military plane and ends in a very intimate space, that of personal loss. Changing of the spatial scales allows the viewer/listener of the exhibition to understand the all-encompassing sensory experience that sound created during the war.

The documentary progresses down in spatial scale through four parts: “Sound of War”, “Sound as Orientation and Movement”, “Sound of Resistance”, and



From recording the interviews with war survivors. Photo by IBU Graphic Department

“Silence”, each part corresponding to the soundscapes. The final scene of the film occurs in a very intimate space and recounts a personal loss, where Džemil Hodžić testifies about the day a sniper killed his older brother Amel, while he was playing tennis with his friends in front of their house. The overwhelming silence ends the film, leaving the viewer to absorb all the testimonials and preparing them to move into the dark gallery where they can listen to the electro-acoustic sound composition “Symphony of the Siege” followed by the music composition “Peace”.

The changing of the spatial scales in all three pieces allows the viewer/listener of the exhibition to understand the all-encompassing sensory experience

related to the sound during the war. The goal of the documentary is to illustrate the transformative nature of the sounds during the siege. It started as a tool of terror and oppression through ballistic sounds; however, as the war progressed, the citizens learned how to use it as a tactical means of survival and finally even adapted it as a tool of resistance through activities such as concerts, music plays and radio. The notion of resilience, empowerment, and resistance through sound becomes the underlying message of the film.

To watch the documentary  
film “Narrating the Siege”



## “Symphony of the Siege” Electro-acoustic composition

The electro-acoustic composition “Symphony of the Siege” by Haris Sahačić is an attempt to spatialize and recreate some of the key experiences described as sound memories through the fifteen testimonies. Psychological research and practice have shown that imprints from the past can also be transformed by having physical experiences that directly contradict the helplessness, rage and collapse that encapsulate trauma.

“Symphony of the Siege” is a recreation of sonic experiences with new sequences and spatial order, based on the narrational testimony. The aim of the work within the project research is two-fold. The first aim is to re-introduce the war sounds to the witnesses in a safe and reconceptualised space and sequence, and in this way, as stated above, the protagonist/witness is able to replay and change scenes from their past and thus ‘normalize’ the war sounds through listening to the composition. The second is to introduce those sounds to the visitors of the exhibition who have not experienced the siege of Sarajevo, again in a safe and controlled environment with a carefully composed flow, as a means of better understanding the survivors and their testimonies.

The electro-acoustic composition is acoustically projected through six active sound monitors in a pitch-dark gallery and thus creates a sense of spatial depth through sonic projection. The piece is composed as a symphony consisting of four acts (based on four spatial scales), each consisting of a number of sound miniatures. Each sound miniature is a recreation of one acoustic moment described by the witnesses. The flow and order of the miniatures is also reflected in the structure of the documentary film. The spatial scales of the sound scenography



Interview with war survivors. Photo by IBU Graphic Department

move from the entirety of urban territory to the space of an intimate moment. As Judith Herman asserts, “the fundamental stages of recovery are establishing safety, reconstructing the trauma story, and restoring the connection between survivors and their community” (Herman, 2015).

To listen to the  
“Symphony of the Siege”:





## “Peace” Sound Composition

Mirsada Zećo's sound composition “Peace” is the third part of the exhibition and is based on music and therapeutic theories. The performance of the sound bath has been pre-recorded and is also structurally based on the narrowing of the sound scales as the performance progresses, ultimately ending in silence. The “Peace” is played in the same space and right after Sahačić's “Symphony of the Siege.” Thus, the role of this sound bath is to regulate the sonic distress that the visitor might experience after listening to the electro-acoustic piece.

“Peace” is based on well-established music theories as pertaining to its therapeutic usage. The sound bath sound bath performance was pre-recorded as a form of therapeutic model. The intensity and strength of the sound of the planetary gong Venus (221,23 Hz) were related to extreme sounds during the period of the siege (*forte, fortissimo*) in order to continue with the calming and subtle sound variations on sound bowls. Mirsada used three different therapeutic bowls (Hess, 2008): a small bowl (frequency scope of 200 and 1.200 Hz), a medium bowl (frequency scope between 100 and 1.100 Hz) and a large bowl (frequency scope between 100 and 2.800 Hz). Each of these sound bowls also resonates with certain organs in the body, bringing the listener into a quicker state of relaxation.



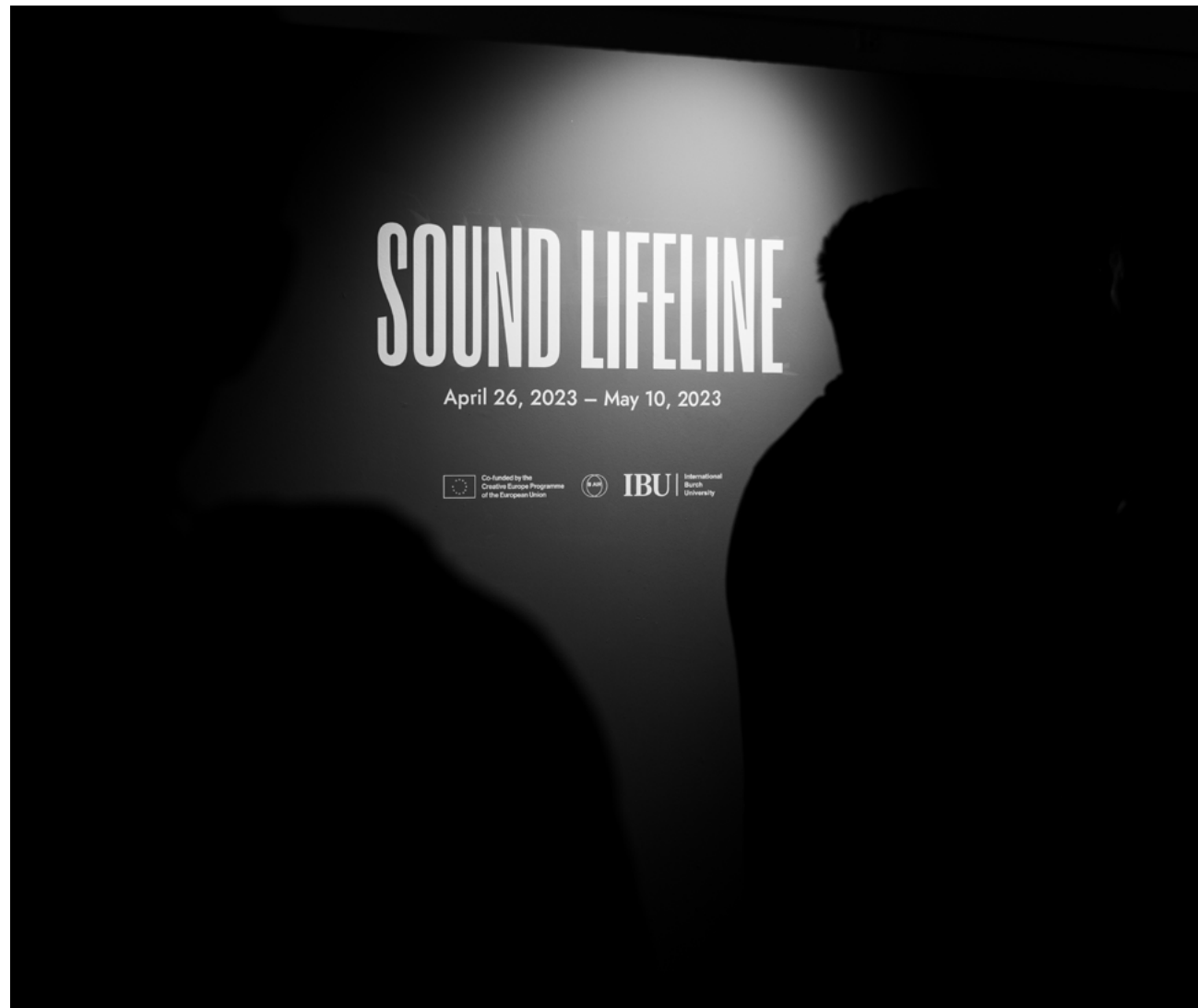
Listening to the sound compositions. MESS Festival, April 26<sup>th</sup>, 2023. Photo by Velija Hasanbegović

To listen to the “Peace”:



## Restoring safety

The project “Sound Lifeline” aims to explore the relationship between architecture, sound, memory and war through the witnessing of fifteen survivors of the siege of Sarajevo 1991-1995. By the means of these testimonials it was possible to trace the transformative agency of sound from that of weapon of war and psychological torture by perpetrators, to that of a tool of orientation and movement in space by the citizens of Sarajevo and finally as a means of resistance through music and radio. The research also portrays the relationship between sound and architecture in extreme circumstances and furthermore it explores how artistic components which resulted from this research (a documentary film, an electro-acoustic composition and a sound composition) were placed in a safe environment.



Sound Lifeline, MESS Festival. Photo by Amina Alić

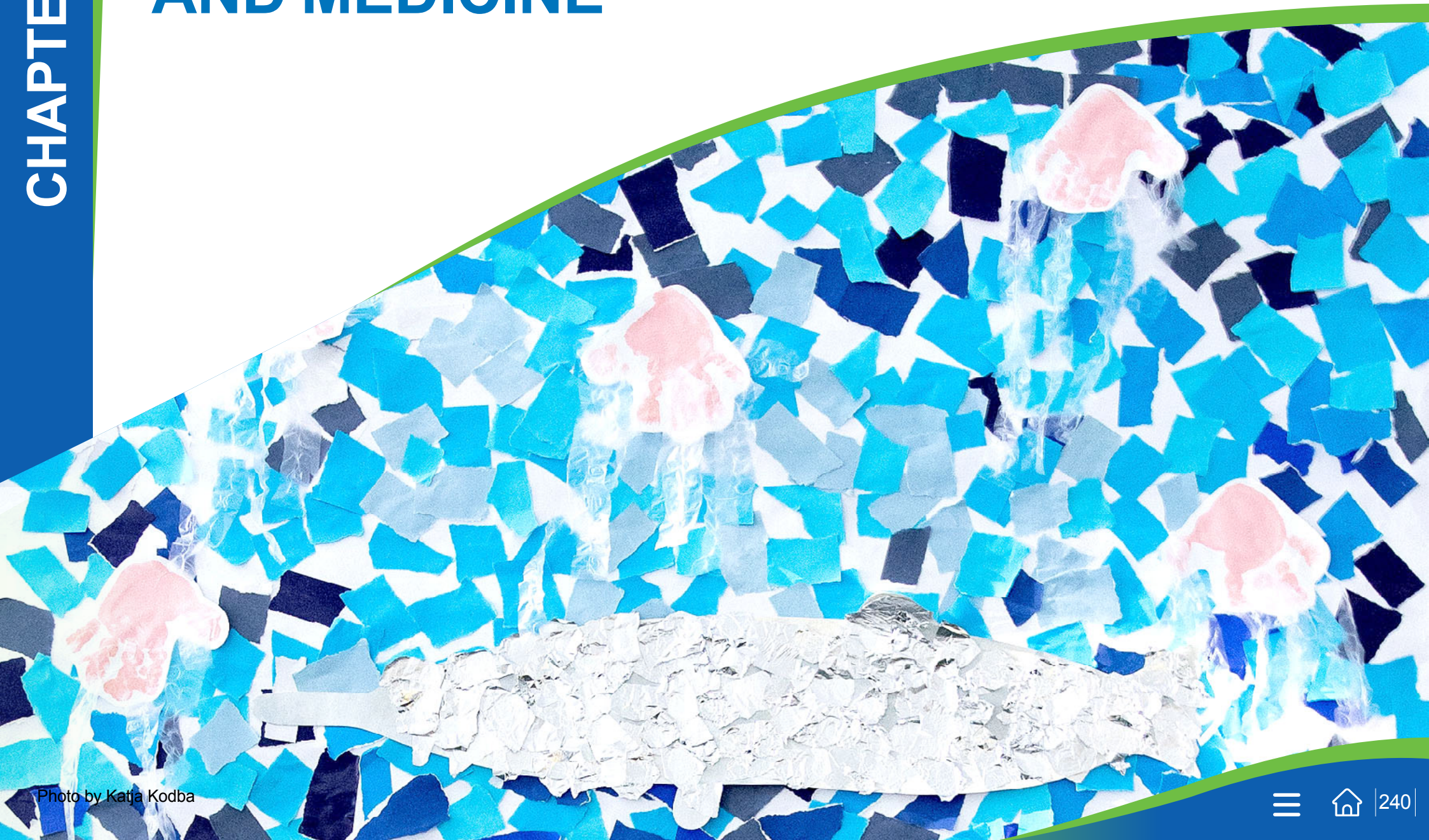


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# SOUNDART AND MEDICINE





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## INITIATING THE USE OF MUSIC IN HEALTHCARE: THE EXPERIENCE OF THE B-AIR PROJECT

Throughout history, music has played an important role in alleviating physical and mental ailments. It is only in recent decades, however, that systematic scientific research into the benefits of music has become widespread. In the framework of the B-AIR project, the authors of this article came together to explore possible ways of promoting the idea of introducing music into the Slovenian healthcare system.

Our project is based on the vast literature supporting the positive role that music can play in healthcare – combining rehabilitation effects on cognition, speech, movement and social aspects. Seeing that music is not part of standard medical practice in Slovenia, we devised an action plan, with the aspiration to start promoting music as an important factor in the Slovenian healthcare system. Our efforts have been put into practice: we have prepared webinars and radio broadcasts (“Soundings”/Zvočenje), and introduced a hospital radio prototype for children at the Paediatric Clinic

of the UMC Ljubljana. Further, a pilot study among musically active doctors was performed to assess the needs and prospects felt by the medical personnel regarding introducing music into their practice. The study confirmed our assumption – there is a lack of knowledge and systematic education about the positive effects of music.

The findings also directed our future efforts. Musically active doctors expressed a desire for more research about the impact of music and several comments have been made regarding the exploration of the patients’ perspective. We performed a study on the use of music and the interest to use music in people with Parkinson’s disease, especially focusing on the members of Parkinson’s disease association of Slovenia – Trepetlika. With the study, we wanted to dually address the need for trial periods and pilot studies. We wanted to give an experience of music therapy and simultaneously research its impact on patients, thus bringing them closer to medical professionals.

As B. Polascik and colleagues (2020) reported, acceptance of music interventions requires time and education. We want to enable this through the gradual introduction and further spreading of awareness through mass media and in professional circles: discussing medical problems among musicians and continuing the creation of radio conversations, seminars and workshops for professionals in music and medicine. Through these efforts we hope that music will gradually take on a more important role in the Slovenian healthcare system.

### The B-AIR project and the theoretical background

Music is present in humans from before birth. Even newborns show the ability to discriminate and show interest in singing and different musical instruments (Babikian et al., 2013). Music has a rich and extensive history in the field of medicine, with its use

spanning across different cultures and time periods. The first person to use music as a remedy for physical and psychological problems was Pythagoras in the sixth century B.C. However, it is only in recent decades that systematic research into the therapeutic utility of music in clinical practice has begun (Babikian et al., 2013). Research on the potential clinical applications of music has been followed by studies on the brain mechanisms of music perception (Blood et al., 2001; Molnar-Szakacs et al., 2012; Schaefer et al., 2013, Vines, 2012; Wu et al., 2012), which have shown positive effects on a wide range of neurological functions (Blood et al., 2001; Molnar-Szakacs et al., 2012; Schaefer et al., 2013, Vines, 2012; Wu et al., 2012). The authors of these studies have estimated that similar brain regions are activated during the perception and processing of musical experiences as with experiences of reward, motivation, emotion and arousal. Listening to music alone activates more brain regions than any other stimulus – activation starts in the brainstem and then continues to more highly developed structures up to the frontal cortex (Molnar-Szakacs et al., 2012). A wide range of neural networks are crucial for the brain's processing of music, from emotional perception to motor and somatosensory functioning (Babikian et al., 2013). The discoveries in the field of neuroscience have greatly contributed to raising awareness and acknowledging the significance and effectiveness of music as a therapeutic approach. Music is acknowledged as a useful tool in neurorehabilitation, as it has the unique ability to activate a wide array of neural networks that are not exclusive to experiencing music, but are primarily responsible for speech, movement, cognition, etc. For example, in the USA and Canada, one type of music therapy (rhythmic auditory stimulation – RAS) has been included in the official guidelines for stroke rehabilitation in 2019 (Thaut, 2021).

In a large-scale international and multidisciplinary project B-AIR, the public institution RTV Slovenia (Radio Slovenia), together with eight partner organisations from seven European countries, explores and questions the role of sound art and the auditory channel in perception, cognition, communication and socialisation in human development, health and disease. Artists, experts from various fields (from neuroscience, developmental psychology, paediatrics, music pedagogy, musicology to architecture, anthropology, sociology) and journalists collaborate to produce musical, fictional, informative, educational and research content. The content is aimed at children, parents, educators, teachers, health professionals and anyone else interested in what sound and sound-based art can bring to human cognitive, emotional and personal development.

The project also served as a starting point for incentivizing the use of music in the Slovenian healthcare system. Recognising that the use of music therapy in Slovenia is not yet as well developed as in some other European countries, the project members developed an action plan to encourage the medical professionals and the general public to consider music as an important factor in the Slovenian healthcare system. In the following, we first present some of the achievements of the project.

### **Musically active doctors' views on the role of music in healthcare**

In May 2021, we conducted a brief survey targeting doctors in Slovenia to investigate their interest and motivation regarding the integration of music into the healthcare system. The purpose of this survey was to gain insights into the possible benefits and potential barriers associated with incorporating music as a therapeutic tool in medical settings. By

directly engaging with the medical community, we aimed to understand their perspectives and gather valuable information that could inform future efforts to enhance patient care through music-based interventions.

16 musically active physicians participated in the pilot survey (response rate was 32%), half of whom (N = 8) were women. Participants were contacted mainly through links in the existing networks (originating from chamber ensembles, string orchestra and choirs) of musically active physicians. As the sample size was small, we cannot speak of statistical significance and hence report only the patterns we observed using descriptive statistics and by categorising the written responses to the open-ended questions.

The questionnaire first aimed to assess the current state of music use in healthcare (results are given as percentages to facilitate clarity and readability). 62.5% of the doctors surveyed had previously encountered music in healthcare. As examples they mentioned special events for patients, music in waiting rooms, during surgery and doctor's office. They indicated that they themselves already use music in the following situations: radio in the delivery room, personal choice of music in the irradiation rooms, music listening during the premature baby's contact with the parent, and generally to improve the patient's mood.

Furthermore, the survey aimed to assess the physician's awareness of the potential benefits of music and their attitudes towards the introduction of music in healthcare. Although the sample included only doctors with extensive music experience, only one person was confident that they had a fair understanding of the benefits of integrating music into



healthcare settings. Most participants were at least somewhat aware of the benefits, and all of them felt that healthcare professionals should be systematically educated about it. 75% of the doctors interviewed were enthusiastic about the idea of introducing music into medicine, while the remainder, although enthusiastic, had concerns about potential barriers.

The respondents were asked about the feasibility of 6 examples of introduction of music in healthcare situations. Figure 1 shows how many of the participants found each idea feasible. When asked about the potential difficulties of introducing music, obstacles were perceived to exist in the resistance from management, uncertainty about whether

such interventions were really necessary or useful, and lack of energy and time. In addition, infrastructure and lack of funding for sufficient technical equipment were highlighted as potential barriers. The diversity of musical tastes was also seen as a significant problem. Many felt that a trial period would be most effective in preparing the staff. Some suggested starting with a survey and one participant proposed a clear plan that would inform and convince the management and staff. Participants would like to see more research on what kind of music is universally soothing, the effect of music on psychological tension during radiation, on chronic regional pain syndrome (CRPS) and on developmental speech disorders.

Music is one of the most universal types of therapy due to its proven benefits for overall well-being, several neurological functions, and its cost-effectiveness. The risks of side-effects are also minimal or non-existent and music can be used in a wide range of clinical populations and age groups (Babikian et al., 2013). However, there are many genres of music available to us and people have developed a variety of musical tastes. Hence, despite being a highly applicable and universal phenomenon, music is also highly individualistic (Babikian et al., 2013). This can be a problem when trying to generalise its effectiveness for a group of people (e.g. in a waiting room), which was also pointed out by the participants in our study. A growing body of research reports the benefits of the therapeutic use of personalised music for well-being (Martin et al., 2016; Park et al., 2016; de la Torre-Luque et al., 2017; Sung et al., 2010, cited in Dimopoulos-Bick et al., 2019).

Genevive A. Dingle et al. (2021) provided a review of the extant literature on the psychosocial mechanisms through which musical activity may contribute to improved health and well-being. The featured mechanisms were emotion regulation and the promotion of social connectedness, cognitive stimulation and physical activation. The presence of these mechanisms may vary depending on the type of music intervention. The heterogeneous nature of the existing research and the inconsistent quality of the findings make it difficult to draw definitive conclusions about the effectiveness of different music interventions. Among the variety of ways in which music can be incorporated into medical practices, researchers recommended the use of music as a complementary therapy for various health problems, as an aid to regulate emotions and reduce stress and so on.

### Which of these do you perceive as feasible?

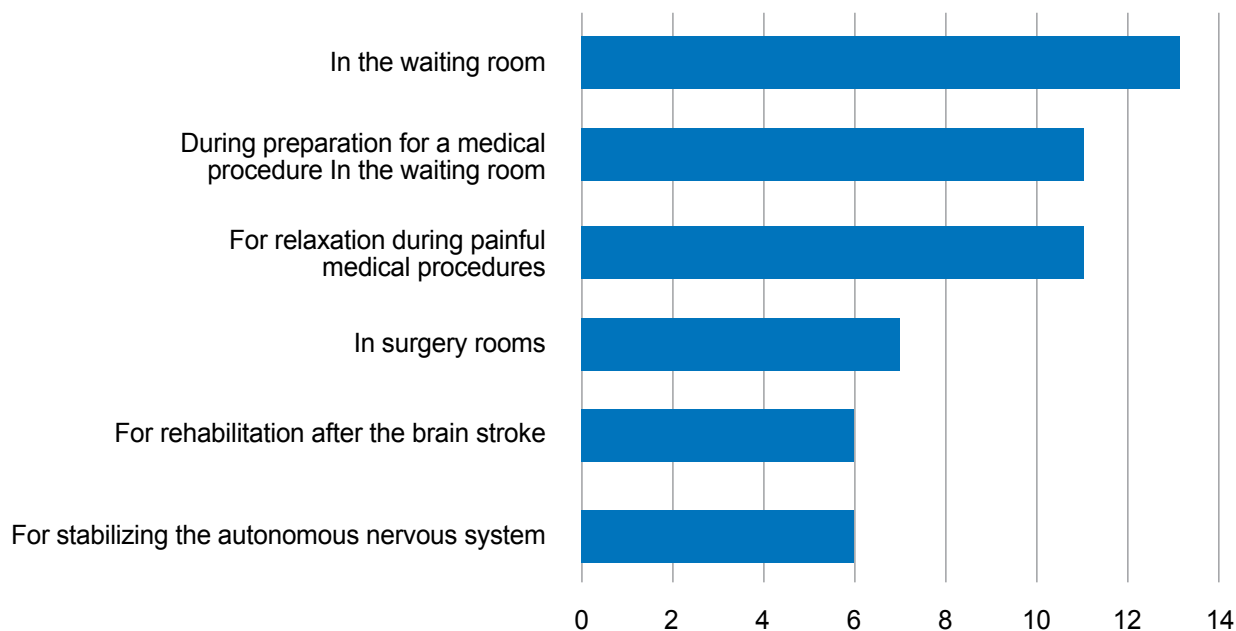


Figure 1: Six examples of introducing music into the health system that the participants (N = 16) found most feasible

For improving physical fitness and coordination, they recommended performing dance or movement activities, and for more successful social integration and cognitive stimulation they encouraged music-making. They pointed out that music interventions should be culturally sensitive and tailored to the individual's needs. Further, they warned that not all music interventions are equally accessible (due to technical equipment or training of health professionals) (Dingle et al., 2021).

One of the interventions that are most accessible and adaptable to the individual is the use of personalised playlists, which has been studied by Tara Dimopoulos-Bick et al (2019). In their study, 76% of patients reported a positive change in their health experience as a result of using a personalised playlist. Healthcare staff felt that the use of personalised playlists was convenient mainly due to ease of administration. Volunteers can be invited to help with the administration of personalised playlists as administration does not require specific qualifications, which was also one of the concerns raised by healthcare staff in our pilot study. Nevertheless, the authors stated that the support of music therapists in the implementation of music interventions is recommended. The study implementers provided training and technical support to healthcare staff before and during the study. Approximately half (51%) of healthcare staff felt that this prepared them fairly well or very well for their role in implementing a music intervention, which is consistent with our participants' views on the importance of staff preparation and the trial period of introducing music into the healthcare system. A music intervention such as the use of a personalised music playlist can be easily embedded into routine healthcare practice. On the other hand, healthcare staff reported some similar barriers to the use of personalised music playlists as those

raised by participants in our study, including funding for technical equipment and other infrastructure to deliver the interventions (e.g. equipment storage, internet connection) and increased workload for those delivering the interventions. Breanna A. Polascik et al. (2020) report similar concerns of healthcare staff about perioperative music use, including reduced patient interest in listening to music, unstable patient turnover timeframes, and additional workload for healthcare staff. The authors report that the acceptance of music interventions by healthcare staff (nurses and anaesthetists) has increased over time (Polascik et al., 2020).

The survey described above served only as a pilot, so we designed a follow-up in summer 2021, with the aim of obtaining a larger sample, but we received only three responses. The current results therefore do not allow us to draw any conclusions about the general opinion of the medical sector, including musically inactive doctors and patients themselves. We do not believe that the exclusive use of online surveys to gain insight into the mindset of healthcare staff is an appropriate way to do this. Healthcare staff is generally overburdened, especially during the Covid pandemic which limited us in methodological terms – we were unable to meet respondents in person. Except for one occasion, the motivational meetings we planned with musically active doctors (orchestra, chamber ensembles, choir) could not be carried out. To gain a more comprehensive understanding of healthcare staff attitudes towards music, it would be more valuable to first conduct qualitative research, such as focus groups. Following this, a questionnaire can be administered to a larger sample, encompassing various groups of healthcare professionals. In the future, we could use a similar methodological approach to Tara Dimopoulos-Bick et al. (2019), who collected questionnaire responses from patients,

family members and healthcare staff, conducted six focus groups with healthcare staff representatives, and analysed various documents about the interventions and the study. This approach could gain access to a holistic view of the issue, since, according to the authors, patients and their families are also the key actors in the introduction of music in the health system.

### Disseminating knowledge through the medium of radio and beyond

Radio is a cost-effective and important source of education, information and entertainment that can easily reach a wider audience (Rahman Ullah and Khan, 2017). A public medium (in this case, radio), with a project that is initially focused on creative arts content, can stimulate a wide network of collaborations that also generate ideas and proposals that can lead to research, development and organisationally significant shifts in the field of comprehensive care for the development, quality of life and treatment of children and vulnerable groups. The material we have generated through a series of radio talks, webinars and lectures will be useful for thematic discussions and for disseminating knowledge to professional and lay audiences about the impact of music on health and quality of life.



## B-AIR “Soundings” (Zvočenja) project and webinars

This is a series of expert talks on the use of music in healthcare with eminent guests from leading European centres, led by Igor Mihael Ravnik, MD, sen-

ior specialist in paediatric neurology. The aim of the interviews is to disseminate knowledge and experience from international good practices, to promote use of music in the Slovenian healthcare system, to increase interest in research as well as raise awareness of the positive effects of music in society.

The project group also organised webinars. B-AIR joined forces with the student section of SiNAPSA, the Slovenian Neuroscience Association, to organise these webinars, which can be seen in Table 1.

Guest	Institution	Topic
Darko Breitenfeld	Croatian Association of Alcoholics' Clubs, Zagreb	Beginnings of music therapy in Central Europe
Ivan Rektor	Centre for Neuroscience, Masaryk University in Brno	Mozart's Sonata K448 for two pianos and epilepsy
Giuseppe Pino Pocolen, Vali Glavič Tretnjak	Lo Specchio Sonoro, Desio; Division of Paediatrics, UMC Ljubljana	From musical education to musical animation and non-verbal music therapy I, II
Mihaela Kavčič	Ad Libitum, Logatec, Department of haemato-oncology, Division of Paediatrics, UMC Ljubljana	Music therapy for children with cancer and people with dementia
Stefan Koelsch	Department of Biological and Medical Psychology, University of Bergen	Music and the brain
Clement Francois	Speech and Word Laboratory, Aix-Marseille University	Words, speech and brain plasticity
Manuela Filippa	University of Aosta, University of Geneva	The newborn and the mother's voice
Katarina Kompan Erzar	Faculty of Theology, Faculty of Education, University of Ljubljana and SFU Ljubljana	First steps in the world of sound and music
Miran Možina	Sigmund Freud University Ljubljana	Psychotherapy, music and dance therapy
Irena Hočevnar Boltežar, Nataša Prebil, Rozalija Kušar in Petra Bavčar	Centre for Voice, Speech and Swallowing Disorders, Department of ENT and Cervicofacial Surgery, UKC Ljubljana	Voice, speech, singing
Saba Batellino	Audiovestibulosis Centre, Department of ENT and Cervicofacial Surgery, UCC Ljubljana	Hearing and pitch

Guest	Institution	Topic
Andre Lee	University of Music, Theatre and Media, Hannover	Physiology of music and medicine for musicians
Ladislav Krapac, Iva Bartolić	Physical medicine and rehabilitation outpatient centre, Zagreb	Physiology of music making and medicine for musicians
Peter Vuust	Royal Academy of Music, Aarhus University	Research in the Center for music in the brain I, II
Andrej Adamek, Janja Hana Jamnikar	Dept. of Neurology, Dept. of haemato-oncology, Division of Paediatrics, UMC Ljubljana	Art for children in the hospital
Jaka Škapin	Luminelle's, London; Dancing with Parkinson's Project	Singing, speech, dancing with patients
Jamie Wilcox, Chaminda Stanislaus	Radio Lollipop, Great Ormond Street Hospital, London	Hospital radio for children
Matevž Pesek	Faculty of computer and information science, Ljubljana University	Human and computer interactions with music
Maria Majno, Luisa Lopez	Fondazione Pierfranco e Luisa Mariani, Milano	The Mariani Foundation's activities in child neurology including neurology and music
Jirý Mekyska, Tomas Kiska, Stepan Miklanek	Polytechnic University Brno, Laboratory for Analysis of the Brain	Listening to and analysing music with the help of a computer
Daniele Schon	Neuroscience Institute of Systems, Marseille	With music into the brain for knowledge and health
<b>Webinars with SiNAPSA</b>		
Rebecca Schaefer, Johanna Perschl	Leiden University	Neuropsychology of music processing and movement rehabilitation with music
Gregor Geršak, Carlos Jurando, Leonie Ascone Michelis	University of Ljubljana, Universidad de Las Américas (UDLA, Ecuador), University Medical Center Hamburg-Eppendorf	The impact of ultrasound and infrasound on human functioning
Katarina Kurtjak, Briana Applewhite, Supriha Aithal	School Centre Novo mesto, University of Oxford, Edge Hill University	Autism and music

Table 1: List of guests and topics of “Soundings” programmes



All of this content was aimed at both the general and professional public. By creating different types of content, we tried to reach the general public in a way that tries to satisfy a range of listeners. Interest was in parallel also actively triggered via personal contacts in professional networks. Examples of positive feedback were: a wish to invite a few of the interviewed researchers to planned educational and research events at the universities (e.g. in perinatology), to specialist meetings (e.g. neurophysiological association), to the doctoral students of several programmes (e.g. psychology, biomedicine) etc.

In the general public, reactions depend on the intrinsic motivation of listeners and participants for self-education through radio and mass media. This is because the use of mass media can stem not only from a desire for self-education but also from various social and psychological needs (such as cognitive needs, emotional needs, personal integrative needs, social integrative needs, and tension release needs) (Hass (1973), as cited in Rahman Ullah and Khan, 2017).

The content has certainly had an impact, although perhaps limited to certain audiences. It is yet not possible to assess the influence these broadcasted discussions with eminent researchers in the field have had in our society. The interviews were broadcasted at 11 a.m. when active staff in healthcare cannot follow the programmes. A number of positive feedback reactions came mostly from retired physicians, but we have no data on the percentage of other professionals having listened to it. We will further need to try motivating them by publishing and promoting the podcasts aimed at the professional public and addressing specific topics in focus groups of interest (specialist associations, NGOs, parent associations, musically active health staff - e.g. we presented our work to the Camerata Medica Strings).

## The Hospital radio

The idea of Hospital Radio was conceived to bring together renowned experts from different disciplines and artists. The aim is to create sound content for hospitalised children and to apply knowledge of the effects of soundtracks to the production of new music and radio works that contribute to the cognitive, emotional and personal development of children.

As a primary goal, radio relaxes, entertains and educates – it serves as a model for the use of music and words for specific situations, such as calming pre- and post-operative anxiety in children. As a secondary objective, it draws attention to noise levels and encourages parents to consider quality of life outside the hospital, including time for quality acoustic medium products (music, verbal contents) in their homes, nowadays predominantly offering children visual and screen time. The first hospital radio prototype was implemented for children at the Ljubljana's Children's Hospital in the course of the B-AIR project (2021/2023).

## Spreading the word

B-AIR team members presented the project activities at two conferences – in June 2021 we attended the “NeuroMusic VII: Connecting with music across the lifespan” conference in Aarhus, Denmark, and in September 2021 we attended the SiNAPSA neuroscience conference – SNC'21, where we also organised a symposium “Music and the brain” and presented a poster about the project activities at the Congress of Neurologists in 2022, after which a series of meetings led to establishment of a working group with specialists from the Department of Neurology, University Medical Centre Ljubljana.

The symposium “Music and the brain” offered an insight into the latest research, findings, practice and open challenges in various fields of expertise to the people in the neuroscience field. The speakers and the titles of their speeches at the symposium were: Stefan Koelsch (University of Bergen): “Research towards evidence-based music interventions”; Daniele Schoen (University of Aix-Marseille): “Neurology of music and the brain”; Uroš Kovačič, MD, PhD (University of Ljubljana): “Heart rate variability in relation to music genres”; and Manuela Filippa (University of Geneva): “Early music interventions in infants”. Manuela Filippa also hosted a workshop in June 2022 for the Slovenian paediatricians, perinatologists, and child psychiatrists on the role of mother's voice in early development.

A part of the project was also presented in the weekly educational TV show “A bite into science” (*Ugriznimo znanost*) on RTV Slovenia.

A part of the project activities was also presented at the International symposium “Opening the doors to the art and science of music”, hosted by the University of Ljubljana Academy of Music and at the B-AIR Symposium “Sound and music in the lived experience of infants, babies and vulnerable groups”.

## Pilot study of music therapy in people with Parkinson's disease (PD)

Methods using music and rhythm can significantly improve a wide range of symptoms in neurological and non-neurological disorders. A good example is Parkinson's disease, in which music interventions are already being used to alleviate symptoms of the disease (Thaut and Hoemberg, 2014). In a review article, Kerry Devlin et al. (2019) point out that recent research has demonstrated the usefulness of music and rhythmic interventions to improve symptoms of people with Parkinson's disease, such as gait impairment and other motor and non-motor symptoms. In Slovenia, some forms of music and dance interventions (especially dance workshops) are being used (non-systematically), especially as a part of activities offered by the Parkinson's Disease Association of Slovenia – Trepetlika (a national NGO with regional network). In Slovenian healthcare, music has not been systematically implemented as a complementary treatment for people with Parkinson's disease.

In Slovenia, we have not yet identified any major research studies examining the impact of music interventions on PD. The aim of our study was to explore the patients' perspectives on the current use of music for alleviating PD symptoms, evaluate current attitudes towards the use of music or musical interventions in the healthcare system and assess their willingness to participate in possible further studies of musical interventions on PD symptoms. In a group of 79 people with PD (most of whom were members of Trepetlika), half of the respondents reported already using music for alleviation of PD symptoms, especially as a way to regulate their mood. In a group of participants that do not yet use music to help with PD symptoms, most of them would be interested in doing so but

would need help in the form of pre-prepared music, reminders to dedicate a specific amount of time for music listening and assistance in the music setup. When asked about their interest in further participation in the studies of music intervention for PD, the majority expressed interest, especially in the case of a music stimulation study, in which they could carry out the activities independently at home (e.g. listening to pre-selected music). Most of the participants, whether they already use music to help with the symptoms of PD or not, displayed interest in education about the possible effects of music (e.g. in the form of a lecture), and most of them showed interest in practical workshops on the use of music. Accordingly, we planned a pilot workshop of musical improvisation, led by artist and musician Jaka Škapin, in cooperation with Trepetlika.

## Conclusion

The B-AIR project addressed the question of how to present and implement the use of music as an important factor in the Slovenian healthcare system. A pilot survey among musically active physicians confirmed the need of focusing more attention to music, as it showed a lack of knowledge and systematic education about the positive effects of music. The survey also guided our further objectives: it is essential that initiatives are not only based on the literature but also on the needs and possibilities seen by health professionals and the patients. The clinicians who completed the questionnaire felt that a trial period would be needed for the introduction of music. The following activities were aimed at setting up the foundations for a better and more widespread integration of music in medicine. In addition to continuing the current activities, which are mainly aimed at opening up the conversation on this topic (organising seminars, presentations at conferences, assemblies

and working group meetings), it is also important to start creating the conditions for musical activity in the medical facilities – which was also identified as a potential problem by the musically active doctors in our survey. Music is already used to some extent, but not systematically.

We further explored the perspective on the patients, namely patients with Parkinson's disease, on the use of music in healthcare. These are the group most directly interested in the interventions, fortunately already well organised as a humanitarian NGO Trepetlika. Half of the participants reported they already use music to help alleviate symptoms of the disease. In the other half, most of the participants expressed interest in using music for the same purpose. Most of the participants expressed interest in taking part in a follow-up study of music interventions for Parkinson's disease. Altogether these results indicate a general interest in the use of music. We also asked the participants if they ever encountered music in Slovenian healthcare. The conclusion was essentially the same as with the group of doctors – music is rarely used in the healthcare system, most of the complementary activities for Parkinson's disease patients are offered by Trepetlika. Further groups where music interventions are expected to be well accepted and effective, include people with cerebrovascular accidents and mental disorders (e.g. dementia).

As reported by Breanna A. Polascik et al. (2020), the acceptance of music interventions requires time and education. Thus, we tried to start this process through a gradual introduction and further communication through the mass media and in professional circles, and we hope that music will gradually take on a more prominent role in the Slovenian healthcare system.



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# **MUSIC IN WORK WITH CHILDREN WITH AUTISM**



# INNOVATIVE APPROACHES TO TEACHING MUSIC TO CHILDREN WITH AUTISM SPECTRUM DISORDERS

Although in Slovenia the music education system is at a high level, the inclusion of neurodivergent children is still a rather unregulated area, and there is a lack of professional support and literature to help teachers teach music to children with autism spectrum disorders (ASD). Music pedagogy for children with ASD is still in its infancy. There are records of some pedagogical methods that are claimed to be successful and useful, but as some ASDs are not yet fully understood, the area of developing adapted methods and tools for the music pedagogical process of children with ASD is also a work in progress.

One of the authors of this article, Katarina Kurtjak, teaches piano, singing and music theory. Through teaching at a private music school, she has also worked with children who, due to special educational needs and referrals, could not be enrolled in a public music school, or who lived too far away from a school that could offer them an appropriate programme. Katarina has been teaching neurodivergent children for 12 years and reports on her process: “I encountered teaching children with ASD without the necessary knowledge and training in inclusive pedagogy, so in most cases I followed my gut feeling and reacted to children. Before I started to delve into specific approaches

to teaching music, I wanted to understand what autism spectrum disorders are and how and which ones are expressed in the pupil.”

According to the Diagnostic and Statistical Manual of Mental Disorders (Diagnostic and Statistical Manual of Mental Disorders, 5<sup>th</sup> edition; DSM-5; American Psychiatric Association, 2013), autism spectrum disorder is characterised by four main features, namely deficits in social interaction, deficits in communication, changes in sensitivity to sensory stimuli (light, sound, smell or touch), and restricted repetitive patterns of behaviour, interests or activities. The latter may be manifested in rigidity in interest, movement or routine, or ritualised behaviours. Meanwhile, deficits in social interaction and communication may manifest themselves in difficulties in language development, understanding imagery, socio-emotional reciprocity, non-verbal communication or establishing social relationships. In addition to these characteristics, above-average abilities are common, specifically in music processing. Individuals with ASD often present better memory for pitch and better ability for recognition of changes in pitch or identification of tones within chords, compared to neurotypical individuals (Applewhite et al., 2022).

ASDs involve a wide range of behavioural and social challenges, which can vary between individuals. Understanding these challenges is key to tailoring music teaching methods and tools to individual children. Each child with ASD is unique, and it is important to adapt teaching methods according to the specific needs of each individual. “I did a lot of reading and training, but what helped me the most was observation, talking openly with the parents of the pupils and research based on creativity and following the pupil. When possible, it is helpful to network and collaborate.” reports Katarina. Collaboration between teachers, parents and possibly therapists is crucial. Together they can help define the goals and strategies that will enable the individual child to learn and develop optimally through music education.

Katarina observes, “In my experience, parents usually want to involve their child in the music education process because they themselves have noticed the child’s interest, the impact of music on the child’s well-being, behaviour, coping with daily challenges and stress. Sometimes it was the advice and experience of other parents that led them to music, other times therapists and teachers from adapted schools.”

In most cases, the music teacher is with the child only once a week for a short time (the 30 to 90 minutes), which is not enough to see the breadth and quality of certain approaches and their impact on the pupil. This is why the collaboration between parents and educators is so valuable and important.

## Goals

Research within teaching began due to the lack of literature and didactic tools for music teaching for neurodivergent children. Katarina: “By now there is more literature, but at the beginning of my music-teaching career there was very little. There were practically no or very few trainings and seminars.”

The main aim of the research was to identify which pedagogical approaches and methods are the most useful for teaching and musical inclusion of children with ASD, specifically for piano playing in children with ASD.

Secondary objectives were also: 1) to identify and present new ways of communicating with children through music that would simultaneously have a positive impact on their well-being, cognitive, motor and socio-emotional skills; 2) to observe the progress and improve the quality of lessons; and 3) to find new ways of recording and demonstrating the progress in the above mentioned areas of children with ASD involved in music activities. The lessons themselves were not so much focused on mastery of the instrument and theory as on using musical engagement to improve the child’s well-being and personal development.

Based on the objectives, the following research questions were developed:

**RQ 1:** *What kind of communication has proved to be successful and with which children?*

**RQ 2:** *What routines and patterns can be generated to make piano lessons enjoyable and the environment safe and comfortable for children with ASD?*

**RQ 3:** *Which didactic aids were the most engaging?*

**RQ 4:** *Which methods and didactic approaches turned out to be most useful for the child’s progress?*

**RQ 5:** *What helped the advancement of social and communication skills?*

**RQ6:** *Which abilities were strengthened?*

## Methods

The research is partly based on action research using multiple case studies and partly based on an analysis of diary entries from previous years.

Through the case studies, we aimed to document and describe the daily experiences and experiences of the participants (Sagadin, 2004). The further analysis of the diary entries of the past years provided a broader sample for the search of the most effective approaches, methods and tools for teaching piano to children with ASD. The latter has led to a wide variety of practical examples of the use of innovative didactic aids for the purpose of teaching children with ASD.

## Observational methods

For the purpose of the case study of three pupils, observational protocols were used. They allowed for systematic observation and determination of which methods, approaches and aids were useful in the pedagogical processes, which were not, and how this was reflected in the child’s behaviour, participation, and progress.

*The lesson observation chart* included the following categories: method used in the lesson (e.g. “rain-bow piano”, visual cards, number marking of notes, listening, imitation, singing, improvisation, etc.); participation (participated, partially participated, needed encouragement, did not participate); reactions (happy, angry, unresponsive, restless, relaxed, scared, other); interests and strengths (musicality, good ear, sense of rhythm, genre of music, other).

*The progress observation chart* tracked five different areas of the individual’s domain: adaptation to the novelties in the environment, communication, memorisation of musical material, concentration and attention, and freedom of expression. Each area was rated numerically from 1 to 5, where 1 indicates the individual’s weak domain, 3 indicates neither weak nor strong, and 5 indicates the individual’s strong domain or progress in that domain. If there have been changes in the observed domain during the lesson, a comment has been added to the change in the rating. Katarina notes the usefulness of the rating scales: “They helped me to record observations quickly, unobtrusively and uniformly, and to later assess progress more easily on the basis of all the data collected, without distracting or interfering with the learning process itself. It was important to observe the student’s behaviour, to note down all the little details that would help me understand their experience of the world.”



The student's domains of strength and ability, his interests, his leisure activities, what calms them down and what triggers them were assessed. Outstanding reactions to the teacher's actions (a word of endearment, instruction, tone, gesture, advice, etc.) were recorded. "In addition to guiding the children during our lessons and trying to teach them music theory and practise like everyone else, I was especially careful in observing and recording their progress and behaviour, and using this information to develop new methods tailored to each child's individual strengths and interests."

### Diary logs

In order to provide a better comparison and insight into the usefulness of the different methods and tools, we also analysed the musical progress of 13 different students over the last 12 years of teaching, logged in the diaries. For each lesson we had the following data: the course, the methods used (how it worked, what was useful, what was not, how the child responded), the child's behaviour, responsiveness, progress and changes observed. Parents' observations and statements were also collected, in the form of notes and comments.

### Audio recordings

From January 2023, lessons with three pupils were audiotaped, resulting in three different pieces of music produced through the pedagogical process. The works are the result of adapting pedagogical methods and recording new musical material for learning. Finally, each piece of music is a reflection of a personal communication with the pupil through the medium of music.

### Participants

At the time of the research, the first participant is seventeen years old and attends a school with an adapted programme. His diagnosis is Asperger's syndrome, ADHD, dyslexia and conduct disorder. He has been taking piano lessons since the age of six, and for the last eight years at Katarina's private music school. He has an absolute pitch and an extraordinary visual memory, which are his strongest areas and great strengths in learning music. He has difficulties in reading and following music and does not understand music theory, although he uses it perfectly. He also has difficulties with concentration and attention.

The second participant is 13 years old at the time of the survey. He attends a specialised primary school. He has been singing and taking piano lessons in a private music school for five years. His diagnosis is autism with mild intellectual disability, obsessive-compulsive disorder, and speech and expression disorder. He has a very good ear and loves to perform. These are two of his strong points. He has difficulties with motor skills and taking instructions. He likes to listen to classical music and to sing along. He loves English phrases and likes to sing Slovenian folk songs.

The third participant is 13 years old at the time of the survey. She attends a specialised primary school. She has been taking piano lessons in a private music school for the last two years. Her diagnosis is autism, with associated anxiety, depression, speech and expression disorder and dysgraphia. She loves listening to music, communicating and expressing herself through music.

### Results

Through addressing research questions, patterns of effective teaching and the positive effects of music were revealed, while innovative teaching methods were defined that proved to be effective for children with ASD.

#### *RQ 1: What kind of communication has proved to be successful and with which children?*

1. It has proved crucial to establish a **clear and personalised way of communicating**. In particular, clear and succinct instructions are important.
2. The use of **visual aids** such as pictures, symbols or communication boards can help children to better understand instructions and express their thoughts.
3. **Using alternative communication methods:** Some children with ASD have difficulties with communication. In such cases, it is useful to explore alternative communication methods such as thumbnails or electronic devices that allow the expression of wants and needs. Especially for non-verbal children, it has been shown that music itself can serve as a way to express oneself, to communicate. With one pupil, communication ran only through music, mostly through the piano, but also through rhythms played on percussion instruments or simply on the table. With some pupils it was necessary to use audiovisual aids, for example a recording of each hand separately over the piano, to serve them for rehearsal at home. With one of the pupils, the communication was done via an electronic tablet: through sounds, pictures, short clips, the program Painter.

**RQ 2: What routines and patterns can be generated to make piano lessons enjoyable and the environment safe and comfortable for children with ASD?**

**1. Individualised approaches:** every child with ASD is unique, so it is crucial to use individualised approaches to music teaching, tailoring the curriculum to the individual student. This involves thoroughly assessing the child's interest in music, their areas of strength and challenges, and adapting the curriculum according to the information gathered. Individualisation allows for better integration of the child and encourages their progress. For example, if a child has a knack for rhythm, the focus of music lessons can be directed towards this area. This approach has proved to be effective for all pupils, as it responds to the pupil's abilities and emphasises their positive skills.

**2. The emphasis on structure** is an approach that has proved effective for most students. Children with ASD often respond positively to structure and routines, which is why it is very useful to establish clear structure and routines in music lessons, both in the objectives and the flow of the lesson itself. Clearly defined steps that are repeated help children to understand what is expected of them and reduce feelings of uncertainty. For example, visual cards come in handy for understanding the flow of the lesson (see below: *Using visual aids*), or simply a whiteboard and marker pen where the lesson plan is written out at the beginning of each lesson and then crossed out and indicated where on the lesson timeline the pupil is positioned.

The latter approach has proven to be very effective with both verbal and non-verbal learners with ASD. Children with ASD often face challenges in

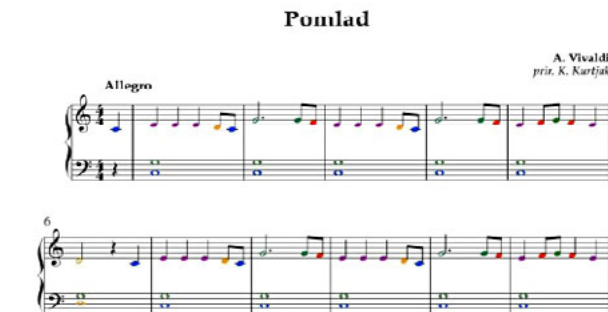
accepting change and adapting to new situations. The latter approach allows them to be more independent and comfortable. A clear structure of space and time has proven positive for all pupils with ASD (including those with comorbid ADD, ADHD, conduct disorder, classic autism).

**RQ 3: Which didactic aids were the most engaging?**

**1. The 'Rainbow Piano':** Katarina explains the development of this method: "Coming from a classical education background, where musical notation is an important part of the transmission of musical information and knowledge, I naturally wanted to bring it closer to ASD students. I did this by first colouring the individual notes with a certain colour.

Sometimes the pupil and I chose the colour (this worked well with verbal pupils, so the colour of the note felt closer to the pupil), and sometimes I chose it myself. At the beginning I just used colour markers or crayons to go over the music, but later (when I was already adapting the music and discovered that it was possible) I created a coloured music notation in Sibelius. Then I marked the keys of the corresponding notes on the piano with the same colours. For the latter, I used sticky notes or coloured paper with adhesive tape. The pupils then played the pieces in rhythm according to the coloured music notation."

For some pupils, the method was not effective. In Katarina's group, non-verbal learners, students with speech disorders and students with intellectual disabilities were not able to follow the approach.



A coloured music notation



The 'Rainbow Piano'

However, the method has proved to be very useful for verbal learners. Students with attention deficit disorders found it easier to concentrate with the colours, and the method presented a structure that was closer to them and easier to follow than the notes. It also helped pupils with Asperger's syndrome, classic autism and dyslexia. The approach was useful with pre-school children. With some pupils later adding letters to indicate certain tones helped the pupils also learn the basics of music theory. The latter has also proved successful with pupils with Asperger's syndrome, classic autism, dyslexia, attention deficit disorder and ADHD (attention deficit hyperactivity disorder).



Often, reciting or singing notes accompanied by playing worked well. For the student with dyspraxia (poorer motor skills, coordination), the approach of marking the notes with numbers, and marking the number on the fingers with coloured rubber bands, proved to be more effective (see below: *Using sensory approaches*).

2. **Using visual aids** such as pictures, symbols or communication boards can help children better understand instructions and express their thoughts. The method can be adapted to the individual, which has proved to be very effective for most children with ASD. It has been found that children with ASD often respond well to visual stimuli, which led to development of methods such as colouring notes and keys and making visual charts, which can be used for learning notes, for improvisation and, last but not least, for following instructions and lesson planning. For example, visual symbols were used to teach rhythm, showing different rhythmic patterns. The use of picture cards showing how the lesson will proceed - visual cards - has also proved very useful. E.g. a picture of an ear for listening, a picture of a coloured piano for improvising, a picture of the sun and a smiley face for learning a new song, etc. Most of the pupils with a variety of ASDs found the visual cards made it easier to follow the lesson, follow the instructions and to concentrate on the learning process (attention span increased).

The visual cards were also used for improvisation, where the pupil and the teacher compose a piece of music together through a sequence of different images, making music together, communicating through the music. Students were encouraged to try to be innovative. Starting from a theme and a sequence of images that served as a structure for a free story, the

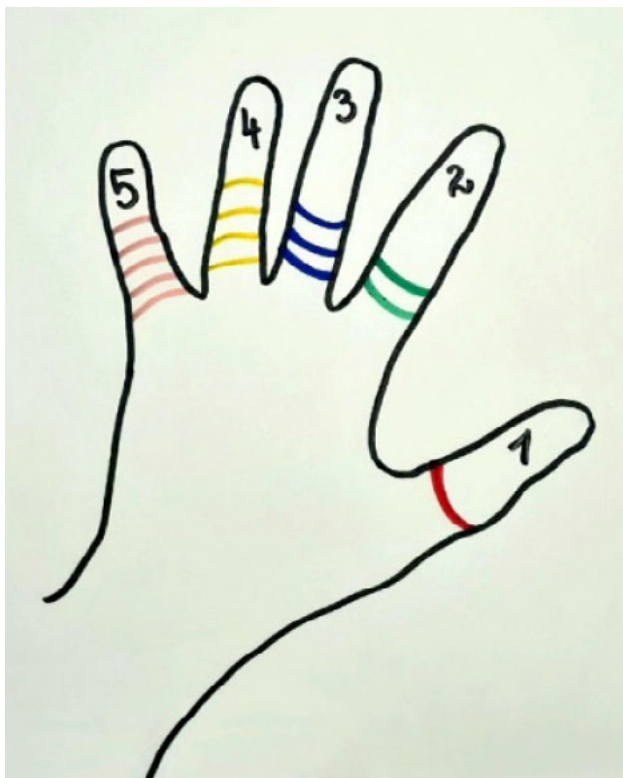


The use of visual cards for overviewing the lesson course

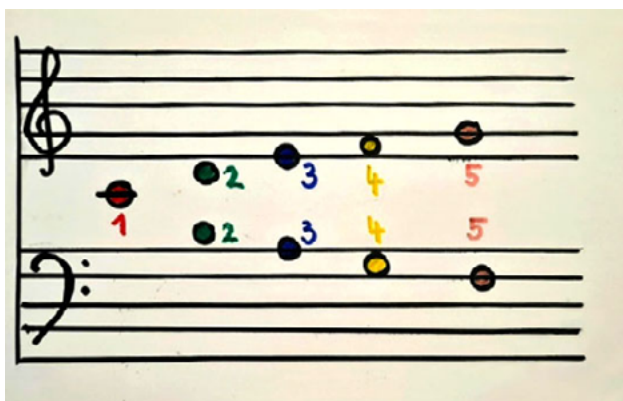
pupils created music. Katarina reports: “Through the visual cards, the non-verbal girl and I also made contact, through which we then communicated through the music. When she came to the lesson, I showed her a card with a question mark on it, and before that I asked her several times what day she had. In response, she would play a melody or rhythm on the lid of the piano to tell me how she was feeling.”

3. **Using sensory approaches:** Children with ASD often show increased sensitivity to sensory stimuli. When teaching music, this area can be enhanced by incorporating different sensory elements such as different sounds,

touch and movement to music. These methods can be used to increase the child’s interest and engagement, especially for children with ADHD, other attention deficit disorders, dysgraphia, dyspraxia. For children with Asperger’s Syndrome, we can also strengthen sensory integration, which is mostly dysfunctional in children with Asperger’s Syndrome.



The use of coloured rubber bands (visual and sensory approach)



Marking the notes with colours and numbers

**4. Using sensory approaches:** Children with ASD often show increased sensitivity to sensory stimuli. When teaching music, this area can be enhanced by incorporating different sensory elements such as different sounds, touch and movement to music. These methods can be used to increase the child's interest and engagement. Especially in children with ADHD, other attention deficit disorders, dysgraphia, dyspraxia. For children with Asperger's Syndrome, we can also strengthen sensory integration, which is mostly dysfunctional in children with Asperger's Syndrome.

**RQ 4: Which methods and didactic approaches turned out to be most useful for the child's progress?**

**1. Using positive reinforcement:** Praise and rewards can help a child with ASD to associate musical success with positive experiences. This encourages confidence and a desire to progress. Stamps, stickers, cards and, for major achievements, medals and diplomas have been used.

**2. Incorporating the child's interests:** by incorporating the musical interests we can encourage their participation and motivation. If the child is enthusiastic about a particular instrument or song, this can become a central part of the curriculum. Katarina: "Here, for example, one of the pupils and I started playing popular music after a while, and eventually we started arranging and producing our own music, which he was particularly interested in. With one pupil we only learnt accompaniments to sing along to, as she was interested in accompanying herself while singing. Another pupil loved folk music, so we concentrated on that area."

**3. Working with parents and therapists** is important because it can help us get a broader picture of the individual more quickly. At the same time, in this way, the positive effects are not only contained within the lesson, but can be transferred to the student's everyday life.

**4. Improvisation** has proved to be the biggest challenge, for both the teacher and the student have to get out of their comfort zone. However, it still proved to be the most useful method of working with children with ASD, because they also became more flexible and open to everyday situations. Constancy and routine are rare in everyday life, which is full of change and unpredictable situations, so learning to be flexible and to 'improvise' is the best remedy against anxiety and stress. Of course, when it comes to musical improvisation, it is necessary to start gradually and to begin with some structure and rules. "Myself, I did it by setting a theme at the beginning, a melody, which we then played in different ways, in different tonalities, articulations, etc.", Katarina describes the process. Gradually, as much freedom and space as possible can be left for self-expression.

**RQ 5: What helped the advancement of social and communication skills?**

**1. Integrating social interactions:** Music lessons can serve as a safe environment to promote social interactions between children with ASD and their peers. Group music making, games and joint performances can contribute to the development of social skills and cooperation. Children with ASD have deficits in social communication and social interaction.



In Katarina's words: "The joint music lessons and performances I organise a few times a year are very useful in strengthening and developing social skills. The children loved to participate and show each other what they could do. Interestingly, the approach also worked for the non-verbal girl who, although it took her a little longer to participate in the joint lesson, after the first joint lesson showed excitement about each subsequent one and was happy to perform. Unfortunately, this approach could not be used with a girl who was physically handicapped, extremely reserved, anxious and depressed. For a while she even wanted me to stand behind the door and look away while she was playing. Now, at least in front of me and her parents, she plays without restraint."

#### RQ 6: Which abilities were strengthened?

1. Through music, it was possible to stimulate communication, imagination, flexible thinking... for example by singing, playing instruments or composing. Katarina: "As an example of personal progress, one pupil and I chose a song, listened to it, analysed it, linked it to another popular song that was similar to it, and I made an arrangement at home, which the pupil then learnt very quickly. We also did a medley of popular songs together. This involved the pupil selecting the songs and using music production software to combine them as he saw fit, to his heart's content, the individual parts of the different songs into a whole. He presented the piece to me, I wrote out the score, through which (and mainly by listening and recording his hands on the keyboard to rehearse at home) we learned the piece, and then recorded a tutorial for his YouTube channel. For the last act we used the Synthesia video creator."

2. The children with Asperger's Syndrome responded very well to the structuring with visual cards, as it was easier for them to concentrate on each step, and this showed very good results, which later helped motivate them to transfer their knowledge and skills to other areas of their lives. One of the pupils learned to read, another to write his own compositions, and a third took up music production.

3. Interestingly, all the children with ASD who have been learning music for a longer period of time and who have been involved in music have shown positive effects in many areas of their lives. All the children have shown progress in their social skills, communication and interaction with others. "A pupil, who barely spoke in the first year, avoiding eye contact and other social interactions, today sometimes discusses music, music production, events in his life with me for an hour. He has become empathetic and also open to others, he interacts more easily with other students, greets them when they come to class, asks how they are, etc." reports Katarina. This pupil, like most of pupils, has gained self-confidence, independence and adaptability to unfamiliar situations. They are coping better with stress and managing anxiety. The positive effects of music are also felt in sustained attention and perseverance. Children find it easier to focus on a given situation and to concentrate. Motor skills and coordination have improved in the case of the dyspraxic pupil. Katarina: "Now she can play songs with both hands at once and sing along. At the beginning of our musical journey, this seemed almost impossible. For a girl with a speech and expression disorder, her speech development has also accelerated, and today she can read simpler lyrics and sing." Most stu-

dents have developed performance skills, perseverance, discipline and prolonged concentration in other areas, and are much better able to adapt to different situations. The non-verbal pupil has connected with her parents through music, which has become her means of communication. For some, there was a development of flexibility of thinking, imagination and openness to the unknown, the non-repetitive.

## Discussion

The report presents some guidelines for fruitful musical engagement with children with ASD. Our analysis of piano lessons, children's responses to music and the challenges they faced clearly shows that adaptations to classical approaches to music learning can significantly enhance the experience and support the specific needs of these individuals.

### Communication and social skills

One of the key findings is that musical engagement can be an excellent environment for developing social skills. Despite the reduced perception of linguistic and social auditory stimuli in children with ASD compared to neurotypical children, it has been observed that they have a highly developed sensitivity to musical stimuli (Kim et al., 2009). These children often prefer music over verbal material and use it to meet their cognitive, emotional and social needs (Applewhite et al., 2022). It is interesting to note that despite difficulties in interpreting the spoken word, children with ASD have no difficulty in identifying and understanding the emotional, communicative and social aspects of music (Applewhite et al., 2022). For socialisation to develop, it is crucial to first establish successful communication within the music activity, which

requires a clear and tailored approach. The current research demonstrates beyond doubt that this is possible, and furthermore that communication can be tailored to the individual, helping them to understand instructions and express their thoughts. We have mentioned various examples of alternative communication methods: visual aids, audio-visual aids and even music itself.

Communication difficulties in children with ASD can be linked to impaired neural connections that are crucial for verbal and social communication skills (Aithal, 2020). This may explain the observation of less frequent spontaneous initiations to interact (Kim et al., 2009). To understand how music can provide a space for communication and improve social skills, we first need to understand what everyday communication entails.

Communication can be something easy and automatic for neurotypical populations. Automatically, our attention is drawn to facial expressions, changes in intonation and other indications of our interaction partner emotions and thoughts. We synchronise with and respond to our interaction partner while maintaining a separate sense of self - how do I differentiate or relate to my partner, what is my role in this interaction? Very subtly, there is a transition which occurs more explicitly in musical engagement: first I 'hear myself', then I 'observe the environment', and then we 'experience together' (Aithal, 2020). If the teacher approaches the lesson with an interest in who the child is that they are teaching, they can allow the child to hear themselves - to play to the best of their ability, to express themselves through music, to observe themselves. Only when the child is comfortable in their own expression and is empowered by being able to hear and express himself, can the child observe the environment at the same time: "someone is listening to me, I am heard", or in

the case of communication through visual aids, "I see a picture and I show my own understanding of it", and so on. In the end, we can experience music together: "I can talk about music with the teacher, or I can show her how I hear music in a similar or different way to her" or even "we play, we feel music together". This requires a kind of interpersonal attunement, which is the last aspect of successful social communication.

If I tune in with another, I can experience the other, respond to them and start the interaction. Early mother-infant interactions are a good example of emotional, musical and motor attunement, and in infants with ASD we often see less reciprocity in these interactions (Kim et al., 2009). Because there is less reciprocity or attunement, music may represent a facilitated, more explicit (due to its structured nature) development of attunement skills that can be carried over into everyday communication.

This is reflected in the positive response to events such as performances and music lessons, which have proved to be a safe environment to practise connecting with peers, in a way that is different from the neurotypical, but no less gratifying and important for mental health.

Improvisation plays an important role in encouraging and transferring skills from musical pursuits to everyday life. As the report shows, this is one of the most strenuous didactic processes, but also one of the most fruitful ones. Improvisation has two vital characteristics: 1) it is very important in social interactions, as we have to respond to many different and new individuals in flexible ways and 2) it confronts us with not being able to anticipate everything. Improvisation allows us to adapt to unexpected social (and other) situations. In improvisational music therapy, experiencing and developing affective skills in

a social context is facilitated because of exercising attunement within the temporal structuring that is inherent to music (Kim et al., 2009).

## Structuring and individualisation

An essential characteristic of music is temporal structuring, rhythm and percussion being the two main components. In addition, the need for structure is also reflected in our understanding of tone, chord and scale. These characteristics of music are important because they are both supportive and flexible. We can lean on the rhythmic structure, if that is the child's forte, and be flexible in changing the key, or vice versa, if the child is more musical than rhythmical. If we are overwhelmed by stimuli or need more explicit patterns and rules, structuring is a good support for making changes. As we saw, if more things were clear and had an explicit structure (through visual cards and other visual aids), children were able to focus their attention more easily, were more responsive to the tasks given, understood better and followed more easily.

Children with ASD need predictability and consistent responses in order to achieve shared attention and social engagement (Kim et al., 2009). Therefore, music is an ideal environment: it allows for predictability in timing and consistent responses or structure from the teacher, while being a vivid, affective and social experience in itself.

Within the structured lessons and within the characteristics of the music, children can thus more easily become accustomed to responding to and understanding social timing and develop those skills that would require more effort in less structured and enjoyable environments.



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## REFLECTION ON THE ARTWORK “FACES OF AUTISM”: Creating and teaching music to children with ASD

As part of the B-AIR project, the artwork “Faces of autism” was also created, which through recordings of the pedagogical process, comments and statements of children’s parents, experts and students, as well as recordings of the creation of three original works, takes us into a deep reflection on music, autism and the process of music creation and education of children with autism spectrum disorders (ASD).

The radio essay intertwines different parts of the creative musical process of three different compositions, which represent the foundation of the research process, and at the same time, the compositions change through the research process itself, as they include the interests, reactions and also the creative traces of the students who perform them. The artwork aims to present the importance of musical creation, connecting and engaging children with ASD. Through experience, theory, thoughts and recordings of completed compositions, it wishes to present the adaptation of teaching methods, tools and, last but not least, the positive effects of the musical process itself.

As an author and teacher, I wanted to connect the creative and research process itself and find out how to get even closer to students with ASD, adjust the learning process itself and encourage the students to create their own works. For the purpose of

the research, I wrote three different pieces of music for three completely different students with ASD. I wrote the musical pieces based on my already existing knowledge of the students, their interests and strong domains. I wanted the initial compositions to be just a tool for learning as well as for the creation of the final piece of music, which would be made together with the students. I also recorded the initial forms of the compositions in sound and writing (audio and sheet music), and I made notes, commented on and archived each change.

The idea was that teaching methods, the meaning of music through the eyes of students, and also the connection between the research, the pedagogical and the creative process, would be reflected through the compositions. I also recorded our piano lessons for the purpose of research and artistic process itself, so I was able to include in the final art work the step-by-step creative process and the process of adapting and developing teaching methods.

As a piano teacher, I had many doubts about teaching, especially what is effective and what is not. I myself have always believed that by playing the piano I can feed my soul as well as make others happy, because music is a versatile tool that heals us and connects us. Despite everything, I was frightened of piano lessons, professors,

demands and expectations for most of my education. The very methods and requirements seemed unpleasant, artificial, and caused me stress, fear and anxiety attacks. When I myself started teaching, I was often afraid that I would ‘break it’ somewhere. I wanted the students to reach their maximum level of knowledge, progress at their own pace, and at the same time enjoy music and gladly return to it. That’s why I wanted to include in the artwork my experiences and thoughts which I hope to claim that many teachers will share.

I have learned from experience that with empathy, mutual respect and adapting the teaching methods to students, we can achieve much more than just with strictness and the uniform requirements and approaches to everyone. During my more than a decade long journey, I also faced the questions of who and what to turn to for help. When teaching children with ASD, I was often faced with the dilemma of how to approach a child, establish communication, adjust the learning process. There was practically no professional support and literature in this area, and we rarely talked about this topic at trainings and studies. At this point, the artwork through comments and examples also opens up the important question of how to improve the inclusion of children with developmental disabilities in music education and how to develop the adapted



teaching methods. Parents' statements and music the students play reflect the importance and influence of music on the quality of life of children with ASD.

The musical excerpts are connected by comments and dialogues of female researchers in the B-AIR project – me as a piano teacher and Manca as a psychologist. My colleague Manca Kok supports the responses and listening examples with a theoretical explanation, which is also helpful to me during the process of creating research and musical work. During the process itself, she guides me with her knowledge and supports experiential examples with her expertise. In the artwork, she also explains the specifics of autism, which is crucial to understanding how to approach children with ASD. She emphasizes the diversity and uniqueness of each individual with ASD and the need for individual approach. She highlights how art and music can serve as powerful tools for connection and expression, which is especially important for children with ASD who may have difficulty expressing themselves in other ways.

The artwork “Faces of Autism” connects three different pieces of music, which reflect the different needs, adaptations, experiences and interests of three students with ASD. The first one is entitled “Along the path of the rainbow” and contains a cycle of three songs for piano and voice, which I created myself, and through the learning process adapted them to the students' needs, interests, responses and strong domains. Through the songs, I wanted to present the ‘rainbow piano’ teaching method, where the student and I determined a colour for each tone and learned the basic form of the composition with the help of colour notation. We then adapted the melody to the text that we sang to make it easier to remember the melodic and

harmonic structure of the music, and at the same time we wanted to highlight the student's strong domains: good listening, musicality and verbal memory, and the joy of singing.

The cycle comprises three compositions about spring, joy, colours and the warmth that invites us to nature. The student loves nature, observes its changes and also expresses his feelings through colours and natural phenomena. The sun, rainbow, spring and spring colours evoke joy, peace and warmth in him. In the first track he plays and sings alone, the second contains my accompaniment, while in the third we both sing and play and complement each other. Creating and listening together has been shown to be very effective in advancing understanding of rhythm, song structure, and sequence memorization. Through playing music together, the student gained concentration, better attention and breadth of expression. He learned how to cooperate with another person and also improved his communication and social skills.

The second piece of the artwork, titled “Gen Z Childhood Compilation”, was created in collaboration with another student. Since I noticed that the student at home likes to separate and assemble individual parts of popular compositions in his own way and put them into a new whole, I wanted him to transfer this way of working to the piano and learn to play a composition that he himself composed and co-created. It is a mix of various popular songs written in an adaptation according to the student's interests, needs and previous knowledge. At the beginning, I proposed the songs myself and combined and adapted them in my own way. Through the creative process, the student added his own sequence of compositions, for which we also created and wrote down the accompaniment in the left hand and learned to play it.

Several methods and tools were included in the process. We learned how to use Sibelius and Logic pro, and for the creative and learning process we also used visual cards, which helped to improve the effectiveness of the lessons, as they showed a clear timeline of the lesson and a structured schedule that provided the student with additional support in following and understanding the lesson process and the instructions. Through the very process of creating joint work, the student and I got to know each other even better, connected and created a pleasant atmosphere in the classes, which we both enjoyed going to. The student's statement is also added to the work, explaining further his experience and the very concept of the musical work.

The third piece is titled “Ana's world of dreams” and it shows the course of guided improvisation – the development of improvisation from the initial lessons which were almost entirely guided, to the final product, where the students' progress in independent expression and free improvisation is shown. At the beginning, the composition consists of three different proposals for creation, which, through a few minutes of improvisation, develop into a reflection of authentic communication between the student and the teacher through music. You can hear joy, relaxation, connection and progress from lesson to lesson, recording to recording.

In the artistic and research process I myself learned what power music has in connecting, learning and getting to know oneself and one's feelings. The artwork shows us ways and examples of how music can become a bridge for connecting and expressing ourselves, regardless of individual challenges. It turns out that some teaching methods can be effective for most students, but not in all periods of their life

and personal development. On the basis of examples, comments and statements, we can conclude that it is necessary to constantly adapt both teaching methods and the requirements and goals of the curriculum. If we want to achieve maximum development in the student, we must also develop the learning process in parallel, adapt it and make it attractive according to the student's interests. The musical works show how much children with ASD can achieve if we approach them in the right way, and also present some examples of effective methods and approaches. Through music and students' stories, we can learn about the positive effect of music on them and how it also influenced the development of other abilities. The artwork leaves room for further research and urges listeners to develop this area of music pedagogy and therapy.

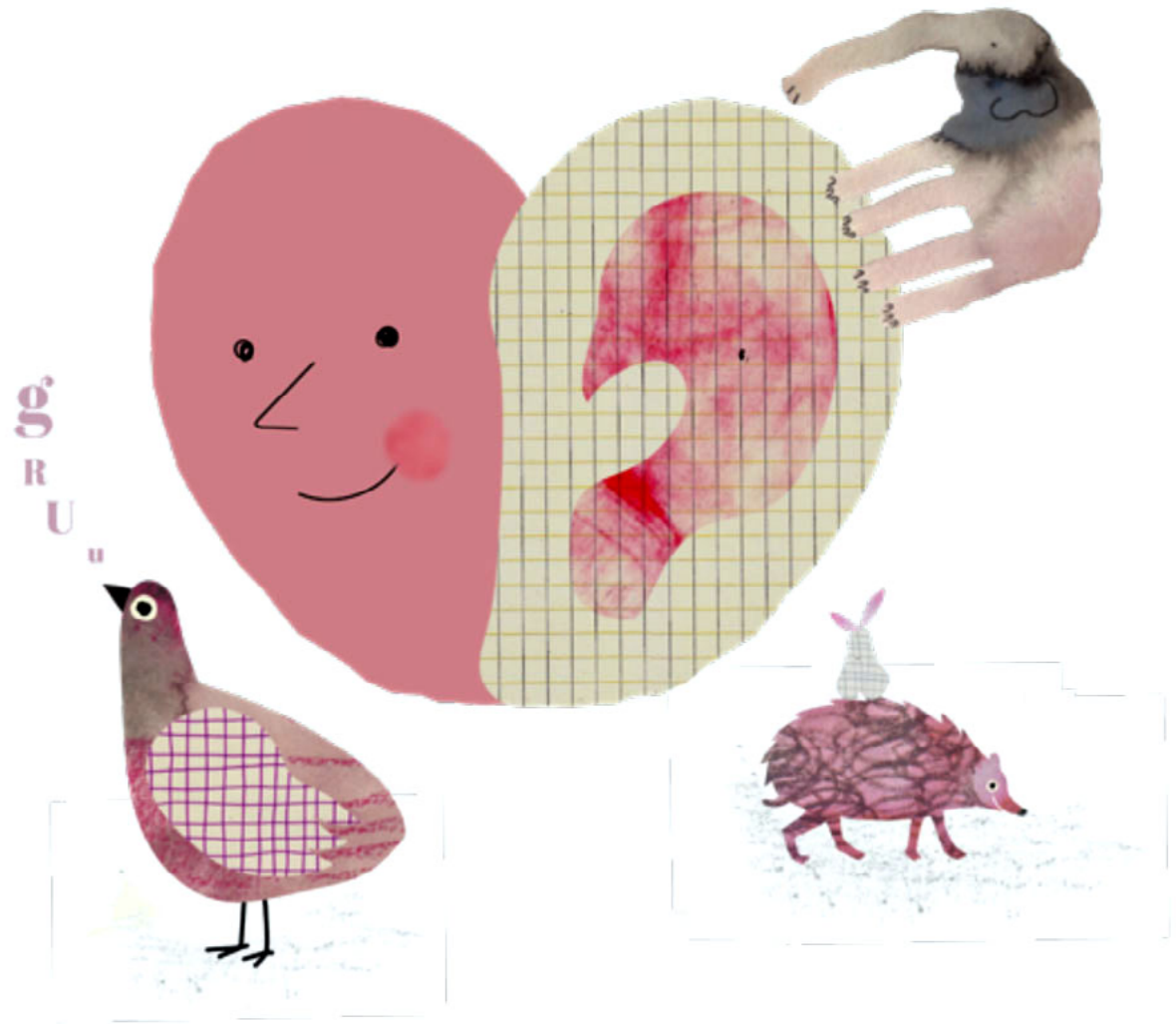


Illustration by Zala Kalan



## REFLECTION ON THE RESEARCH AND ARTISTIC PROCESS

As a collaborator, coming from the field of psychology and with interest and experience in exploring the utility of music, I joined Katarina's research process in order to give more structure to the process and the product. Katarina's many years of experience were the most valuable part of the research, given the development of didactic tools and teaching skills for children who are very different from each other is a very slow and long-lasting process.

Katarina added structure to her existing diary entries with research questions, which we defined through conversation. The systematization of such material is very valuable, because only with distance it is possible to explain one teacher's intuition to another.

In order for Katarina to acquire even more methods for research work, I directed her towards action research, which is an approach aimed at improving practice in a real environment. Key features include collaboration between researchers and practitioners, a cyclical process, critical reflection, implementation of actions to solve concrete problems, changing practice based on findings and a focus on sustainable improvements. Some of these foundations of action research were already used by Katarina, but she used them even more explicitly in the last six months. This work is a product of a never ending cyclical process, grounded in the awareness that learning is part of the developmental process for every teacher.

Although structuring and preparing radio materials is a new practice for Katarina, with her effort and courage she has created wonderful contributions that will help and inspire many.

It is important to point out that many music teachers would not dare to face the challenge of teaching students who are not included in the classical education program. Coping with misunderstanding and continuous adaptation to students, requires courage and perseverance. This is evident in the results of incorporating improvisation into a process that can provoke great resistance in the learner. Courage for this process is rewarded with flourishing which shows itself in various areas, after the child has accepted improvisation and enjoys it.



**RADIO  
TELEVIZIJA  
SLOVENIJA**

# **MUSIC AND PARKINSON'S DISEASE**



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# MUSICAL INTERVENTIONS FOR PATIENTS WITH PARKINSON'S DISEASE:

## A pilot project with a survey and a music-based improvisation workshop

### Characteristics of Parkinson's disease

Parkinson's disease (PD) is the second most common neurodegenerative disease (the first is Alzheimer's disease). In Slovenia, the estimated number of patients with PD is around 7000 (Trepetlika, 2009; Trošt, 2008). PD is a chronic, progressive neurodegenerative disease that affects the dopaminergic system in the brain (Carod-Artal et al., 2013). Dopamine is a neurotransmitter involved in movement, motivation, memory and several other functions. In PD, the loss of dopamine causes various motor and non-motor impairments (Carod-Artal et al., 2013; Emamzadeh & Surguchov, 2018). Hallmark motor symptoms are bradykinesia (slowness of movement), rest tremor (involuntary rhythmical movement at rest), muscle rigidity, and postural instability (difficulty balancing) (Nestler et al., 2015). Difficulties in the initiation of movement arise, making it challenging for the patients to perform daily tasks. Patients start and execute the movements slowly with intermittent pauses. The patient's face becomes less

expressive, and facial expressions are impoverished (Nestler et al., 2015; Trošt, 2008). Postural instability generally appears in the late stages of the disease and is one of the most debilitating symptoms of PD, as it can increase the frequency of falls and may worsen its consequences (Viseux et al., 2020). Up to 86% of patients with PD also experience freezing of gait by the late stages of the disease. Freezing of gait is described as a "brief, episodic absence or marked reduction of forward progression of feet despite the intention to walk" (Bekkers et al., 2018; Heremans et al., 2013).

Among the non-motor symptoms of PD, disturbances of the autonomic nervous system, such as constipation, incontinence, erectile dysfunction, abnormal heartbeat, dry mouth, sweating, and low blood pressure are common. Olfactory dysfunction and problems with odour recognition also occur and can in some cases even precede the motor signs of the disease. Patients may also face weight loss and various sleep disorders (i.e. REM sleep disturbances, which can also precede the motor signs) (Goetz & Kompol-

iti, 2005; Trošt, 2008). Throughout the course of the disease, various behavioural and cognitive symptoms may arise. Depression occurs in about one-third of the patients, and dementia is present in 20 to 40% (Aarsland et al., 2001). Attention, executive functions, and working memory may be significantly impaired, and problems in the ability to plan more complex tasks and multi-tasking may also appear (EPDA, 2009). Hallucinations and other psychotic symptoms occur in approximately one-quarter of those affected (Goetz & Kompoliti, 2005).

PD also includes a variety of social symptoms, which can also significantly diminish the quality of life, as the social roles get altered by interfering with employment status, household management, friendships and other relationships. Patients with PD experience disruptions in emotional expression (facial masking), recognition of others' expressions, and disruptions in emotional speech production (dysarthria) and perception (Prenger et al., 2020; Perepezko et al., 2019).

Different medications and therapies for symptomatic treatment of PD (controlling for PD symptoms) are currently available (levodopa is the most effective one); however, no cure exists yet. In the late stages of the disease, with very severe and treatment-resistant symptoms, deep brain stimulation may be used and involves electrical stimulation of certain parts of the brain by a neurostimulator device (Emamzadeh & Surguchov, 2018). Some complementary treatment strategies have been showing effectiveness in the alleviation of some symptoms. Among the most commonly used are: physical/occupational therapy, physical exercise, dance, biofeedback, external sensory feedback, and training with virtual reality (Ghai et al., 2018).

### Why music for patients with Parkinson's disease?

Dalla Bella and colleagues (2018) state that rhythmic abilities are widespread in the general population. Most people can extract a normal rhythm from music and match their movements to the rhythm. People with PD often experience disturbances in the function of internal timing and rhythmic abilities, especially with disease progression. As rhythm is known to be closely related to movement, several studies (Devlin et al., 2019) suggest some musical and rhythmic interventions may improve some symptoms of PD, namely walking impairments, as well as some other motor and non-motor symptoms. Evidence has been accumulating that people with PD benefit especially from music with strong and clear rhythmical beats, as it likely enhances the feeling of internal timing, which can be impaired in PD. Ghai and colleagues (2018) suggested that a musical cue can serve as an external stimulus that may bypass the affected brain regions (basal ganglia), thus helping with the initiation of movement, and further increasing the

participant's speed and stride length. Nieuwboer et al. (2010) also additionally reported improvements in gait and balance. Furthermore, Jola and colleagues' (2022) study results show prolonged effects of dance interventions on gait, even after the dance class and without hearing music. The results are in line with the hypothesis that music enhances the feelings of internalized rhythm that supports motor control and improves gait even after the patients stop listening to music and are no longer dancing. Harrison and colleagues (2019) report that even quiet/mental singing (e.g., mental singing of a marching band while walking) improves motor performance in older adults and people with PD.

It is important to emphasize the neuropsychological aspect of music interventions as well. General positive feelings associated with music facilitate dopamine release through increased activity of the limbic system in the general population and can thus be effective in people with PD as well. Music-based movement interventions have repeatedly been found to improve not only motor symptoms but also cognitive functioning and life satisfaction in people with Parkinson's disease. Music and singing are thought to be beneficial as they can be used as a tool to communicate and express emotions, both of which can be difficult for people with PD. The application of music can complement or even exceed the benefits achieved through other methods of treatment (Dalla Bella et al., 2015; Morris et al., 2019).

### The patients' perspectives on the use of music

Various types of music therapy and musical interventions, such as neurological music therapy and auditory music stimulation, are already being used globally as complementary treatments

for PD (Thout & Hoemberg, 2014). In Slovenia, some forms of music and dance therapy are being used non-systematically, especially within the association of PD patients – Trepetlika. However, the existing and future efforts to ameliorate the symptoms of PD could benefit from more systematic research and quantification of these effects. We aim to fuel this research not only from existing literature but also from the needs and experiences of people with PD.

In light of the latter, we designed a questionnaire for individuals with PD with three objectives:

1. To gain a better insight into the current (personal/private) use of music to alleviate PD symptoms.
2. To evaluate current attitudes towards the use of music or musical interventions in the health-care system for alleviating PD symptoms.
3. To assess willingness to participate in a larger study where different types of musical interventions would be targeted and their effects on PD symptoms examined.

### Participants

Eighty-seven individuals with PD were included in the study, out of which 8 individuals did not complete the minimal number of questions needed for inclusion in the analysis. Thus, the final sample consisted of 79 individuals with PD, of whom 27 (35%) were women. The average age of the participants was 68 years. The majority of the participants identified as musically inactive music lovers (70%), while 23% of the participants identified as former active musicians (23%).

Among currently musically active individuals (5%) and a couple of professional musicians, only one-fifth reported formal music education (20%).

## Results

**Alleviation of PD symptoms:** Approximately half of the participants (49.4%) reported the use of music as a way of alleviating PD symptoms. Among the other half of participants ( $n = 40$ ) who are currently not using music for this purpose, 30 (75%) believe that music could help alleviate their symptoms, and 32 (81.2%) think that the presentation of current findings on the effects of music on PD symptoms could encourage them to use music for symptom alleviation.

We then asked the participants who already use music for PD symptom alleviation, in what ways they engage with music for this purpose. The most commonly reported was passive listening of music (Figure 1A).

We then asked the participants about the type of music that is most helpful for them in alleviating PD symptoms. We did not discover any specific pattern; the choice is highly dependent on the individual taste and access to music (e.g. listening to music on the radio is less personally adaptable, compared to listening through the internet/streaming apps).

We were further interested in the resources the group of patients with PD, that do not yet use music but reported they believe music could help with the symptoms of PD, would need. The most

commonly reported needs were assistance in setting up the music, reminders for music listening and a pre-prepared playlist they could listen to (Figure 1B).

**Music in Slovenian healthcare:** In our group of participants, only 12 individuals (15%) had encountered music within the healthcare system. Most had encountered music during magnetic resonance imaging, one participant encountered music in a private dental practice, and another participated in a music therapy session within the psychiatric hospital. Though not part of the healthcare system, several individuals mentioned encountering music with the purpose of symptom alleviation within various gatherings and activities organized by the Parkinson's Disease Association of Slovenia – Trepetlika.

Figure 1A



Figure 1: Word clouds of the most commonly reported ways of using music to alleviate PD symptoms (A) and needs to motivate the participants to use music to alleviate PD symptoms (B)

Figure 1B





**Current attitudes towards music implementation into the healthcare system:** The majority of the participants (n = 60; 76%) find the implementation of targeted musical activities into PD healthcare sensible and beneficial. None of the respondents felt the idea was not meaningful, but 8 individuals (10%) believed it could have both positive and negative effects. 12.7% of participants (n = 10) did not wish to express their opinion on the topic.

**Interest in participating in a larger study:** We explored the interest of the patients with PD to participate in an advanced study on the effects of music therapy on PD symptoms, where they would

undergo several hours of music therapy. 72% of participants (n = 57) expressed interest, while 27.8% (n = 22) would not be willing to participate. Of these, 10 individuals expressed concerns due to transportation issues, 6 due to difficulties with accompaniment, and 3 due to lack of time. The rest of the participants did not provide reasons for not wanting to participate.

Furthermore, the patients with PD were asked if they would be willing to participate in a study on the effects of music stimulation on PD symptoms, conducted at their homes (e.g., participants would listen to specific music every day). 84.2% of participants (n = 64) expressed interest, while 15.8%

(n = 12) would not want to participate in the study. Of these, 4 individuals expressed concerns due to the lack of technical equipment, 3 individuals saw difficulties in setting up technical equipment, and 3 individuals did not want to participate in the study due to lack of time. The rest of the participants did not provide reasons for not wanting to participate.

**Interest in the relationship between music and Parkinson's disease:** Finally, participants were asked what would be their main interest/activity of choice in terms of spreading information or knowledge about the connection between music and PD. Almost half of the participants expressed interest in educational lectures on the effects of music on PD symptom alleviation. Slightly fewer individuals (40%) would be interested in participating in a multiple-session workshop on the use of music for alleviating PD symptoms, while 26.7% of participants expressed interest in the Q&A session with experts in the field. 23.3% of participants were interested in a workshop on music-based improvisation, and 22.7% of participants were interested in a one-time workshop. Under the "Other" category of answers, a dance workshop was highlighted (Figure 2).

**Correlation analysis:** We explored the correlation between the willingness to attend a few hours of music therapy for the study on the effects of music on PD symptoms and several other variables. We only discovered a moderate correlation between the described willingness and the expressed interest in participating in the study of musical stimulation, which would be carried out at the patient's home. We discovered no correlation between formal musical education, previous experience with music in healthcare and current (private) use of music to alleviate symptoms of PD.

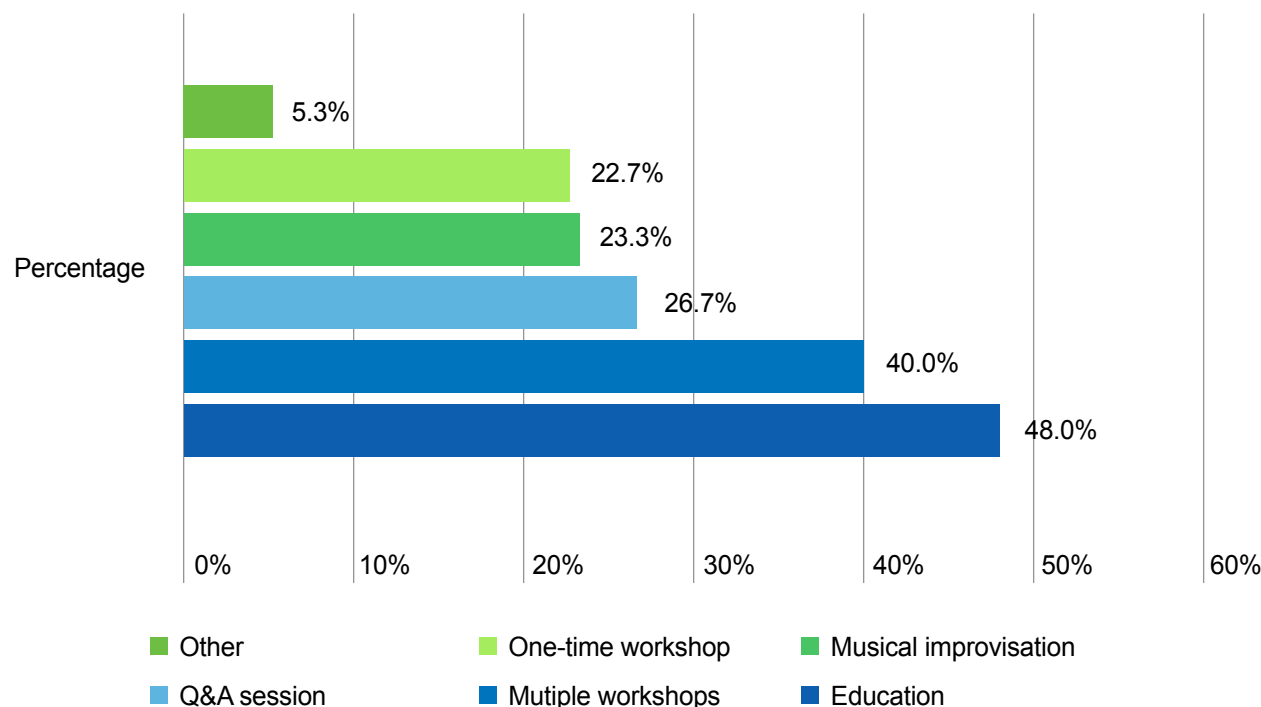


Figure 2: The expressed interest of PD patients (in %) for different activities which may help in promotion of the use of music to alleviate Parkinson's disease symptoms

## Conclusions

Based on the results of our study, we conclude that music already represents an important tool for alleviating PD symptoms in many individuals, while others show a significant interest in using music for this purpose in the future. Half of the respondents already use music for alleviation of PD symptoms, with most of them using it passively, mainly to help regulate their mood. Some use music to help them with movement and coordination, and a few participants use music actively, primarily through dancing or playing instruments. For those participants, who do not currently use music but would like to, there seems to be a need for pre-prepared music, reminders for listening and assistance in the music setup. Most of the participants (those who already use music and those who do not) would prefer a presentation of key findings on the benefits of the use of music in PD. In general, participants show the most interest in education, while they express less interest in Q&A sessions with a professional, working in this field, likely because they do not yet have a concrete foundation on the topic.

Regarding the interest in participation in a study on the effects of music on PD symptoms, the majority of respondents expressed interest, especially when it comes to activities that they could carry out independently at home (e.g., listening to selected music). However, it needs to be emphasized that the study mostly involved members of Trepetlika, who likely have a predisposition for such complementary activities that could help alleviate PD symptoms. Therefore, the results are likely not representative of the entire population of patients with PD. In expressing an interest in study participation, individuals are mostly limited by transportation and accompaniment, technical equipment and time. Those willing to participate in a study of music therapy

also express interest in music stimulation study, but not *vice versa*. Surprisingly, the interest in taking part in the study does not correlate with any other factor (e.g., formal music education, current use of music). The participants showed interest in the practical workshops on the use of music. However, less interest was expressed in a workshop with music-based improvisations. Improvisation may be intimidating and harder to imagine if one has never done that before.

Finally, only a small percentage of the participants have encountered the use of music in the Slovenian healthcare system. However, the opinion on the implementation of music into the healthcare system is mostly positive.

### Music-based improvisation as a form of intervention

The workshop facilitator, Jaka Škapin, considers his approach in this setting as non-therapeutic, even if it results in potential therapeutic effects. In doing so, he is following the values of the Dancing with Parkinson's programme, developed over more than a decade by Danielle Jones, artistic director of Luminelle, in London and beyond. He first joined the project in 2016.

"The Luminelle Dancing with Parkinson's programme brings expressive, moving and creative dance opportunities to people with Parkinson's, their family members and carers. It is a core programme developed by Artistic Director Danielle Jones, over 14 years of practice in this specialist health arena. Featuring live dance and live music, Luminelle's workshop programme offers people with Parkinson's the chance for personal enquiry, and artistic expression, to feel seen and experience compassionate connection with like-minded

participating dancers, both digitally in our at home programme, and in-person in our workshops and events across the UK and internationally." (Luminelle, n.d.)

Deploying these values during the pilot workshop on August 28<sup>th</sup> 2023 in Maribor, we explored the possibility of using improvisation to maintain and improve the vitality of the vocal cords as one of the body's muscles, and choreographically built physical expressiveness and mobility as a creative activity for all.

The workshop began with a short presentation of the Dancing with Parkinson's approach, as well as the introduction of the guests in the space, who all actively participated, except the sound and video crew. We then gathered in a seated circle, starting with a body scan and mindful awareness of the breath and body. Afterwards, we gently started to warm up the body through stretches that involved imagining reaching further than our seated position, into the space, towards others and outside of the building in which we were in – relating to our inner as well as outer environments. We then proceeded to individually imagine that we were moving through our homes, utilising the memory of objects and room placement to create movement patterns based on everyday habits and activities. This was the first instance when some of the participants began to stand up during their exploration.

During the whole workshop, the facilitator led through words as well as improvised vocal music captured on a digital vocal looper. While the intro and warm-up featured a meditative soundscape, he first introduced a clear groove in the before-mentioned home memory exploration,

which prompted sharper movements through the speed of the music, as well as rhythmic parts that conjured up the sound of home appliances, sliding objects and so on. This created the first bank of movements, which we returned to later on. What followed was a standing duo mirroring exercise, which started with one person leading and another following, before merging into an area in between, where neither of the movers knew who was leading or following, or in essence, they were both doing so by switching the roles quicker and becoming more attuned to their partner's choices and interests.

After a break, we returned to a trio exercise, where one person was more static at least at the beginning and allowed the other two to find different configurations of dueting around their body. This was a development of the duo exercise which allowed participants to work with a new partner, as well as include some of the gestures that they developed before the break. The exploration was also supported by quick coaching moments when the facilitator went around to different groups and suggested possible developments for their emerging choreographies, themes and relations.

During the last part of our session, we expanded this setup to include everyone. The first three people in the space were static for at least the first half of the exercise, with everyone else being able to freely move between them, adding on the notion of threads that allowed them to guide their movement from one person to the other, from one side of the room to the other, imagining that different parts of their body connect different parts of the space.

What emerged at this point was also the need and want to vocalise, and sing, especially as the facilitator left the loop station and continued sing-

ing while moving through the group. This led to a poignant closing circle where we all sang long notes, let go of the movement exploration and concluded by pressing into each others' palms, transferring weight and swaying in a closed circle.

The facilitators' experience of the group was that most of them had not had prior encounters with music-based improvisation, although they were all interested in exploring it. It felt that the gradual introduction of the 'free' movement helped, as well as the relationship between their choices and movements related to everyday life, and the relationality of being able to rely on a partner, or simply be inspired and copy anyone in the space. What was also essential to the process were the dance assistants, who were able to support participants through their embodiment and examples of movements that would not have been explored otherwise, such as how arms or upper body do not necessarily always have to lead and so on. Lastly, having even just one or two participants who have an established relationship with improvised singing and movement helped the group feel at ease, as they confidently entered explorations and helped guide the group towards present-moment awareness, and less concern around how they might be perceived, or if they might not be doing the 'right' thing. This was exemplified during our conversations after the workshop, in which many participants expressed that the open space created allowed them to move and interact in new ways, as well as build a strong sense of connection and acceptance among the group.

### Excerpts from the interviews and radio documentary

Below are excerpts from three participants' interviews captured after the session:

"When I arrived, earlier, I felt something, how should I say, anticipation, but also a little trepidation and reluctance. What will happen? But this was something incredible, it just blew me away. When it started, the intro and then the music, and the facilitation and ... I just felt good. Relaxed, I sometimes felt that we had to awaken our inner child, today I managed to do it, even though I always wondered, how? I kind of immersed myself in the music. Somehow music, when you feel it inside you, that rhythm carries you away. And I think that this is also the part that leads to the relaxation, besides of course all the other movements we performed during the music. It seems to me that in life, if you have some problems, and if you have some activity where you can relax, so that the body is relaxed, you can tolerate all these problems more easily, and you may feel them to a lesser extent. Because when you are relaxed, the physical pain is also lessened, since the muscles are relaxed and we are not so stiff as we say." – Milica Kapić

"Where you have set steps, you cannot relax. In other words, your mind works, your mind has to lead, how many steps there, how many there, here, and you think about it. But when you have such relaxation with music, and creating, then you are not burdened with something you should know, or how you will be perceived, because you know that if you let yourself go, it is always fine, it cannot be wrong or right. And this is the kind of relaxation that also relaxes your mind, that it is relaxed, that it is not burdened with certain thoughts, all day we think, now I can do this now I can do that, how will I do this, how will I do that, but here you are as if you are switched off, you switch off and you fall into yourself. The music had such an effect on me that as soon as I heard it, I couldn't wait to be in it with my body. Because when you join the music, it's that



rhythm that pulls you in and makes you forget about everything else.” – Biserka Muršec

“The therapeutic exercise organised in the health care centre satisfies us from the aspect of motor skills, the increase of mobility. This workshop however offers something that physiotherapy does not. And that is the music, the bespoke music, the voice of the workshop leader, a voice that relaxes you and encourages you to try and sing something. This is related to problems that people with Parkinson’s have regularly, our voice gets weaker and weaker, with the articulation of the voice worsening. Any singing that is encouraged by someone is a positive for us since we don’t usually sing unless someone gets us to do it. As people, we need both movement and increased motor skills, but we also need singing and we also need music, and we also need the atmosphere that is created within the group, so that people want to come to the group to also enjoy themselves, to actually have fun, which is visible from their mood, that they are comfortable. In short, I think that even back at home, the people in the family to which the patient returns from such a workshop would be content, because they’d arrived relaxed, full of energy, and should’ve been sent back the following week. I would like this also as a service that would be made possible by the healthcare system, because the healthcare system should actually be the pillar that allows such non-pharmacological exercise, influences it, from a positive aspect and actually enables us to achieve additional, I would say, benefits, which we have not experienced up until now.” – Vinko Kurent

### Advantages of music-based improvisation

Whilst people with PD commonly report a calming effect while listening to music, the music listening alone does not seem to affect the subjective experience of an

improvement in their motor symptoms. A music-based movement intervention (e.g., dancing) combines the physical, rhythmical, psychological and emotional aspects, which is why it may be more effective than passive music listening. Furthermore, evidence from qualitative studies indicates that the majority of participants experience exercise dance programs as helpful with regaining a sense of positive identity, decreased feelings of isolation, better mood and quality of life, reduced motor symptoms, and enhanced functioning. In the subjective experience of motor improvement, a combination of dancing, music and signing is likely most beneficial (Jola et al., 2022).

Ashoori and colleagues (2015) have postulated that an adaptive system that adjusts the rhythm of movement is most efficient for intervention in PD, as the music is hypothesized to have a detrimental effect on motor performance if the exercise mode demands high levels of concentration. In such instances, the human brain attempts to partially suppress potential distractors to enable the organism to engage with the task. Rhythm that is too fast may thus exceed the physical abilities of the individual and induce more stress, which may lead to a higher risk of falls. This is why music-based improvisation may be of relevance and represents an added value to these interventions. First, in music-based improvisation, all three components are included – dancing (moving), music and singing. Secondly, the leader of the workshop can adapt music and rhythm to the specific group of patients, to prevent disruptive effects. During the workshop, the leader facilitates the process, but there are no right or wrong movements, so everything is allowed and each individual can execute the moves within his abilities. There are also no choreographed movements, which can put an additional strain on the memory processes in people with PD. The whole process of music-based improvisa-

tion benefits the feeling of social connection and social involvement. It may also benefit the sense of positive identity of people with PD.

### Experiences and impressions of the participants

In the interviews, that we conducted after the music-based improvisation workshop, the participants most commonly reported feeling relaxed and more socially connected to the group and their partners (if they attended the workshop together with their partners). A lot of the participants also reported feeling calm, happy and motivated. Some of the participants felt attunement and wakefulness, as well as openness, liveliness and centrality. The participants found it beneficial that all movements were spontaneous and not pre-planned, as this allowed them to delve into themselves and follow their impulses when moving. One of the participants pointed out the pleasant surprise of the kindness of strangers, and another participant noted the workshop was a good preparation for the unknown, as no movement or activity within the workshop was precisely planned. All participants expressed interest in possible further workshops, and most of them stated they would gladly come again the following week. Most of the participants also agreed they would benefit from the possibility of pre-prepared music to which they could try the activities at home. The conclusion of the workshop was that the group is a key factor in the process, as it enhances the interest and motivation in the activities and affects the feeling of connection, which is not the same if one individual tries these activities by themselves. It is best if these activities can be tried at home with at least one more person, preferably a partner or a caregiver, as it may benefit not only the person with PD but also their relationships.

## Conclusions

Some variations of music and dance interventions are already in use within the Parkinson's disease association of Slovenia – Trepetlika. However, there is a need for systematic research into the use of music for alleviating PD symptoms and quantifying the effects of music, to encourage the targeted use of music interventions within the Slovenian healthcare system. Only a small group of participants have encountered music in Slovenia healthcare system and none of them have encountered music in the context of Parkinson's disease. However, the majority of the participants expressed interest in the use of music, as well as the participation in further studies in music. Current scientific findings are essential for achieving the systematic use of music, but the experiences and needs of patients should be taken into account as well, as they are crucial for future insights and motivation for future studies.

The Dancing with Parkinson's approach introduced to Trepetlika's Maribor members was positively received and engaged participants with previous as well as no dance or group improvisation experience. The workshop provided self-expression as well as social connection space different to existing dance programmes or the physiotherapy currently provided within the public health care system. The majority of the participants saw this practice as a valuable complementary activity that they would like to explore further and experience regularly.



Illustration by Zala Kalan

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# HOSPITAL RADIO

# HOSPITAL RADIO

Hospital radio is created for toddlers, children and adolescents who for various medical reasons visit the hospital for a short or longer period of time. The artistic content has been carefully curated in order to make their stay in the hospital environment easier and reduce worry and tension. The artistic, entertaining, educational and other content is selected that can be calming and supportive to children during hospitalization, as well as helping them cope with, learn about, and understand what is going on during hospital stay.

The Hospital Radio is thus created together with the University Children's Hospital Ljubljana, the hospital's school and kindergarten, experts from various scientific fields, and artists and artistic organizations, all contributing their knowledge and art to the broadcast.

The proposal for the Hospital Radio concept was given by the neuropaediatrician, chief physician Igor Mihael Ravnik based on his extensive and valuable work experience and network. Radio Slovenia realized it with the cooperation of the University Children's Hospital Ljubljana management, expert director doc. dr. Marko Pokorn, dr. med., and doc. dr. Klemen Dovč from the clinical department of endocrinology, diabetes and digestive diseases.



Artworks by children from kindergartens upon listening sessions at the Festival of Radio Plays for Babies and Toddlers, RTV SLO, March 2023, Ljubljana, Slovenia. Photo by Katja Kodba

## KAJA HAS TO VISIT THE HOSPITAL (Excerpt from a radio drama)

**Nurse JANJA**  
**Girl KAJA, a patient**  
**Kaja's DADDY**  
**Kaja's MOMMY**  
**SURGEON**  
**ANESTHESIOLOGIST**

Taking place in the children's hospital.

JANJA: Good morning, Kaja! How did you sleep?

KAJA: Good. Pst, Daddy is still sleeping. *(in a hushed voice)* I was dreaming about My Bunny, running around on a meadow and eating grass.

JANJA: Kaja, I'm sorry but today you cannot have breakfast.

KAJA: I know, I know everything. We cannot eat before surgery.

JANJA: You will get a special syrup so you won't be scared. It's called premedication. Open your mouth.

KAJA: *(slurps from the spoon)* Oh, it's so sweet!

DADDY: Oh, good morning! Can I also get some of that syrup, hahaha?

KAJA: No, daddy, you can't. You have to be scared so I won't be, when I'm in surgery.

JANJA: Well, is our champion ready for a short trip?

KAJA: Oh my, we're going now? Can I take My Bunny?

JANJA: Of course! We'll go very slowly to the operating room. Come!

DADDY: I'll be with you the whole time and mommy's also coming.

*(The noise from the hallways, children's muffled singing:*

*"When we count to five,  
my pain is gone bye bye*

*1,2,3,4,5,*

*auuu,*

*my pain is gone bye bye."*

*It could also be a recording of heart rhythm - du-dum, du-dum- if that's not too much?)*

SURGEON: Hello, little girl, how are you? I'm the surgeon.

KAJA *(calmly, after drinking the syrup)*: I'm Kaja, normally I go to school, and this is My Bunny, he stays at home.

SURGEON: I'll do the surgery, in the operating room next to this one. An anesthesiologist and a nurse will help me. The anesthesiologist will help you fall asleep.

DADDY: Kaja, look, mommy is here!

KAJA *(happily)*: O, mommy, mommy!

MOMMY: I'm here! Let me hug you and kiss you. Everything will be fine.

KAJA: Will you and daddy take care of My Bunny if I sleep too long?

DADDY: We'll take care of everything. We'll wait outside, in the hallway.

SURGEON: Kaja, are you ready for a long sleep?

ANESTHESIOLOGIST: You said you go to school, Kaja. How old are you?

KAJA: I'm eight already!

ANESTHESIOLOGIST: That's a lot! And how high can you count?

KAJA: I don't know, high...

MOMMY: Tell him, Kaja, how high. You're very good with numbers.

KAJA: One, two, three, four, five....

*(Falls asleep.)*



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## Cast:

**Kaja:** Luna Khaleesi Meglič

**Brina:** Mila Mrak

**Mom:** Sabina Kogovšek

**Dad:** Matej Puc

**Admission nurse:** Barbara Rojnik

**Janja, clinical nurse:**

Slavica Ravnik

**Doctor Breda:** Katarina Borovnik

**Surgeon:** Igor M. Ravnik

**Anesthetist:** Vladimir Bricelj

**Hospital educator:** Janja Hana Jamnikar

Recorded in the studios of Radio Slovenia in  
October 2021

**Production:** B-AIR, Editorial of the Radio  
Slovenia Fiction Program



Photo by Katja Kodba

To listen to "Kaja Has to  
Visit the Hospital":



## TESTING RADIO PLAY IN CHILDREN HOSPITALS

In the final phase of the B-AIR project (November-December 2023), RadioTeatar started to test radio plays for children in hospitals. The opportunity to share our radio plays with children in the hospital came through the collaboration with the Elementary School “Ivan Goran Kovačić” from Zagreb, whose teachers also run the school in the children’s hospital “Srebrnjak”.

What we found out about the school in this hospital is that the classes are always combined, similar more to individual instructions (repetitions) than

the regular classes. Having in mind the fact that the group changes every day, most of the materials need to be made for self-directed learning, and facilitated in that way. It is happening because the fluctuation of children in the hospital is quite big and fast. The children mainly spend several days in the hospital, in order to do some diagnostic appointments with doctors, and medical treatments. Besides that, sometimes they have medical tests in the ‘school time’ (which is usually in the middle of the day).

Music and Arts teachers usually work in the hospital once in 15 days, which means that there is a lack of artistic content in the ‘curricula’, comparing to the content of ‘more important’ subjects such as Mathematics, Croatian language, etc. where children usually have a lot of homework to do (e.g. in workbooks from schools). The groups of children in the hospital school are mixed, unpredictable and very heterogeneous: sometimes there are 5-year-old and 13-years-old children in the same group, which poses a real challenge for the teachers in deciding on the learning and teaching strategies.



Ek o b a r a b a i  
p e t r i c a p u h



M O J S C E N A R I J Z A D J E Č J U  
E K O - R A D I O D R A M U





Even some children of the preschool age enter the hospital 'school'.

In the days when we have visited the hospital, the group consisted of mainly small children who still can't read (from 5 to 7 years-old), with only one boy who was 11. We originally prepared listening materials and writing prompts for the first two episodes of children eco-radio drama "Eco Hooligan and Petrica Puh" (see the writing prompts at the end of this chapter), which are suitable for children who are 9+ years old. As the group was unexpectedly much younger, I decided on the spot to use "Earlet the Gnome and the Mysterious Doors". I knew that the 'Sluško' radioplays will be boring to the 11-year-old child in terms of content, but since the rest of the group were pre-schoolers, I had to respect both sides. This is why I decided to give the 11-year-old a 'special task' – to be a DJ in charge for the speakers and the volume of the play during the storytelling and listening.

After the school hospital experience, what can be noticed and suggested for future events is:

1. There is a need for a specialised professional (music and arts mediator/animator) who could create meaningful live encounters with sound, music and drama within the school, but also in the shape of a performance in the hospital;
2. It is time to put back theatre plays in the children's hospitals – as it was before the pandemic;
3. There is a need to create short radio pieces and 'one time' lessons with creative exercises in the shape of written material. One of the examples that we created can be found at the end of this article, made especially for the first two episodes of "Eco Hooligan and

Petrica Puh", a detective-science children's radiophonic series (see more about "Eco Hooligan and Petrica Puh" in Chapter I);

4. In terms of children's radio drama, it would be useful to think about creating applied radiophonic material for the hospital space (e.g. soundwalk that might make transition from home to the hospital and the time spent in the hospital cosier and less stressful for the child). Making the hospital space more welcoming through stories and sounds does not require additional construction work in the hospital – besides printing QR codes that would be put in visible places (e.g. walls and doors), so the children, parents and medical workers might easily approach the sound content. This activity might be beneficial for the whole community within the hospital;
5. Many activities related to singing, listening and body percussions need to be carefully crafted and navigated in the encounters with children, because of their medical condition;
6. In the heterogeneous age groups, it is good to create some special tasks for the children who are, for example, older than the majority of the group, which can be applied while working with other children.

Dear listener,

Welcome to the world of children's radio drama! You're probably wondering what a radio drama is. Here's the answer!

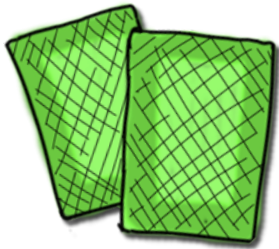
A radio drama is a drama that does not take place in an 'ordinary' theatre, but on the radio, therefore it has no visual elements. What helps listeners imagine the characters and the story itself are dialogues, music and sound effects.

We hope you like our radio drama about friends who set out to save the city from garbage and pollution!

But in order to join them in the story, you first have to get to know them! Listen carefully to the first episode and connect the names of the characters with everything you notice about them while listening.

**P.S. Some characters have more than one feature offered!**





VESNA

PETRICI PUH

BOJAN

MORANA

EKO BARABA /  
ECO HOOLIGAN

MIRKA

Često ide u operu i  
zapravo je vještica  
(Baba Jaga)!

Often goes to opera  
and is actually a  
witch  
(Baba Jaga)!

Lik koji stalno pjeva. To  
je umjetnica-lastavica  
koja svugdje donosi  
veselje i proljeće.

A character who  
sings all the time. An  
artist-swallow who  
brings joy and spring  
everywhere.

Glavna junakinja koja  
se bori za prirodu.

The protagonist who  
fights for nature.

Brzo pamti i još brže  
zaboravlja. Po cijele  
dane je na internetu  
kad bi trebala spavati.  
Zato ima podočnjake i  
stalno pije kavu.

Remembers quickly  
and forgets even  
faster. Spends all day  
on the Internet instead  
of sleeping. That's why  
he has dark circles and  
drinks coffee all the  
time.

Pravo ime mu je  
Vjekoslav.

His real name is  
Vjekoslav.

Kao što mu ime kaže,  
malo je plah, ali i  
hrabar.

As his name says, he  
has temper,  
but courage as well.

Eko Barabina mama  
Eco Hooligan's mom

Misli da je odlaganje  
smeća glupost i želi da  
se Maksimir, Ribnjak  
i Bundeck postanu  
močvara za odlaganje  
smeća.

Thinks that garbage  
disposal is nonsense  
and wants parks to  
become a garbage  
disposal swamp.

Ponekad u tajnosti  
odigra partiju igrice s  
Eko Barabom

Sometimes secretly  
plays a computer  
game with Eco  
Hooligan.

Stan joj je pun smeća i  
stalno stavlja parfem

Her apartment is full  
of garbage and she  
wears perfume all the  
time.

Now that you've met our main characters, listen to what happened to them in the second episode! Imagine if Petrica and Vesna came to your door like trick-or-treaters! What song did Vesna sing?

Draw a scene. ☺

What kind of trouble did Vesna and Petrica find themselves in? Imagine what the solution to their problem might look like! If you could record the next episode, what would happen at the beginning, what in the middle, and what at the end? What sounds would you include in your episode to evoke the plot?

What did Petrica do to help Vesna? Did someone come to her aid?

During this time, while Petrica is looking for a solution - how is Vesna feeling in the cage? What does she do to break free?

How does the story end? Keep in mind that it will be followed by a new episode!

introduction

middle

ending

Write here the sounds you would put in each part!

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## TOGETHER

### A radio play for children in hospitals and beyond

“Together” (*Skupaj*) is a musical radio tale about the unusual friendship between a feather and a bird. It was commissioned by Radio Slovenia, in their series of radio plays that explore the healing or soothing potentials of the radiophonic medium for children with a hospitalization experience.

#### The story and its sound

The story is about the unexpected friendship of a bird and a feather. It departs from a bed – presumably a hospital bed – where the feather lives inside a pillow. As the bedding is shuffled, the feather finds itself out of the pillow, flying around in the room, until a breeze takes it out through the window. It softly lands in the city, amidst the urban environment, where it sees a wounded bird by the sidewalk. They meet, exchange wishes and needs, and they decide to join forces – or rather, to help each other out – and fly together combining what each of them misses: the bird has a wounded wing and asks the feather to mend it by joining it;

and the feather, after being closed in the pillow, craves to see the world and asks the bird to be its companion. Together, they start their voyage, a flight over pleasant locations around the world. It is in fact a story of anti-heroes, or at least of heroes that are somehow troubled, non-wholesome, and they gain power by helping each other out.

For the composition, we are drawing upon various musical elements. The simple vocal melodic lines are inspired by lullabies. The whole composition follows an oneiric (dream-like) approach, without the intention to necessarily make audiences fall asleep; we rather aim at evoking the feelings one gets from a dream of flying, which, according to several psychologists, is associated with relief.

The piece is written for two ‘instruments’ which are rarely met in music for children. The first instrument is a Minimoog synthesizer, a legendary monophonic analogue synth born in the 1970s; it is used the musical parts. Minimoog’s sound

is blended together with the second ‘instrument’, the use of field recordings.

On one hand, field recordings are meant to represent actual living environments, simulate them and blend them into the oneiric reality of the piece. For hospitalized children, those environments are not necessarily pleasant – partly because of the feeling of loss of agency, or control over one’s own body and space. So, their swift incorporation into the melodic and rhythmical structure is meant to bring about a feeling of playfulness with those negatively associated soundscapes, as well as their trans-substantiation into something positive. Minimoog’s vast range of timbres enables us to perform this bridge: the particular synth has the ability to synthesize sounds with analog properties. We use it by overlaying synthesized sounds, that imitate the timbre of orchestral instruments. With numerous pre-sets, and the ability to change



the envelope<sup>1</sup> and parameters of all sounds, it can create new timbres to match the soundscape compositions that engulf the entire radio piece. This instrument has a powerful ability to create new, still non-existent sounds that are created *ex nihilo*. We selected and manipulated each sound in the piece, to match with the oneiric feel we wanted to achieve. We depart from something quite realistic – a blend of field recordings and the synth's subtle presence – and, through the Minimoog, we introduce the oneiric textures, 'fly' for a little while in a dreamscape and land back again into reality, having gained this flight-feeling along the way.

In the vast range of timbres of Minimoog, we sought mainly for subtle and soothing textures, to inspire calmness and to spark imagination, in support to the imaginary flight of our two friends. We only added intensity in the *crescendo* parts. These are the parts that stand out in the composition as *refrains* – or *ritournelles* – to use the French word, in consistency with philosopher Gilles Deleuze's (1980) approach. The *ritournelles* of "Skupa", one in each part of the composition, are aimed to be remembered, sang along, and function as a reference point for the aural-oral (ear-to-voice) constitution of a "calm and stable centre [of order] in the heart of chaos" (Deleuze 1980: 382). If we may try to simplify the French philosopher's approach, this is one of the primordial functions of music – of refrains in particular, "found in tales (both horror stories and fairy tales), and in lieder as well" (ibid.: 383): a way of creating an ordered space-time within an otherwise uncharted world.

When it comes to the piece's innovation, both Minimoog and field recordings are quite unusual for this particular audience, as we all are used to more 'traditional' sounds in children's music. Although sound effects and sound samples have been used widely as supporting elements in children's narratives, not enough work has been put into the usage of electronic musical timbre. In parallel, nowadays musicological research focuses on timbre, added that, since the late 20<sup>th</sup> century, we experience a digital revolution in music technology. We are not going here into the discussion about the healing properties of particular musical frequencies, possibly falling into the field of interest of psychoacoustics; but the fact that electronic sound is gaining more and more ground in both popular music and the avant-garde, made it quite interesting for us to use it in a piece made for children. Moreover, the history of music is an ever-evolving field, and we find that radio for children is a fine medium to introduce this emerging musical reality to young audiences.

### Learning from vulnerable positions

Our work with TWIXTlab in B-AIR focused in a rather different field. We engaged in ethnographic, artistic and pedagogical research with Deaf and hard-of-hearing participants, aiming to introduce, create, and make sense with inclusive practices of music and sound art, together with our interlocutors (see Chapter II, "Audibility". However, as Creative Europe collaborations provide an exceptional opportunity for encountering diverse fields and approaches, we were greatly informed and inspired by RTV Slovenia's work with neuroscientists and developmental psychologists

towards radio research-for-creation. We find a common denominator in our research about the Deaf, and the Radio Slovenia's inquiry about hospitalized children, namely the notion of 'vulnerability', and the feeling of being 'left out' or 'marginalized'. Thus, we brought into play our own findings, experiences, approaches and artistic intuition, to address those issues. With the radio tale "Skupa" we sincerely hope to contribute to the cause, for both general audiences, and arts-and-science research that underlies the project.

To listen to "Together":



1 In sound and music, an 'envelope' describes how a sound changes over time, for example in its amplitude (volume), frequency (with the use of filters) or pitch.  
[https://en.wikipedia.org/wiki/Envelope\\_\(music\)](https://en.wikipedia.org/wiki/Envelope_(music))

### Sources and literature:

Deleuze, G., & Guattari, F. (1980). *Capitalisme et schizophrénie. Mille plateaux*. Les éditions de minuit.



Illustration by Zala Kalan

## SOUND AMBIANCES





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## HOW DOES THE WORLD SOUND?

Since the first works of Pierre Schaeffer (“The Sound Object”, 1966), then Murray Schafer on the soundscape (1977), completed by the collective work of the CRESSON team (sonic effects notion, 1995), many are now the concepts likely to describe the sound phenomena as they are experienced and produced daily. These works make it possible to describe sonic phenomena on different scales: scale of the sonic sources with the sound object, scale of the body in movement with the sonic effect and scale of the landscape with the soundscape. They articulate perfectly to the attention that we have when we are listening to sounds and acting with them. They are also very meaningful and relevant to describe the *affect* produced on the listening and on the acting subject. They become operators for sound creators (installation, sculpture, radio arts, musical arts) but also for space designers (artists, architects, urban designers). Nowadays, with the revival of the general interest for sound (sound studies), the notion of sonic effect seems the most promising tool to describe our contemporary practices with the sonic environment.

More recently, the concept of *ambiance* is subject of special attention and with the work of sociologist, CNRS<sup>1</sup> member and the researcher at CRESSON team Jean-Paul Thibaud, it appears very promising to develop a new perspective on our contemporary sonic environments.

If sound and *ambiance* are so closely related, it is because they both question the idea of a clear distinction between the perceiver and the perceived, the subject and the object, the inside and the outside, the individual and the world. Instead of relying on a dualistic and substantialist mode of thinking, they require an alternative to ontology of the thing and attention to the medium and fluxes involved in everyday sensory experiences. Sound has proved to be a very useful medium to describe the tuning *into*, the unfolding *of*, and the situation *within* an *ambiance*. Those three perspectives help to approach the puzzling notion of *ambiance* by revealing some of its main features: the emphasis on sensing over perceiving; the crucial role of resonance and affective tonality; the importance of internal dynamics, everyday gestures and social forms of life; the phenomenon of coalescence that

unifies the diverse components of a situation; the articulation between the spatial, the social and the physical.

In other words, this research intended to explore urban ambiances through sounds, using the concept of sonic effect both for description and creation.

What can be learned about an *ambiance* when we just listen to it?

In other words, **how does the world sound?**

In a world of increasing sound and communication, the confusion generated by the multiplication of media (often sonic) requires the reexamination of the effectiveness of these notions. The package of activities by the CRESSON team “B-AIR: How does the world sound?” aimed to contribute to this debate by proposing six weeks of research, seminars coupled with experimental and pedagogical workshops. Radio as a medium and radio as new forms of artistic and scientific expressions has helped us tackle this issue.

<sup>1</sup> National Centre for Scientific Research (*Centre national de la recherche scientifique*), France

## La recherche culturelle et l'Europe

Des synergies fortes



Walter Kneijman, *In radio et l'audience* - Marche sonore, Portbou, septembre 2021.

sensibilité sonore dès le plus jeune âge et tout au long de la vie. Quel est l'impact du sonore (son, voix, langage, musique) sur le développement cognitif, émotionnel et personnel de chacun, mais aussi pendant la maladie et la convalescence ? Le groupement s'est donné la mission d'explorer le média de la radio sous ses formes les plus contemporaines pour aborder ce sujet : performances sonores dans l'espace public, théâtre de rue, marches sonores, émissions de radio, ateliers sonores dans des écoles et dans des établissements spécialisés pour les enfants malentendants, ateliers sonores dans des EPHAD sont autant d'actions qui sont testées et discutées dans le cadre du projet B-AIR. Autrement dit, B-AIR partage au sein de ses partenaires l'hypothèse que l'art et le sonore peuvent être considérés comme un facteur de développement et de transformation. D'une part, le consortium explore différents environnements sonores (espaces publics, écoles, hôpitaux, maisons de retraite), d'autre part, il s'adresse à différents publics, notamment ceux qui sont habituellement négligés (bébés, jeunes enfants, groupes

vulnérables, personnes âgées). Au-delà d'une approche artistique purement intuitive, l'objectif du consortium est aussi de mettre en dialogue la recherche scientifique et la création radiophonique en fédérant une réflexion sur le rôle, l'impact diffus, sensoriel et sémantique du son dans nos vies. B-AIR promeut l'importance du son en général et de la radio en particulier pour la croissance, le bien-être et la socialisation de tout un chacun.

### Art infini de la radio

Dans le paysage médiatique actuel, la radio n'est peut-être pas le média que l'on choisirait en premier, mais B-AIR est convaincu que c'est le média que l'humanité abandonnerait en dernier. Avec le projet B-AIR, nous voulons permettre la production expérimentale et la réinvention de la radio en tant que média créatif, comme un geste artistique en soi, et soulever la question de la transformation du média radio (transformation à la fois technologique et sociale). Refusant une pensée dichotomique entre ce qui est nommé « pratique artistique » et « pratiques ordinaires », les partenaires s'attachent à

développer leurs propositions de recherche et artistiques vers les communautés cibles. La production d'« art sonore de qualité » réservée habituellement aux salles de concert est portée vers des publics sensibles : art sonore participatif co-créé avec des enfants hospitalisés, narration d'art sonore communautaire dans les maisons de retraite, la radio étant un média commun. En faisant participer des publics tels que les enfants et les personnes âgées à un processus de création et de réévaluation, l'idée de B-AIR est de favoriser aussi la prise de conscience par nos sociétés de l'importance de l'art sonore aujourd'hui dans nos trajectoires de vie en rendant l'enfant, la personne malade ou vulnérable consciente de son potentiel créatif. L'enjeu est de décloisonner les processus créatifs et d'éducation musicale et sonore et d'ouvrir la communauté à une liberté créative avec un art sonore pour tous.

L'un des outils méthodologiques proposés par le projet B-AIR est la création et le partage d'une plateforme internet dédiée à la création sonore et radiophonique (<https://b-air.infinity.radio/>). Nombreux sont les partenaires

**Pays engagés :** Slovénie, France, Croatie, Serbie, Finlande, Grèce, Bosnie-Herzégovine

**Partenaires :** BAZAART (Belgrade, Serbie), AMU-Cresson - École d'architecture de Grenoble (Grenoble, France), Institut Jožef Stefan (Ljubljana, Slovénie), ITA-Suomen Högskola (Helsinki, Finlande), Inna medijica ustvariva Radio - Inevicija Srbija (Belgrade, Serbie), Radioteatar Bajsić i prijatelji (Zagreb, Croatie), TWIXTAD AMKE (Athènes, Grèce), Vaskoskiolka ustanova internacionalni burz univerzitet (Sarajevo, Bosnie-Herzégovine)

**Financement :** Programme Creative Europe Culture Sub-programme "Support for European cooperation projects" 2020 EACEA 32-2019 - Larger scale cooperation projects (COOP2)

**Responsables scientifiques :** Sabina Rajc, Radio televizija Slovenija, RTV SLO (Ljubljana, Slovénie) - Nicolas Rémy et Nicolas Tixier pour AMU-Cresson. Contrat débuté en novembre 2020, se terminant fin 2023.

# **WALTER BENJAMIN, THE RADIO AND THE CHILDHOOD**





## HOW CAN WE MAKE THE WORLD SOUND

“Dear invisibles” – this is how Walter Benjamin called the listeners. Benjamin wrote about the radio and for the radio. In the late 1920s, he worked for public radio stations in Berlin and Frankfurt. He loved the popular dimension of this new media which he found to have endless possibilities, including the staging of everyday life. More specifically, he produced a series of programs ‘for children’, which were also aimed at adults. For Benjamin, the radio was the place *par excellence* of the practical application of his reflections on means of technical reproducibility. He even sketched a theory of radio.

As part of our B-AIR research group, Benjamin’s writings and radio plays have been revisited in order to question the use and potentials of radio today. Through radio, sound creation and philosophy, the seminar and the associated creative workshop were an opportunity to re-ask the following questions: How does the world sound? And how can we make it sound?



Soundwalk during the Seminar in Portbou, Spain, September 2021. Photo by Cédric Pichat

# WALTER BENJAMIN, THE RADIO AND THE CHILDHOOD – WALKING, LISTENING, TALKING

Portbou (Spain), September 29<sup>th</sup> to 30<sup>th</sup>, 2021

In September 2021, the CRESSON team organised a seminar in Portbou, Spain, where every two years a meeting on Walter Benjamin's work brings together researchers, artists, architects and philosophers to discuss and experiment on it.

Titled "Walter Benjamin, the Radio and the Childhood - Walking, Listening, Talking" the seminar has alternated between lectures followed by discussions, readings, sound creations and sound walks. General discussions took place inside the "Casa Walter Benjamin", by the courtesy of the Portbou Municipality.

This two-day event was free and open to the public. Over 40 people attended, including kids from the city-school who participated in the program.

The whole event was organised as a large radio set, allowing the program to be recorded and archived as podcasts:



## WALTER BENJAMIN, THE RADIO AND THE CHILDHOOD – WALKING, LISTENING, TALKING

### Program:

#### Day 1: September 29<sup>th</sup>, 2021

- 09:30 "A l'écoute" de Walter Benjamin (lecture par Didier Tallagrand)
- 09:45 "Chers invisibles" / "Dear invisibles" #1 (Nicolas Tixier)
- 10:00 Walter Benjamin et la radio (Philippe Baudouin) (diffusion)
- 10:15 "Dressez l'oreille, vous risquez d'en avoir besoin". Apprentissage de l'insatisfaction (Anne Roche)
- 11:15 Walter Benjamin et Portbou (Bruno Queysanne) Suivi d'une marche vers le mémorial W. Benjamin
- 15:30 Archéologie des "Hörspiele" en contexte allemand (Hans Hartje)
- 16:30 En partant du narrateur: devenir des récits terrestres (Jean-Paul Thibaud)
- 17:30 Electronic media and listening commons in the early years of Radio Ljubljana (Rajko Muršič)
- 18:30 RadioWalk for Benjamin (Pavlica Bajsic Brazzoduro)

#### Day 2: September 30<sup>th</sup>, 2021

- 09:30 "Le Mississippi et l'inondation de 1927" de Walter Benjamin (lecture par Sonia Pérez)
- 09:45 "Chers invisibles" / "Dear invisibles" #2 (Nicolas Tixier)
- 10:00 Navigating Borderscapes and Belonging. Memories of Children's Radio Listening in Finland (Helmi Järviluoma-Mäkelä)
- 11:00 Enfance et réalité à venir (Alexandre Costanzo)
- 12:00 The end of an era (correspondence of Benjamin and Adorno) / Sound Walk (Dana Papachristou and Georges Samantas)
- 16:00 Experimental Broadcasting and Transnational Evening of Sounds (Heikki Uimonen)
- 17:00 Sound performance – Radio Wega (Giuseppe Gavazza)
- 17:30 Conte radiophonique (enfants de Portbou)
- 18:15 Lecture transversale et échanges finaux (Pascal Amphoux)





A radio workshop held with children from the Portbou elementary school

The seminar was accompanied by a five-day long workshop with the students of the master program *Terrain*, of the Experimental School of Art Anney Alps. During the workshop, students took on a singular situation, that of a small town: Portbou. Portbou's unique geography of sea and mountains, and its history linked to its location on the border between France and Spain, have made it a scene of various tragedies: the *Retirada* or post-war Spanish Republican exile from 1936 to 1939,

and the suicide of philosopher Walter Benjamin in September 1940. Students were also introduced to this tragic period of our history through a meeting at the beginning of the week, with the French philosopher Bruno Queysanne, a specialist on Walter Benjamin's works.

To listen to the podcasts and see contents, participants and pictures from the seminar:





# **VULNERABILITY AND LISTENING**



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## WINTER SCHOOLS

Since 2013, CRESSON's Winter Schools have taken the form of a week of research and practice to discuss and explore laboratory methods and concepts in their ability to provide answers to a specific subject related to the sound environment, its study and its transformations. For the three years of the B-AIR project duration (winters 2021, 2022 and 2023), the Winter Schools have been working and exploring on the B-AIR project general theme of listening to vulnerabilities. These intensive weeks have included seminars, round-table discussions, sound and space research and creation workshops, enabling the participants to explore and exchange ideas and creative contents on the subject.



# WINTER SCHOOL 2021:

## “Vulnerabilities and sounds, the experience of listening” (online)

### Grenoble (France) and Volos (Greece), January 18<sup>th</sup> to 22<sup>nd</sup>, 2021

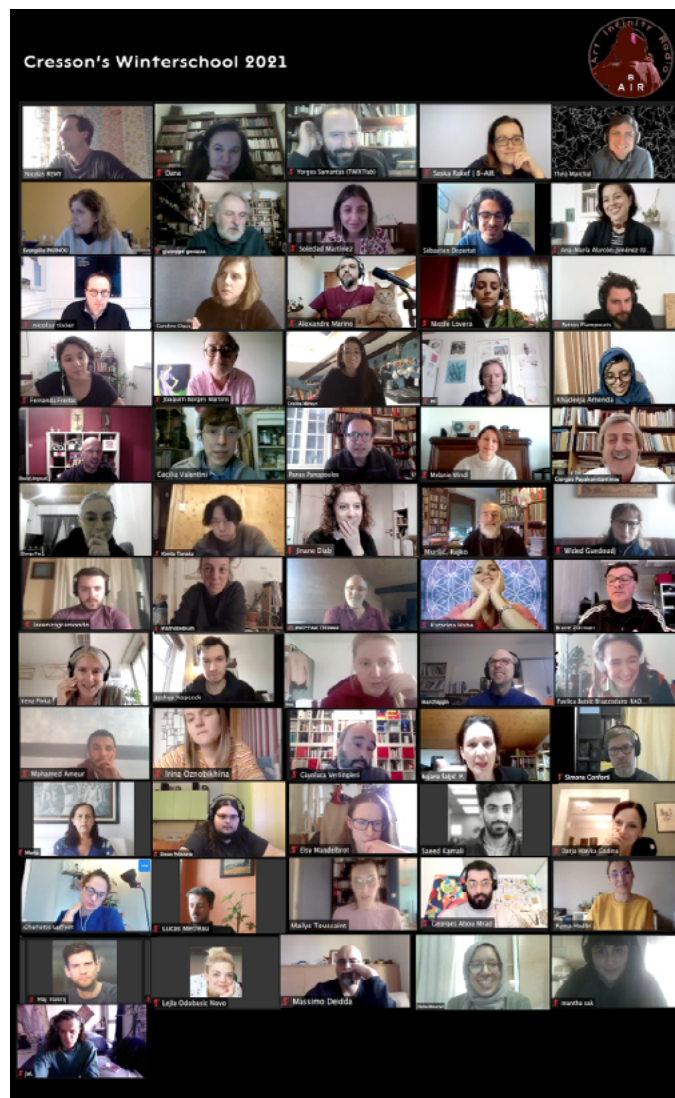
Because it was held during the COVID pandemic, all the lectures, events and workshops took place online due to the lockdown restrictions.

In a world where the immediacy of information as well as the quickness of actions have become the rule, it seems more and more challenging to take the time. The acceleration of lifestyles and ways of thinking has become a prerequisite for success. Nevertheless, in parallel with this fast-moving world, long-term issues are being increasingly neglected, creating social, environmental and spatial ‘vulnerabilities’. It is precisely at the intersection of these stakes that the question of ambiances and more particularly of sounds can appear as a catch. Listening to the environment – a gesture that may seem simple and insignificant – becomes a powerful tool for considering places and words at scales and temporalities that are difficult to reach with the visual. Sound is a medium intrinsically related to time, but also very capable of questioning scales that are often ‘left aside’ because they appear to be too obvious, too small or on the other hand too large. Therefore, sound could be considered as a lever for considering, questioning or reframing these issues.

To see the Seminar program: Winter School 2021 – Program & Team – *Le Cresson enseigne*



To listen to the podcasts from the lectures and to see pictures from the seminar:



Participants of the Winter School 2021 (online)



# WINTERSCHOOL 2021

ATTENDEES



1  19

Localisation of the Winter School  
2021 online participants (100 during  
the week)

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## WINTER SCHOOL 2022: “Sound spaces in waiting”

### Grenoble (France) and Volos (Greece), January 17<sup>th</sup> to 21<sup>st</sup>, 2022

“Listening to the world” can be seen today as a posture of scaling facing the usual frames of reference and allowing us to pay more attention to vulnerabilities: How does the world sound to our ears? How does it sound when we are children? How does it sound when our bodies suffer and age? How does it sound when our senses or our beings are ‘different’?

The 2022 edition of the Winter School proposed to the participants to think more precisely about the cultural and spatial dimensions of the perception of ambiances by working on ‘sound spaces in waiting’. As architects, urban planners, artists, designers, and also inhabitants, we all conceive and occupy the public spaces of our cities, and the landscaped spaces are often the sites of various sound practices: speech, musical listening, sports practices, walking, staying, meetings, etc.

How can we design public space and its furnishings to be less vulnerable? How can a public bench become a waiting sound space, ready to be activated by an individual (a hearing impaired person, a group, a child, etc.)? How can these urban objects be designed and constructed to provide multiple, sensitive and multicultural listening experiences? What kind of ‘sound spaces in waiting’ can be designed and built to give or bring attention to the vulnerabilities and pluralities of uses and spaces?

This Winter School continued the reflection carried out in 2021 around the general theme of listening vulnerabilities. It took place in parallel at the Ecole Nationale d’Architecture de Grenoble, and at the Department of Architecture of the Polytechnic school of the University of Thessaly in Volos (Greece).

The participants were invited to explore the fabrication of urban furniture and urban situations (benches, kiosks, urban carpets, sound installations, art practices) at the scale of the human body in movement, using the problematic around the listening (to listen, to feel, to understand and to be heard). It was chosen to work on sound spaces and sound places *for* and *in waiting* to echo the three categories of sound vulnerability, which were previously developed during the 2021 Winter School: social, spatial and environmental vulnerability.

The workshops took place from Tuesday to Friday on each site (Greece and France) and were punctuated by exchanges and remote presentations via ZOOM meetings in English. The workshops, held on both sites in parallel, ended with a time of hybrid presentations and exchanges between France, Greece and the remote participants, to share and discuss the productions.

### Volos Workshop:

The Volos workshop team consisted of 12 participants and several tutors. The participants were asked to design and construct a 1/1 scale structure (scale of the human body) at the end of the week. The workshop methodology was grounded in several theories and approaches that were introduced during the first two workshop days: ambiances theories and architectural design, design for people with specific needs, acoustics, vibrations and practical skills for human body design, wood properties and wooden construction skills. During the testing phase, along with hands-on experimentations, semi-empirical methods of sound evaluation and sound and design concepts were presented and discussed among the participants. Different design prototypes were tested by the participants, from morphology, potentials to create and material-wise. The designs were altered accordingly along the development and experimentation process. Several models and ideas were thus produced in order for the participants' team to agree upon and develop a final model that could be constructed on a physical scale (1/1).

### Grenoble Workshop:

The method involved a three-day period of intense reflection, design, sketching and fabrication of spatial devices and sound pieces. Participants had access to construction materials (wooden plates, organic wool) and sound tools (recorders, microphones, synthesisers, computers) for editing, transforming, generating and diffusing sound. The outcome was two built prototypes using sound as a material.

The first prototype focused on solid diffusion of sounds in urban furniture such as a bench de-



Winter School 2022 - The Bench

signed to allow different body postures and combined with several sound devices:

- a solid sound transducer for people using the bench in a lying position,
- indirect sound transducer through bones

when people lean on the bench, by using their arms to connect their body with the source of sounds, and

- low frequency vibration transducer through a seat attached to a wooden membrane.





Winter School 2022 - The Shell

The second prototype was a shell that allowed for varying degrees of isolation from the surrounding sound environment. It aimed to create a spiral space that constrained both the body and sounds, generating a gradation in isolation and absorption and limiting the number of people able to move inside the device: participants had to increasingly curl up to move forward until reaching the final point.

To read abstracts of the lectures:



To listen to the podcasts of the lectures:



To see workshop description and pictures (Grenoble):



To see workshop description and pictures (Volos):



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## WINTER SCHOOL 2023:

### “Density, intensity, diversity: How does the living sound?”

Grenoble (France), January 23<sup>rd</sup> to 27<sup>th</sup>, 2023

Aren't we a little too quick to associate density with sonority? If you take a closer look at this question, it's clear that architectural and urban forms offer a wide range of possibilities for users with very different sonorities. The back of a large building may be strangely quiet, while its street frontage is alive with traffic and shops; living on the top floor or the ground floor changes our perception of a place; from one apartment to another we experience sound proximity very differently, and, more generally and fortunately, the world around us can sound in a thousand and one way.

This Winter School was an opportunity to study, grasp and even experiment with these relationships between density and sound. Our starting point was the hypothesis that approaching our dwelling and its environment through sound would enable us to perceive and talk about density in ways other than a simple figure quantifying a ratio. This would enable us to grasp not only uses, practices and coexistences, but also materialities, spatialities and temporalities – in other words, the very essence of what helps characterise any urbanity.

To explore 'what it sounds like to live here', we explored different situations in the Grenoble metropolitan area, varying in their relationship to density. Between the *in situ* listening, interviews with inhabitants and sound recordings, the challenge of the workshops was to produce sound creations, representations, expressions or even projections imagined for the different situations studied.

The sites for this Winter school were chosen in collaboration with the Grenoble Region Urban Planning Agency (*Agence d'Urbanisme de la Région Grenobloise*), and the project was carried out in conjunction with IDHEAL, the Institute of Advanced Studies for Action in Housing (*Institut des Hautes Études pour l'Action dans le Logement*), as a part of its DESIR study program (*Density: experienced, desired, imagined, feared?*).


This Winter school brought together sound professionals with the Grenoble urban planning students and the students from the Cuneo Conservatory (Italie).

To listen to the podcasts and see contents, participants and pictures from the seminar:



# **HOW DOES THE WORLD SOUND?**

## **COMPOSING THE SOUND / WITH THE SOUNDS**





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## B-AIR DAYS

Experience and expertise from organizing the Winter Schools was transposed to open-end knowledge exchange and co-creation framework aimed at the B-AIR Consortium as well.

B-AIR Days was a program composed from seminars, workshops, concerts and installations, bringing together international partners from universities, radio and sound arts over exploring new theoretical, methodological and practical tools to promote listening as well as sound creation. Through the prism of ambiances, we questioned our inhabited and living spaces in the face of environmental and societal changes, and we were particularly interested in so-called vulnerable audiences (very young children, people with disabilities, the elderly and the sick, etc.).

The diversity of skills and backgrounds of the B-AIR Consortium members finds its common base in a shared interest in listening and paying attention to the world of sound; even more specifically, paying attention to the world of children and vulnerable people.

The agenda followed a successful format which was adopted in these face-to-face events: the mornings were dedicated to public lectures, presentations, debates and meetings, while the afternoons and evenings were devoted to field activities – research actions, workshops, performances – that also involved a wider audience. At the end, there was a rendering and documentation of the field activities.

# B-AIR DAYS 2022

## “How does the world sound? Composing the sound / with the sounds”

Cuneo (Italy), October 5<sup>th</sup> to 8<sup>th</sup>, 2022

Conservatorio di Musica G.F. Ghedini, Electronic Music Department METS

B-AIR Days in Cuneo were the bridge between two meetings organised by CRESSON, which gathered the B-AIR Consortium: the first one held in Portbou, Spain, a year earlier (27<sup>th</sup> September – 1<sup>st</sup> October 2021), and the one held in Cerisy, France, from 14<sup>th</sup> to 20<sup>th</sup> of May 2023.

The seminar in Cuneo, hosted by the Conservatory of Music, was an opportunity to involve the students (electroacoustic composition, sound engineering, pedagogy and music didactics) in some activities which were presented, tested and discussed in Portbou in 2021. The period between the B-AIR days (October 2022) and the workshop in Cerisy in May 2023, coinciding with the first semester of the 2022-2023 academic year, allowed for the organisation of some courses on the themes, offering to the students the opportunity to develop the concept for the TAROT performance that was elaborated, realised and performed in Cerisy and subsequently at the French pavilion in the Biennale di Architettura di Venezia (5 August 2023), as part of the artistic and educational activities of the Rifugio Levi-Molinari Retreat (10-11 August 2023) and which will also be included in the artistic season 2023-2024 program of the Conservatory in Cuneo.

The theme and the title of the B-AIR days held in Cuneo: “How does the world sound? Composing the sound / with the sounds” followed the thought of Jean-Claude Risset<sup>1</sup>: “One of my early desires as a musician was (...) to compose the sound itself, instead of merely composing with sounds”. Taking inspiration from this sentence, the CRESSON team worked to activate a *B-AIR Antenna* in Cuneo.

The *Antenna* is an agile media that can follow, shifting in time and space, the activities all along the B-AIR project developments. It has involved, as an active host, the METS (Electronic Music and Sound Engineering) Department of the Cuneo Music Conservatory, as well as local realities related with B-AIR themes.

The theme of composing music was a driving force, but certainly not the only one that fuelled the activities in these meetings: uniting under a common theme, the different skills, knowledge and interests of all B-AIR Consortium partners led to a broadened concept of ‘composing’ as an organisation of sounds extended to space design, and to the concept of ambience that is the meeting point for the network partners.

Involving experts and specialist departments of education, this process has been open to research and experimentation on sound and listening in the world of children and disabled and vulnerable people.

Following this thread in the three meetings which covered the time span of 18 months, local stakeholders and guests came across. Composers, musicians, architects, urban planners, university professors and researchers, philosophers, radio programme directors, theatre directors, neurologists, psychologists, all played a significant role in the meetings, as well as the Conservatoire and art school students who followed the didactic and pedagogical programme which focused synergistically with the themes.

This seminar, including guests, took place in 4 ways:

- Theoretical presentations or reports of experiences, in the morning,
- Small group working in the afternoon (writing, recording podcasts, walking, preparing sound installations, etc.),

<sup>1</sup> Jean-Claude Risset (1938-2016) was a composer, a pioneer of musical research, a founder of Music Research Center ACROE and initiator of the AST - Art Science Technology concept.



- Listening and discovery of sound installations at the end of the day or in the evening,
- A creative workshop with students from art schools (Annecy, Tours) and the Conservatory of Cuneo.

To listen to the podcasts and see contents, participants and pictures from the seminar:



B-AIR Days in Cuneo, Italy, October 2022





## B-AIR DAYS 2023

“How does the world sound to our ears and how might it sound tomorrow?”

Cerisy (France), May 20<sup>th</sup> to 25<sup>th</sup>, 2023

*Centre Culturel International de Cerisy la Salle*

How does the world sound to our ears and how might it sound tomorrow?

It's a vast question, but one that is unique among the disciplines, albeit transversal to them, that touches on the understanding and design of our inhabited spaces.

What does the soundscape of an urban space, a square, a hospital, a school, or the soundscape of a lake, a forest or a glacier, tell us? When do we really listen, what do we hear, and not only the inhabitants, but also the world of beings that we live in? What empathy with the world does sound convey, and how does sound affect and shape our ordinary practices?

Approaching our disciplines through sound, and therefore through listening, calls for a different relation to the materials of research, but even more so for sharing and debating them. It engages the participants to find a medium of communication and creation that reflects both the sensitive part of the world, and the debates that drive our research.

This multidisciplinary seminar has modestly set out to achieve this by sharing knowledge, experimenting with situations and creating sound.



The Agenda kept the schedule from the B-AIR Days in Cuneo, combining seminars in the morning, creative workshops on writing, recording podcasts, walking, preparing sound installations, etc. in the afternoon and concerts and presentations in the evening. It included the students from art schools in Annecy and Tours, the conservatory of Cuneo and the school of nature and landscapes of Blois.

#### Seminar Program

##### TUESDAY May 16<sup>th</sup>, 2023

###### **Seminar 1: The sound factory of imagination**

1. Giuseppe Gavazza: *The Castle of Crossed Destiny, call for the participative project*
2. Evangelia Paxinou, Petros Flampouris, Nicolas Rémy: *92,5FM*
3. Ona Ballo: *The heritage that remains. The sound space of the Romanesque churches of the Catalan Pyrenees*
4. juL McOisans, Cédric Pichat, Nicolas Tixier: *Radio Utopia – News from the World*

###### **Sound Installations and Performances**

Evangelia Paxinou, Petros Flampouris, Nicolas Rémy: *95.2 FM Sympathy Radio*

Sébastien de Pertat: *Losonnante*

###### **Shared Listening**

DJ: *TWIXTlab*

##### WEDNESDAY May 17<sup>th</sup>, 2023

**Working groups** (podcasts, B-air publication reporting, writing, walking, reading, etc.)

###### **Sound performance**

Thierry Mouillé: *ISS*

###### **Shared Listening**

juL McOisans, Cédric Pichat, Nicolas Tixier: *News from the World*

##### THURSDAY May 18<sup>th</sup>, 2023

###### **Seminar 2: The sound factory of imagination**

1. Helmi Järviluoma, Heikki Uimonen: *Where to go? New directions in studying sensory environments*
2. Lejla Odobašić Novo: *Sounds from Sarajevo siege*
3. Dana Papachristou, Georges Samantas, Petros Flampouris: *Tangible Radio – Haptic orientations on a deaf planet*
4. Sébastien De Pertat, Marc Higgin, Laïs Janvion: *Listening to the city between water, mountains, and industry: making sense of Grenoble and its hinterlands*

**Working groups** (podcasts, B-air publication reporting, writing, walking, reading, etc.)

###### **Sound Installation and Performance**

Cresson Team: *Les sirènes du Drac*

###### **Shared Listening**

*RTV program*

##### FRIDAY May 19<sup>th</sup>, 2023

###### **Seminar 3: The sound factory of imagination**

1. Théo Marchal, Nicolas Rémy: *Sharawadji*
2. Lolita Voisin, Olivier Gaudin: *Learning by sound, becoming landscape designers*
3. Perrine Poupin: *Ambiance of a country in wartime: An approach based on Ukrainian artists' works in progress*
4. Saška Rakef: *Symphony for babies and toddlers*

**Working groups** (podcasts, B-AIR publication reporting by BAZAART, writing, walking, reading, etc.)

###### **Sound Performance**

Cuneo Team: *The Castle of Crossed Destinies*

###### **Sound evening**

Organized by students (Cuneo, Tours, Annecy)

##### SATURDAY May 20<sup>th</sup>, 2023

General B-AIR Meeting about the research report, evaluation and dissemination.

To listen to the podcasts and see contents, participants and pictures from the seminar:



# **SYMPATHY RADIO**





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## 95.2 FM SYMPATHY RADIO

In order to tackle the issue of social, environmental and spatial *vulnerabilities* due to sounds, the architects, designers and artists of the B-AIR Consortium decided not to differentiate the populations which they addressed, considering the fact that we all, permanently or temporarily, have found ourselves in vulnerable situations, especially through sounds. Therefore, more general forms of vulnerability through ordinary and everyday listening situations have inspired our work of theoretical reflection on the design of spaces and sounds.

In this frame, an epistemological and ethical approach to the term 'sympathy' attempts to investigate the obvious relations that exist between vulnerability and sympathy of spaces and people. Designing spaces by creating ambiances through sympathy enables architects to overpass the empathetic identification and to be more in correspondence with the place.

More specifically, in architecture, the notion of sympathy is perfectly used to express the aesthetic relations of the correspondence between spaces, the ambiances that activate them and the feelings they provide.

What interests us in this term is the fact that sympathy allows us to put ourselves in the place of others and to tune in with the world in which we live, in infinite sensitive relationships.

The 95.2 FM Sympathy Radio is a methodological tool which uses radio waves to explore attentive listening to sound environments, reveal situations of vulnerability and promote common sympathy practices in the public space. In practice, two sound broadcasters record and transmit live their sounds (composition) on the 95.2 FM frequency to three listeners that are wearing bone conduction audio headsets. While walking, the listeners simultaneously hearing (naturally and by bone conduction) the surrounding sound environment and the sound compositions of the two sound broadcasters. The 95.2 FM Sympathy Radio emerges thus as a method and a tool between a sound installation and a sound performance, like a musical counterpoint between individual and collective soundscapes.



Sympathy Radio in Volos, Greece



## Sympathy Radio in Action



Sympathy Radio in the Castle of Cerisy, France, May 2023

We may say that the installation is incorporated into the performers. The broadcasters hold an antenna in one hand and the microphone-recorder in the other while carrying a radio transmitter in a small bag. The listeners are wearing bone conduction audio headsets and with their mobile phones they listen to the 95.2 FM radio station. Both listeners and broadcasters are moving in different intersected circular transmission zones

(with diameters that vary from 50m to 100m, depending on the build environment). So, the broadcaster becomes the antenna and the listener the headsets. The radiophonic electromagnetic waves connect the participants' sound worlds in an unexpected and playful way. Each one has to be very concentrated and sensible in hearing the sounds of their environment. For the broadcasters the goal is to compose their transmission sounds,

and for the listeners the goal is to perceive them, while they both move around in different transmission zones. The bone conduction audio headsets are perfect for that use because they simultaneously enable the immersive hearing through bones and the hearing of the airborne 'real' sounds through the ears.



For the listeners, this is clearly an opportunity to hear the sounds of the place like never before, through this co-presence of direct sounds and sounds transmitted by the radio. It's like seeing a place simultaneously from two different and distant points of view. The listener is confronted with small inconsistencies in the soundscape, which however do not create discomfort (feeling of being lost, assaulted by the sounds) but conduce to a playful state centred on what one listens to, according to one's position in the space. We then grasp all the sounds that we are not used to hearing (sound of footsteps on the ground, sounds of nature which are very often masked – insects, breeze in the leaves, birds). Listening switches constantly between hearing and listening; as to resume the words of Pierre Schaefer (*écouter, ouïr, entendre, comprendre*). We don't always understand what we hear, but the experience is often marked by surprise and joy.

For the broadcaster(s), it is a way of composing the sound world while s/he traverses it with the antenna and the microphone. Like any sound recorder, the broadcaster has the audio feedback on the sounds he transmits and he is responsible for his/her sound emissions. When there are not many sound events, the broadcasters feel disconnected, insecure and vulnerable. The absence of sound

"It is more like a process of sympathy between the participants and their sound environment."



"This dynamic hearing is reinforced by the affordances of the movement engagement of every living organism involved in the performance (people, birds, leaves, flowing water, sea waves etc.)."

events to transmit activates the need to create and produce sounds. Sounding the world is therefore a way to deal with the vulnerabilities of listening. The search for sound sources engages her/his body in motion with specific movements, sometimes small and delicate and sometimes fast and sharp, in order to bring the microphone closer to what she/he wants to offer for listening. The microphone body leans towards a source, rises in the air to capture the sound





Duration: 07:13

Created by Evangelia Paxinou, Petros Flampouris, Nicolas Remy for B-AIR



of a bird better; the broadcaster uses her/his feet to play with the materiality of the ground, grabs a stick or a metal rod to strike a wall or a metal pillar, etc. The broadcaster enters into an endless dance while he composes his sound production of events unfolding in front of him, to tell his story from a distance: he approaches a group, participates in their conversation, then moves away from it to hear better and make other sounds.

Using 95.2 FM Sympathy radio is therefore a listening game that enables us to hear the sonic world. It is a playful game where we can listen to our environment and be heard by it – a game of trying to enter into sympathy.

“M’akous?” (in the Greek language) or “Do you hear me?” (in English) is an original composition created from sound fragments recorded in situ using a portable transmission and receiving FM radio system (92,5 FM Sympathy Radio). The presented sound piece is composed as a musical counterpoint between individual and collective soundscapes experienced by the participants.

Sympathy radio is set (in 92.5 mhz) in radio receiver devices which enables the simultaneous hearing (though air-born and bone-conduction methods) of different and remote points of the same place, in real-time.

95.2 FM [Sympathy radio](#) was used by Evangelia Paxinou, Petros Flampouris and Nicolas Rémy to create a sound piece “M’Akous?” (*Do you hear me?*), that was played at 18<sup>th</sup> Venice International Architecture Biennale in August 2023, within the framework of the “*Radio Utopia, le bal des sonorités*” (dir. Carlotta Darò, Nicolas Tixier).

To listen to the sound piece “M’akous?”:



# **RADIO UTOPIA: NEWS FROM THE WORLD**





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# B-AIR PROJECT AT THE 18<sup>TH</sup> VENICE INTERNATIONAL ARCHITECTURE BIENNALE 2023

*Giardini della Biennale, August 1<sup>st</sup> to 5<sup>th</sup>, 2023*

B-AIR has joined forces with the French pavilion at the 18<sup>th</sup> Venice Architecture Biennale for a week of research and public creation. In an international public setting, this week was an opportunity to showcase work already completed, to produce new work and to invite a number of artists and researchers to it.

The Ball Theater's response to the "Laboratory of the future" theme, selected by Lesley Lokko, is a spectacular sound architecture emerging as an alternative space for reflection, and a laboratory of imagination and festivity. The theatre has the form of a light and modular sphere, conceived as a laboratory of identities. It adopts a poetic and utopian dimension that explores the notion of growth. It can be interpreted both as a foretaste of the future and as a multifaceted sphere that dramatises the interplay of sound, space and bodies. It becomes the arena for a monthly cycle of workshops-residences-events in which a multiplicity of voices and narratives took the stage, opening up the theatre to the world and its planetary challenges.

It functions like an echo chamber, resonating with topical issues around the fragility of the planet, our colonial heritage, our representations of identity and gender. It suggests a new approach to today's crises, based on questioning, letting go, seeking alternatives and building on different visions.

The party's not over!

# RADIO UTOPIA, *LE BAL DES SONORITÉS*

By Nicolas Tixier, AAU research unit, Cresson Team, ENSA Grenoble, and  
Carlotta Darò, LIAT research unit, ENSA Paris-Malaquais  
In collaboration with juL McOisans and Cédric Pichat, and the  
support of Marc Higgin, Sébastien de Pertat and Théo Marchal

During this week, the Ball Theatre was transformed into a veritable radio studio open to the public. Capturing and broadcasting different types of soundtracks, this radio antenna connects the radio theatre to numerous French and foreign partners, territories, institutions, researchers, artists and acousticians. Its programming was evolving throughout the week, with a series of live broadcasts titled “News from the world”, site-specific installations and the opportunity to wander around the pavilion’s interior and exterior spaces with mini sound speakers from all over the world, collected through a call for contributions. This sound laboratory offered an experimental platform to better grasp our times, learn to listen differently and make audible new voices from here and elsewhere.

As a part of the French pavilion represented by Muoto at the 18<sup>th</sup> Venice International Architecture Biennale 2023, we have launched a call for contributions to receive news from the world in the form of soundtracks lasting less than 7 minutes. By world news, we meant: News of place, News from the other, News from the future, News from the past, News of fiction, News from the spheres. Proposals could have been of any kind: creations, fiction, interviews, soundscapes, archives, etc.

Conceived as a receiving and transmitting antenna, the Ball Theatre, installed in the French pavilion, was opened up as a field for fictional experimentation, research and debate: a radio theatre.

This world news broadcasted as part of a science week – “Radio Utopia”. They were transmitted on individual small radio loudspeakers, which could be used by anyone in the pavilion’s interior and exterior spaces, as well as in the Ball Theater.

We received over 200 news submitted from all over the world. They were selected on the basis of their production quality and content, in line with the proposed themes. A veritable sound laboratory for the duration of the week, the French pavilion gave us a taste of what the world sounds like.

A subjective selection of some of the 150 “News from the world” chosen titles:

To listen to the “News from the world”:



“Mais où veux-tu aller pour être mieux?”

“Thé ou café: online, inlife”

“Cellular Xenospaces 41”

“Chrion.2060”

“Dérives: du globe au paillason”

“Électro faune”

“Gestures of thaw (supraglacial)”

“Induction Soundscape”

“e veux une ville nouvelle”

“L’effet Proust ou Le chant de Gaïa”

“Le Corbusier by the ear”

“Lockdown: A radius of one km in Marseille”

“New York Night Walk”

“Night atmosphere of the front-line city of Kharkiv”

“Nouvelles de la plaine”

“Puffs & Pings”

“Reprendre appui sur la terre”

“Rêve sonore de villes disparues”

“Réveil à Séoul”

“Scene of daily life in a lilong”

“Soudain, entre les murs, l’animal”

“The Rock Wall”

...





Ball Theatre, French Pavilion, Venice Biennale, August 2023. Photo by Schnepf Renou



## PROGRAM

Permanent installations  
(August 1<sup>st</sup> to 5<sup>th</sup>, 2023)



**News from the World,**  
Carlotta Darò,  
Nicolas Tixier

**Losonnante,**  
Thomas Bonnenfant,  
Sébastien de Pertat

**Radio Wega,**  
Giuseppe Gavazza,  
composer in collaboration  
with Alessandro De Cecco

**Trio,**  
Thierry Mouillé,  
artist

### TUESDAY August 1<sup>st</sup>, 2023

- 11h: Sound installation: *The Sirens of the Drac*,**  
Cresson Quintet, in collaboration with APNÉES
- 15-17h: Radio set: *L'écoute des mondes*: Perrine Poupin,** sociologist, AAU\_CRESSON,  
**Sabine Von Fischer,** historian and critic of architecture, **Marc Higgin,** anthropologist, AAU\_CRESSON, **Thomas Bonnenfant,** Nuit Architecture, **Sébastien de Pertat,** AAU\_CRESSON and PACTE.
- With recorded contribution from **Tim Ingold,** anthropologist, University of Aberdeen
- Sound piece: *DRUM*,** Sally Jane Norman, Te Kōkī - New Zealand School of Music, with Riki Gooch, composer
- Animation:** Damien Masson, Nicolas Tixier
- 17-18h: Listening session:**
- ***Vibroscapes*,** discussion with Meta Virant-Doberlet and José Lopez Diez
  - ***NIB*,** Slovenia, Department of Organisms and Ecosystems
  - ***Flee project*,** discussion with Alan Marzo and Olivier Duport
  - ***Welcome of the World - Movements II and IV - Courage and Critical Thinking*,** Irena Popović Dragović (BAZAART), B-AIR
- 18h: Sound performance: *Ubiquités*,**  
Cresson Quintet

### WEDNESDAY August 2<sup>nd</sup>, 2023

- 11h: Sound installation: *By heart, the sound that remains*,** Monica Fantini
- 15-17h: Radio set: *Le son qui reste*: Ona Balló,** art historian, **Monica Fantini,** sound author, "Ecouter le monde" Radio France Internationale, **Jean-Paul Thibaud,** sociologist, AAU\_CRESSON
- Followed by a tribute to **Sandrine Depeau: *Between the words of the brats***
- Animation:** Nicolas Tixier
- 17-18h: Listening session: *Là où chantent les palourdes*,** Didier Tallagrand
- 18h: Sound Performance: *Scanographic soundscape*,** Julien Clauss

### THURSDAY August 3<sup>rd</sup>, 2023

- 11h: Sound installation: *"Etoiles"*,** Nicolas Frize
- 15-17h: Radio set: *Utopian territories*: Marco Assennato,** philosopher ENSA Paris Malaquais/ACS.
- With recorded contributions from **Werner Oechslin,** art and architecture historian, ETH Zürich, **Ada Ackerman,** art historian, CNRS/THALIM
- Animation:** Carlotta Darò

- 17-18h: Discussion: *L'ouïe des villes*,** Pascal Amphoux, architect, AAU\_CRESSON, **Nicolas Frize,** musician and composer
- 18h: Sound performance: *Chemins de l'eau*,**  
Bernard Fort, composer and audionaturalist

### FRIDAY August 4<sup>th</sup>, 2023

- 11h: Sound installations: *Photosynthetic Beats*,**  
Ludwig Berger and Julian Sartorius; ***Lightning Ellipse*,** Raviv Ganchrow
- 15-17h: Radio set: *Sound futures*: Nadine Schütz,** (((Echora))), architect and sound artist, IRCAM-STMS, **Achilleas Xydis,** architect and sound artist, ETH Zürich, **Ludwig Berger,** landscape designer and sound artist, **Raviv Ganchrow,** architect and sound researcher  
**Animation:** Carlotta Darò
- 17-18h: Listening session:**
- ***Duo LP: Baby Blues*,** Nikoleta Dojčinović, B-AIR
  - ***On the planet...*,** TWIXTlab, B-AIR
  - ***M'akous? [Do you hear me?]*,** Evangelia Paxinou, Petros Flampouris and Nicolas Rémy, B-AIR
- 18h: Sound performance: *Echoes, effects and synergies*,** Collectif Cresson + guests)



## SATURDAY August 5<sup>th</sup>, 2023

**11h: Sound installations: *Espaces Matières: Horizons, Point d'orgue, Plage de la défense #2*, Nadine Schütz; *Resonant Spaces: Exploring Architectural Soundscapes*, Achilleas Xydis**

**15-17h: Radio set: *Sound, fiction, architecture:***  
Open stage, in the presence of **Gilles Delalex**, muoto architect, Fiction reading: **Armelle Le Mouëllic** (TVK), Sound piece: 28,000 m<sup>3</sup> of silence (excerpt), **Soline Nivet**, ENSA Paris-Malaquais architect and **Angélique Tibau**, director France Culture

With recorded contributions from **Bruther, List, Muoto, François Charbonnet Made in, Momoyo Kayjima Atelier Bow Wow, Kosmos, MBL, Luca Merlini, Philippe Rahm, Mio Tsuneyama and Studio mnm, Truwant+Rodet+**

**Animation:** Carlotta Darò and Nicolas Tixier

**17-18h: Listening session:**

- ***So Quiet - Symphonic work***, Larisa Vrhunc, B-AIR
- ***Sea - radio opera for babies***, Saška Rakef, Bojana Šaljić Podešva, B-AIR

**18h: Sound performance: *Tarots, Tetrapack+***  
(METS students from the Cuneo Conservatory) based on an idea by **Giuseppe Gavazza**



Radio set program at the Venice Biennale, August 2023. Photo by Nicolas Tixier

To see global programming:



To listen to the podcasts and see contents, participants and pictures from the seminar:



To see the publication:



To listen to the podcast:



# 'A'A'

L'Architecture  
d'Aujourd'hui

Numéro spécial / Special issue

fr / en

son, fiction, occupation  
sound, fiction, occupation



Pavillon français, 18<sup>e</sup> exposition internationale d'architecture, Venise 2023

## LE BALL THEATER

Carlotta Darò,  
Nicolas Tixier,  
"Sound, Fiction,  
Occupation",  
The Ball Theater,  
Architecture  
d'Aujourd'hui,  
Numéro special /  
Special issue,  
p. 66, 2023





# RADIO UTOPIA

## 150 News from the World

Paris, “City of Architecture”, October 14<sup>th</sup> to 15<sup>th</sup>, 2023

After the Venice biennale, CRESSON has been invited to Paris, to the “City of Architecture”, to present their work during the open weekend of the “National Architecture Days”.

The “City of Architecture” hosted the Ball Theatre event held at the French Pavilion of the 18<sup>th</sup> Venice Architecture Biennale in August 2023. Architects, acousticians, artists, sound designers and researchers responded to a call for ‘news from the world’ with sound compositions lasting less than 7 minutes. The audience could sit back and listen for as long as they liked to these unusual, soothing, intimate and surprising recordings that permeate our daily lives and our imaginations.



“News from the World” at the “City of Architecture”, Paris, France, October 2023

Nicolas Tixier, Ph.D.

Professor, Director of the CRESSON Team  
Ambiances Architectures Urbanités research lab, ENSAG,  
University Grenoble Alpes, France

[Nicolas.Tixier@grenoble.archi.fr](mailto:Nicolas.Tixier@grenoble.archi.fr)

# HOW DOES THE WORLD SOUND? SOUND EXPERIMENTS AND PUBLIC COMPOSITIONS

**18<sup>th</sup> Venice International Architecture Biennale 2023**  
*Giardini della Biennale, August 1<sup>st</sup> to 5<sup>th</sup>, 2023*

CRESSON is for many years naturally connected with artistic practices involving sounds & spaces, but most of the time as an observer of social situated phenomena. The B-AIR program gave us the opportunity to develop this artistic dimension in a more active way – by inviting some artists to propose a presentation of their current works related to the thematics of the research, but also by arousing experiments that question the porosity between artistic and scientific fields and their mediation.



Nicolas Frize, the invited artist to the Venice Biennale, August 2023

**Giuseppe GAVAZZA, Ph.D.**

Composer, Professor, Researcher at the CRESSON Team  
Ambiances Architectures Urbanités research lab, ENSAG,  
University Grenoble Alpes, France

[giuseppe.gavazza@grenoble.archi.fr](mailto:giuseppe.gavazza@grenoble.archi.fr)

**Alessandro De Cecco, Ph.D. student**

Independent musician and researcher,  
Member of the APNÉES association

<https://adececco.wordpress.com/>

## RADIO WEGA

Radio Wega: B-AIR is an old valve radio I inherited from my grandmother. When someone approaches it, it turns on and transmits radio broadcasts from the years gone by. Radio Wega is a modified analogue-digital hybrid radio: instead of scrolling through radio wave frequencies, the tuning knob controls a scan between recordings of radio broadcasts of different periods, collected in a playlist arranged chronologically following a palimpsest. Radio Wega: B-AIR navigates through the waves and becomes a sonic time machine.

As a site and time-specific installation, Radio Wega is a prototype that will be designed in specific variations. This version, Radio Wega: B-AIR, features 120 snippets of radio broadcasts, year by year, from Guglielmo Marconi's first broadcast in 1901, to my own field recording of a portable radio, recorded on January 31<sup>st</sup> 2020 in Tissardmine, Moroccan Sahara, in which the news report announces more cases of Coronavirus in China.

Radio Wega measurements: height = 40 cm,  
width = 60 cm, depth = 25 cm

To listen to Radio Wega:



Radio Wega installation at the Venice Biennale, August 2023



## LOSONNANTE Sound installation

'Losonnante' – title composed from French words "L'os", the bone, and "sonnante", sounding – is a listening device that uses the capacity of a bone to conduct sound. To listen, you have to cover your ears, resting your elbows on the vibrating surface. It is an invitation to listen differently, in resonance between the body, the object and the sounds. In a sense, Losonnante is a moment of silence, a pause: plug your ears, close your eyes and let the sound find a way through your arms, your hands. No Hi-Fi sound here, but vibrations and distortions; a new ear tending to the living sounds that surround us.

Following artists such as Laurie Anderson, Marcus Kison or Pascale Criton, among others, the idea of this installation was to challenge our perception of sound by listening through the solids, using our elbows, arms and hands as headphones. This device is also meant to investigate about and to question our relations to public spaces and living environments through sound and listening.

All the compositions played on Losonnante are by Knud Viktor (1924-2013), a Danish artist who lived for almost 50 years in the Luberon, in the south of France. As a painter, he moved to this region to find the light of Van Gogh's works; he was drawn to the sounds and vibrations of his environment and became what has been called a 'painter of sound'. Always working with



Losonnante at the "Lydmaler Knud Viktor" exhibition in the ARoS Museum, Aarhus, Denmark, April 2021.  
Photo by Sébastien De Pertat

very rudimentary equipment, often of his own making, Knud Viktor deployed a very meticulous and attentive form of listening to the living world around him. His compositions are a testimony to this sensuous relation between the artist and his milieu.

Losonnante was created by Thomas Bonnenfant and Sébastien De Pertat and developed in AAU\_CRESSON and Pacte laboratories in Grenoble in 2019 and 2020.



It was supported by the Institute of Humanities and Social Sciences (InSHS) in the French National Centre for Scientific Research (CNRS).

### Losonnante in different contexts and exhibitions

With the support of the B-Air project, Losonnante has been taken to ARoS Museum in Aarhus, Denmark, in April 2021, to the Castle of Cerisy in France, in May 2023, to the 18<sup>th</sup> Venice International Architecture Biennale in August 2023 and to Paris for the “City of Architecture”. To each of these installations, the work of Knud Viktor was displayed. Even though the same sounds were played, it would each time be listened differently, depending on the milieu where the object was taking place: a post-Covid spring in a public museum; a sunny week in a castle park; a crowded pavilion in an international exhibition.

The other reason why we chose Knud Viktor’s work to listen through Losonnante is because it is one of the greatest listening experiences we made with this device. Through Losonnante, we had a new ear given to those pieces, while totally shifting the listening experience: going closer and deeper into the movements of the sound created by Knud Viktor (the small drop of the water, the rumble of the falling rocks, the humming of a bee...).

We were therefore invited by associations AUT and Allô la Terre for an exhibition around Knud Viktor’s work in ARoS Museum, one of the major art museums in Northern Europe. The exhibition took place in April 2021; however, due to sanitary restrictions at that moment, preventing the audiences to attend the event, the second exhibition period was proposed by the museum, for July 2021.



Losonnante in front of the Castle of Cerisy, May 2023. Photo by Sébastien De Pertat

Losonnante was part of the exhibition with two other installations: a human-sized owl nest, playing a Knud Viktor’s piece about a small owl called “Le petit Duc”, and The Bamboos, a sound installation created by Knud Viktor himself, that he displayed at “the planetary garden” exhibition (*le jardin planétaire*) by Gilles Clément, in La Villette, Paris (1999).

A specific time was designated for groups of children at the exhibition, enabling them to discover the ‘sounds of nature’ as heard by Knud Viktor, and to experience different types of listening (with Losonnante, the Nest and The Bamboos).

In Cerisy and Venice, we continued to share this encounter between Knud Viktor’s work and Losonnante device, and explore how each offers a new listening to the other. Each installation was the occasion to experiment with different conditions – in terms of spatiality, scenography, sonic environment and specific audiences (occasional experiences with children or deaf people, for example).





Losonnante and Radio Wega, Venice Biennale, August 2023.  
Photo by Manon Genet





Losonnante, Venice Biennale, August 2023.  
Photo by Nicolas Tixier





Losonnante in  
the Salle de la  
coupole, "City  
of Architecture",  
Paris, France,  
October 2023.  
Photo by Cédric  
Pichat

## TAROTS

### Tetrapack+ / Students from the METS, Conservatory of Cuneo, based on the idea by Giuseppe Gavazza

“Tarots” is an electroacoustic composition created by five students from the METS (Electronic music and sound engineering) department of the Cuneo Conservatory, each bringing with them a wealth of experience and different musical tastes. It was performed and presented as an interactive improvisation system built during a stay organised at the Château de Cerisy.

The experience came about as part of an electronic music composition course conducted by Giuseppe Gavazza with these five students and was inspired by Italo Calvino’s book “The Castle of Crossed Destinies”. The week at the Castle of Cerisy, in the framework of the B-AIR international seminar “How Does the World Sound” in May 2023, created the opportunity to design and realise a collaborative project open to all seminar participants: some 50 people from different countries, languages, cultures and experiences crossed their destinies in this magnificent castle.

The tarot cards, which are at the narrative heart of this book, were taken as the core of the performance. In the novel, the use of tarot cards is made necessary in order to communicate in the castle

between travellers who are inexplicably unable to speak: given the theme of the seminar and the skills involved, for all of us participants who deal with sounds, voices, radio broadcasts, listeners (Walter Benjamin’s “Dear Invisibles” radio listeners) of the preverbal age of language and vulnerability, it has been an inspiring challenge.

The system resembles a game but is inspired more by tarot card reading, through associating sounds to the cards of the Major Arcana and elaborating improvised and performative sound events. It also seeks to move away from the frontal realisation of a concert, with the performers surrounded by the audience like an island, and involving spectators/listeners who can interact with the musicians through the tarot cards gameplay.

On the first day of the seminar, we presented the project in more detail. In the meantime, we had prepared a series of 50 short sounds (lasting between 5 and 10 seconds) to be proposed in listening sessions (via headphones or portable loudspeakers) open to anyone, and during which:

- we selected 22 sounds,
- we associated them with the 22 Major Arcana cards (taking as reference the ‘Tarot de Marseille’, the same as used by Italo Calvino),
- we associated with the same (inverted) Tarot processes of musical composition and performance,
- we established operational procedures to achieve a performance that we have conceived and rehearsed daily.

This performance was concluded on the last evening with the tarot cards which were chosen and proposed by the audience to the musicians who performed in the centre of the hall.

To listen to the Tarots:







"Tarots", Venice Biennale, August 2023.  
Photo by Nicolas Tixier

## IN BETWEEN KIDS WORDS

### An audio analysis

During the research action program “ANR Mobikids” founded by CNRS, children took part in the in situ ‘commentary walks’ which were recorded and transcribed for analysis. The question then arose: What else is there in these recordings that could not be transcribed? The result is an analysis ‘by ear’ of what we hear between and beyond the words: the tonalities of expression.

A part of the methodology was based on the “Commented city walk” developed by Jean-Paul Thibaud and revised here with children. Thus, with children who consented, the procedure consisted of collecting children’s voices and photos (video-recording in the second year) taken by them during the commented walk made in a familiar context (their ordinary school-home travel). More precisely, this was to make the return journey from school and to ask the kid to describe his/her perceptions, sensations and other observations along the way. This walk and comments were recorded *in situ*, then transcribed to help with the various forms of analysis afterwards. Mainly 7 categories of the sonic material shared by children participants can be described: relationship to the environment, interaction with the interviewers, melodic voice expressions, monosyllabic expressions, hesitations, speech adjustments and verbal expressions.

But, as a matter of principle, the transcriptions only preserve what is expressed in the order of speech, while the children’s expression is much richer and more subtle than the simple words they use. They expressed themselves through the voice, its intonations, its rhythms, its hesitations or silences sometimes; expression is in the relationships that we hear between the child walking and the sounds of the environment, or the interviewer who accompanies and questions them.

To listen to the city walk:



# **PUBLIC CREATIONS AND INTERVENTIONS AT THE 18<sup>TH</sup> VENICE INTERNATIONAL ARCHITECTURE BIENNALE 2023**

as part of the French pavilion / Ball Theater /  
*La fête n'est pas finie* "Radio Utopia",  
*le bal des sonorités*

*Giardini della Biennale, August 1<sup>st</sup> to 5<sup>th</sup>, 2023*



# SOUND VOLUMES

## Public creation

August 1<sup>st</sup> to 5<sup>th</sup>, 2023

By Julien Clauss, artist invited to Venice

Some of formal references evoked by the Ball Theatre's cut-out metal sphere led to sound experiments *onsite*.

Taking inspiration from acoustic radar, a half-sphere was used as a sound diffuser. The layered metal structure was employed for its diffraction qualities. A liveable mirror ball, the Ball Theatre installation also hosted a "constructivist" DJ set in which the records were replaced by physical volumes with different textures. From the concave hull of the theatre to objects hijacked by a laser, these performances and installations explored processes of sound creation in relation to volumes and architecture. Finally, the installation of radio devices producing an interaction between the private sphere of listening and the shared space of the theatre opened up a choreographic movement of the random and undirected audiences.

### Gradient

A harmonic noise emerges from silence. The sound is projected by a loudspeaker towards the heart of the Ball Theatre, which reflects and diffracts it throughout the pavilion. The volume of this resonant framework increases steadily, gradually overpowering the conversations, until it reaches a pitch that saturates the acoustics and mantles the pavilion in a dense, opaque calm. At its climax, the

noise stops abruptly. In an instant, the short reverberation of the space is heard, exposing its architectural essence. The sound of the air-conditioning is defined, and the interior is once again coloured by the murmur of flying insects. In less than a minute, the sound space has been saturated and then brutally emptied of its content, revealing the acoustic signature of the building. The room can be played ad-lib.

### Contour

Three turntables are equipped with a laser sensor. Objects – geometric shapes, micro-architectures, abstract sculptures – measuring around twenty centimetres, are placed on the turntables and rotated. Each laser works like a reader head, scanning the contours of the objects. Interpreted by a synthesiser, this signal sculpts the sound. Its dynamics, frequency and timbre are entirely determined by the profile of the objects. The synthesis created incorporates elements from minimalist and improvised music, resulting in visible and audible abstract patterns that can be harmonic or noisy.

### Micro Radio

A low-power FM transmitter relays the radio programmes held each day in the Ball Theatre. Radio sets scattered in and out of the pavilion make it

possible to follow the exchanges by choosing the place and atmosphere in which to listen.

The discussions from the pavilion emerge in radio ether that can be traversed as listeners and radios move about.



Julien Clauss, sound performance. Photo by Manon Genet



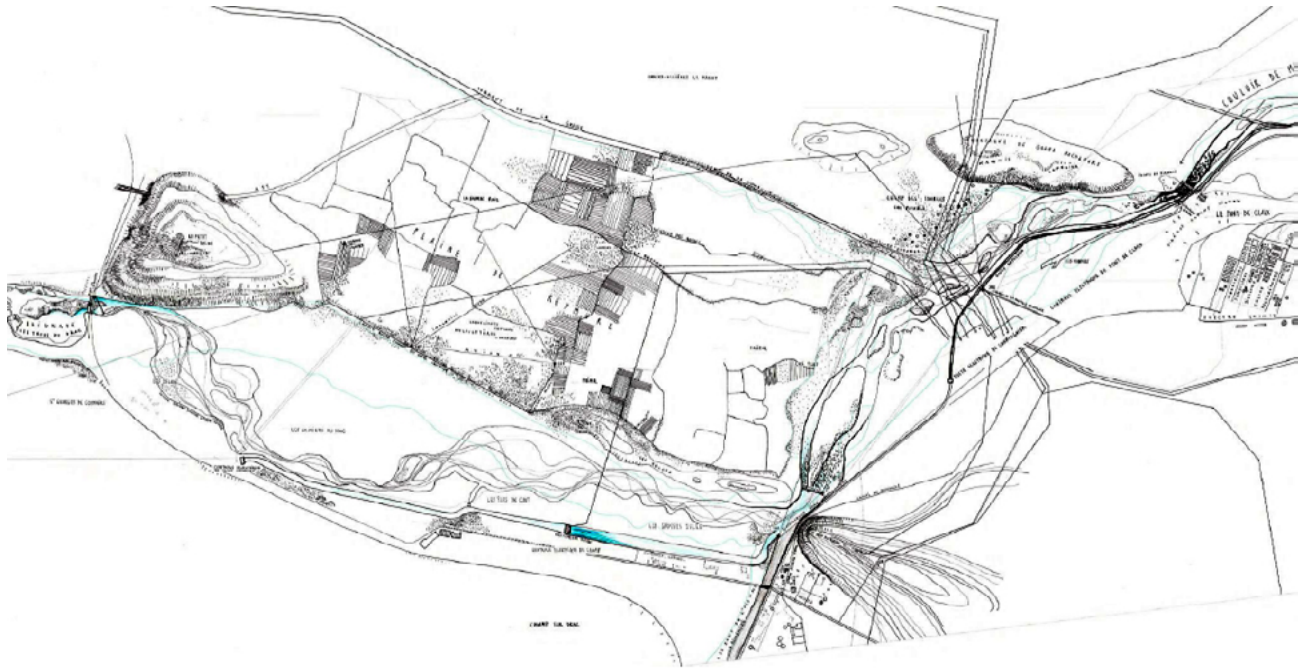
## Public creation

## August 1<sup>st</sup> to 5<sup>th</sup>, 2023

**Marc Higgin, Théo Marchal, juL McOisans, Cédric Pichat**

*By the river Drac, to the south of Grenoble, sirens are wailing, reverberating off the mountains. Emergency drills in case of the failure of dams upstream, or accidents in the neighbouring chemical plants, these sirens reveal a territory criss-crossed by industrial infrastructures, threaded – through air and water – to the lives of half a million of inhabitants.*

This project focuses on the industrial neighbourhood south of Grenoble. This is a small area of a few kilometres in diameter, where the valley is bordered by mountains from all sides, with two rivers flowing through – the Drac and the Romanche – that have shaped the course of Grenoble history: Grenoble Malheureux. Controlled and canalised, these unpredictable waters have been the motor of the city's modern history: as material resource, as energy. With the invention of hydro-electric turbine at the end of the 19<sup>th</sup> century, the territory became one of the centres of France's second industrial revolution: paper, cement, carbide, aluminium, silicon, chlorine and derivatives – that set the stage for the singular knot of industry, science/engineering and military, that characterises this territory in 20<sup>th</sup> and 21<sup>st</sup> centuries.



Location: Saut du Moine waterfalls, France. Map by Ingrid Saumur



Every three months, all the emergency sirens in the area sound for an alarm drill. At that moment, they make tangible the fault-lines that run through this area: the whole of the Metropole is revealed as a potential disaster zone – due to accidents of fall-out in the two vast chemical platforms, and the collapse or malfunction of a dam in the rivers, making the Metropolis become a vast potential flood plain.

In June 2022, we recorded the sirens in seven different locations, then used the recordings as the basis for a multi-channel sound installation that re-presented and re-sounded the area. In 2023, we re-recorded the sirens *in situ*, with musicians from the APNEE collective, who produced a collective – but dispersed – electroacoustic improvisation.

This installation is an invitation to listen to these sirens in a different way, to question the territories they compose, with its transient boundaries dictating which spaces are forbidden and which are permitted. Beyond instilling 'good reflexes' and expected behaviour, what is the sonorous geography revealed by these sirens?



Marc Higgin and Théo Marchal, "The Sirens of Drac River". Photo by Nicolas Tixier





Radio Utopia, Venice 2023, "The Sirens of Drac River" (*Les sirènes du Drac*), AAU\_CRESSON, Photo by Manon Genet



# NO ONE CAN GET USED TO IT

## Ukrainian Soundscapes in Wartime

### Public intervention

August 1<sup>st</sup> to 5<sup>th</sup>, 2023

By Perrine Poupin (AAU\_CRESSON)

For the past fifteen years, I've been using an ethnographic approach to study planning and environmental conflicts in Russia, Ukraine and France. Ukraine's soundscapes have changed considerably since the country was invaded by Russia. These transformations encompass different sensitive experiences of the destruction of urban landscapes, territorialities, cities, neighbourhoods, habitats, historical and cultural heritage, environments and ecosystems. Andrii Nidzelskyi, a Ukrainian sound engineer with whom I've been collaborating for several years, recorded sounds in various inhabited spaces. In these sounds, artillery fire and impacts resound amid bird songs, dog barks and 'concrete sounds' such as natural phenomena and the sounds of everyday life. Air raid sirens and ambulance sirens feature regularly. Certain sounds are rare. In bombed-out areas, the sound of traffic jams, crowds, and city noise is a thing of the past. War has created an anguished 'silence' everywhere.

Sounds are at the root of many accounts of the war experience in Ukraine. They also have an insidious physical and psychological impact on people. In February 2022, people were terrified by warning sirens and instantly dropped to the ground.

Today, they react with much more restraint, quickly 'reading' the threat level from the sounds. They have learned to distinguish the 'subtleties' of the air-attack warning system. Anxiety also evolves. Silence, too, hides traumatic experiences. On the battlefield, silence is literally the calm before the storm. Soldiers know how to analyse the source and intensity of bombs and artillery. When silence reigns, anxiety sets in. You don't know what's going to happen next.

These juxtapositions of noise and silence reflect the paradox of the war experience. On the one hand, the eerie silence, on the other, the cacophony of warfare. These war-related sounds and disturbances have become a normal part of life in Ukraine for over a year and a half. These experiences affect people's health and well-being. Countless testimonies assert no one can get used to it. The purpose of Russia's actions in Ukraine is to incite terror and instil fear in the population.

To access the Radio Publication  
in Radio France International:



# THE SOUND THAT REMAINS

## The Forgotten Atmosphere of Romanesque Churches

### Public intervention

August 1<sup>st</sup> to 5<sup>th</sup>, 2023

By Ona Balló Pedragosa (AAU\_CRESSON)

Studying the sounds of the past means taking an interest in a material that no longer exists, reconstructing traces, testing hypotheses, but also allowing for interpretations. The 'divided heritage' of the Romanesque churches in the Catalan Pyrenees prompts the inquiry of work decontextualisation, atmospheric fragmentation, and historical evolution through an *in situ* return that primarily stimulates the senses as a cognitive instrument.

Many churches and hermitages dating back to the 11<sup>th</sup> and 12<sup>th</sup> centuries can be found in the valleys of the Catalan Pyrenees. Filled with murals, music, words and silence throughout their history, they are now mostly closed. At the beginning of the 20<sup>th</sup> century, to limit sales to North American art collectors, measures were taken to remove the murals. Transported from the mountains to the regional capital, they were then permanently installed in the National Art Museum of Catalonia. While the fresco paintings may have been moved, the world of sound that once enveloped them is still present on the sight.

These churches have a history of practices that originate from a tradition that is both Christian and pagan, providing space for prayer, refuge, and entertainment. The murals show a close link with the sound practices of the place. For example, the iconography of the church of Sant Joan de Boí features a juggler playing a stringed instrument, while the paintings of Sant Romà de les Bons show figures reacting to the sacred message through their exaggeratedly visible ears. The frescoes at the bottom of the walls, depicting backdrops for liturgical dramas, are also in question. But what sound space did these images bathe in?

Today, the artistic value and heritage significance of these murals are unanimously recognised, but this does not prevent most of the churches that house them from deteriorating and ceasing to have any activity that brings them to life. And yet their acoustic qualities are obvious when voices or music are heard there again. If today the issue of returning the murals is not currently relevant due to potential conservation risks, how can we bring this 'divided' heritage to life, if not by activating its sensitive part and its eminently narrative dimension?

The idea is to restore meaning to these churches through the historical, geographical and societal paths that link them to their fresco paintings. We're operating under the premise that sound and walking are potent sensory experiences for comprehending this heritage, and envisioning modern creations<sup>1</sup> to forge fresh connections.

<sup>1</sup> For example, the work of musician Arnau Obiols in the churches of Sant Pere and Sant Pau de Esterri de Cardós and Santa Maria in Ginestarre, during one of our research visits.





Field recordings,  
Ginestarre, Spain.  
Photo by Balló  
Pedragosa

# RECORDING “THE SOUND THAT REMAINS”

## Recorded public intervention

August 1<sup>st</sup> to 5<sup>th</sup>, 2023

By Tim Ingold, anthropologist, University of Aberdeen

Interview by Peter Loovers, adapted by Marc Higgin

If you ask a physicist, they will tell you that sound consists of mechanical, longitudinal waves conducted through a medium, such as air, and that these waves travel from a vibratory source to a recipient – to your ear, for example. In this physical sense, sounds can exist regardless of whether any ears are around to pick them up. Sound is simply mechanical vibrations conducted through a medium within a certain range of wavelengths.

Ask a psychologist, however, and they might give you a different answer. They might insist that sound is what *we hear*. It's something we register within our own minds on the basis of an input of sensory data from the ears to the brain. Sound is registered in the brain; it is not something out there in the world.

So, we seem to be faced with a choice between two senses of what sound could be: it is either a purely physical phenomenon or a purely mental phenomenon. But both answers depend on our making a rather rigid distinction between the physical world *out there* and the mental or psychological world *in here*; as though there was a fundamental boundary between mind and world.

But this, I would argue, is not how it is in our experience. And sound, first and foremost, is a

phenomenon of experience; it is something we become aware of. When we're listening to sound, in a sense we're hearing our own awareness of it. Here, sound and hearing become one and the same. In this regard, hearing is not an inner mental sensation but something that happens when the boundaries between mind and world dissolve.

Philosophers often present us with a kind of thought experiment which goes like this: Suppose a tree falls in a storm and lands on the ground with a great thud. The question is, would the falling tree make a sound if no one is around to hear it? Following the schema outlined earlier, the physicist would, of course, say 'yes' – it makes a sound because waves are emitted; while the psychologist would say, 'no' – it doesn't make a sound because there's nobody, no mind, to pick it up and process the waves as sound.

But what if, instead of conducting this rather abstract thought experiment, we imagine that we're actually out there in the forest with a storm raging, and a tree falls. In the moment of the tree's falling, we are completely caught up in the event, even if we had no wish to be. When it falls, we feel the rush and thud in our guts, we feel this tremendous sound, it overwhelms us as though we and the tree

were, for a moment, bound together in this extraordinary event. It's not as though the tree emitted the sound as a package of information which then travelled through the air and arrived at our ears, and we thought, "Oh, that must be a tree falling." It is, rather, that in hearing the sound, we become participants in the event itself – an event that carries on with a duration of its own, in the real time of our experience.

So we have to distinguish between two senses of sound, or, if you will, *two lines* of sound.

First, there's the line of transmission that connects the source to the recipient. We might draw it as a straight line from one to the other, while noting that it takes a certain amount of time for the sound waves to travel the distance, a certain amount of time to be processed by the ear and sent to the brain, and so on. But that's one kind of sound-line. The other kind describes the actual evolution of the sound in your own awareness, in your consciousness. And that's the line of sound I'm interested in – a line that describes the sound that arises when our own awareness meets and mingles with the real-time unfolding of a cosmic event.



Following this line, I would say that sound is neither physical nor mental, but *atmospheric*. So, let's treat sound as a phenomenon of atmosphere, as the underside of our own experience of hearing.

What does this mean for our understanding of the ear and of the body? We can no longer think of the ear simply as a receptor organ that is picking up signals from a source and sending them to the brain for processing and interpretation. Rather, the ear signifies the attentiveness of an entire body that is, so to speak, on aural alert – alert to everything going on around in your surroundings. So instead of being a body with ears, it becomes something like an ear-body. The whole body becomes an antenna that is reaching out and attending to this unfolding of the events in the storm that is going on around you. That means we have to think of the body less in anatomical terms than as something like a bundle of affects.

Take that famous episode in Shakespeare's play *Julius Caesar*, where Mark Antony makes a speech. He gets up on the podium and declares, "Friends, Romans and Countrymen, lend me your ears." Obviously, he doesn't mean that everybody should cut their ears off and give them to him! What he means by "lend me your ears" is "please give me a voice." That is, "when I open my mouth to speak, let it be heard." In lending their ears, Mark Anthony wants those people in the audience to stretch out their aural attention towards him so that he can have a voice, so that it may be heard. And I think there's something very fundamental about this because it shows that we're not just consuming sound, picking it up and interpreting it; we're complicit in its very production. But more than that, by attending to the world that surrounds us, by lending our ears to it, we are actually giving that world a voice.

Thus, when we listen to the sounds of nature, it's not a way of our taking possession of the world. Rather, it is the way in which the world itself takes possession of us. And in doing so, it allows us to lend our own ears to what is going on and, in that way, to give nature itself a voice. If we go back to that tree falling in the storm: the tree, of course, doesn't have a voice of its own; it doesn't have vocal cords; it doesn't have ears. It's just a tree. But in lending our ears to the tree as it falls, we give it a voice that it wouldn't otherwise have. And I think this is really where the true meaning of sound resides. Sound is the way in which, through attending aurally to the world around us, we become possessed by it. And paradoxically, through becoming possessed by it, we give the world a voice so that it can speak to us.

# “ETOILES”

## Public creation

August 1<sup>st</sup> to 5<sup>th</sup>, 2023

By Nicolas Frize, artist invited to Venice

But human perception, with its irrepressible appetite for poetry, unity and contemplation, will grant the celestial dome the status of a landscape! Here, of course, acoustics help the sound sources to blend and compose themselves, yet they always remain distinct and distant sources! The limits of the composer's dream of atmosphere and homogeneous space are undoubtedly the loudspeakers... so he resigns himself to a polylogue, calling on the walls for help whenever he can.



Nicolas Frize, sound and notation creation. Photo by Nicolas Tixier



# BY HEART, THE SOUND THAT STAYS

## Public creation

August 1<sup>st</sup> to 5<sup>th</sup>, 2023

By Monica Fantini, RFI, artist invited to Venice

For the past ten years, Monica Fantini has been offering the listeners of the Radio France International the chance to hear the world differently, using the words and sounds of everyday life. For the “*Par cœur – Le son qui reste*” series of programs, she has taken an interest in what we are capable of reciting ‘by heart’, those fragments that constitute living archives of what we retain of the world, whether voluntarily or not. She shares with us words, poems, lullabies, slogans and songs that have escaped oblivion, collected from people of different languages, backgrounds and ages, evoking the context and memories they resurrect... What is our sound memory made up of, and how does it shape us? Assembled and interwoven, these memories compose a sound mosaic of the world’s memories, for a spatialised and immersive listening experience, orchestrated by RFI Labo, as part of “Radio Utopia”. The installation “*Par cœur – Le son qui reste*” consists of seven episodes of “*Ecouter le monde*”: *La langue perdue* (with Léa Seide, student); *La chambre noire* (Christophe Rosenberg, musician and composer); *La phrase inoubliable* (with Gérard Thérue, baritone); *L’absurde* (Jordan Sibeoni, child psychiatrist and writer); *Mémoire Palace* (Violaine Lochu, artist and performer); *Le poème en grec* (Ephie Raikopoulou, literature teacher); *Le mystère* (Isabelle Le Gouic, lover of words and sounds).



Monica Fantini,  
sound installation.  
Photo by Nicolas  
Tixier

# WHERE THE CLAMS SING

## Public creation

August 2<sup>nd</sup>, 2023

By Didier Tallagrand, artist invited to Venice

Readings set to sound with excerpts from texts by:

Chen Fou, "Six souvenirs of a floating life"

Tim Ingold, "Walking with dragons"

Samuel Beckett, "*Mal vu mal dit*"

Lucretius, "The nature of things"

Raymond Queneau, "*Les fleurs bleues*"

Henry D. Thoreau, "Walden"

Elisée Reclus, "Story of a brook"

Kenzi Miyazawa, "Snow crossing"

René Char, "*Les matinaux*"

Alain Mons, "*Le bruit-silence*"

Augustin Berque, "The reasons for the landscape"

Philippe Bonnin & Nishida Masatsugu,

"Vocabulary of Japanese spatiality"

& Various excerpts from Jim Harrison's superb novels.



Didier Tallagrand,  
sound creation.  
Photo by Manon  
Genet



# HEARING OF CITIES – STORY OF A PUBLIC LISTENER

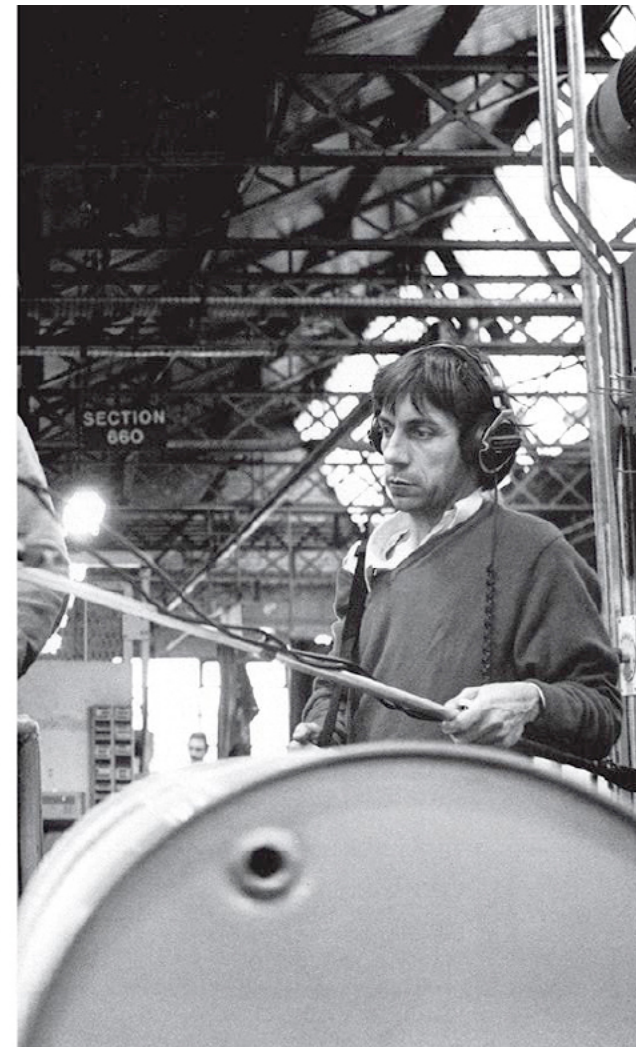
French edition of the book by Nicolas Frize, an invited artist in B-AIR

Researcher, musician and composer Nicolas Frize listens to the sounds of the world. For over forty years, he has been scrutinising living spaces and public places, exploring the sound potential of objects. He is one of those people who enjoy the impact of a train passing under a small bridge in a corner of the countryside, and who are particularly interested in the crinkling of cotton balls in the hand, the rubbing of plastic on the skin or the shattering of crystal glass. He stages concerts in unlikely locations, orchestrating the audience's movements to multiply the listening experience.

Nicolas Frize works in hospitals, offices and factories, usually as part of public commissions, increasingly in residence, or artistic collaborations, for example with the Renzo Piano Building Workshop. He has also taken part in research programs run by the French Ministry of the Environment, and worked for municipalities such as Saint-Denis to establish sound audits of the urban context, leading to social proposals.

This book is a buzzing structure that traces an artistic, philosophical and political project. It is the singular account of a man mad about listening, an artist, a citizen, who takes us closer to what the world of sound can teach us.

This edition, produced by Effa (2023), was created in partnership with the CRESSON team of the AAU laboratory at ENSA Grenoble, as part of the B-AIR research program.



Nicolas Frize, artist

twixt<sup>lab</sup>

  
RADIO TEATAR  
DAJSIĆ & PRIJATELJI

# **SOUNDWALKS: EXPERIENCING SOUND SPACES AND NARRATIVES**



## SOUNDWALK COMPOSITION – NARRATIVES, SOUNDSCAPES AND MAPS IN AUGMENTED AURALITY APPLICATIONS

Soundwalking and audiowalking as artistic practices encourage conscious listening and interaction with the sound environment. Often related to the theoretical approach of ‘promenadology’ (Burckhardt, 2006/2015) and *flânerie* (Baudelaire, 1863; Benjamin, 1974, pp. 177–221), soundwalking artworks invite the walker/listener into a wandering within an “aurally augmented” urban public space – whether through a redefinition of the hierarchized sensorium or through technological means of aural augmentation (Papachristou, 2021). This artistic practice uses field recordings and soundscape or music composition, and creates new spatial and aural routes that question the concept of linear interaction with the city, in order to escape from the model of the prominently visual public space.

Sound walks, audio walks and listening walks as artistic practices deal with sound, walking and the public space. There is a distinction between these three artistic practices: a listening walk is walking while concentrating in hearing the existing sounds of an area. A sound walk is the exploration of a specific area’s soundscape with the use of a score as a guide, usually the score being a map that draws

the attention of the listener to unusual sounds or places, inviting them to stand and listen throughout the route. An audio walk is a walk in which the soundscape of an area is augmented through the use of technology: pre-recorded sounds from the same – or any other – area, narratives, music or soundscape compositions come to the surface during the walkthrough, usually with the use of GPS geo-located mobile applications.

The choice of terms here is not arbitrary: although sound walks were established as an autonomous artistic practice rather recently, the term has been used since the 70s by members of the World Soundscape Project as a practice of browsing the soundscape of an area using a score-map that draws attention to unusual sounds. Murray Schafer (1977/1994, p. 212–213) specifically distinguishes ‘sound walk’ from ‘listening walk’ defining the latter as a simple walk with enhanced attention to environmental sounds. The very subtle distinction, as he writes, brings forth the issue of active listening and hence the “cleansing of the ears”, which is a central demand of the author in his earlier works. Moreover, the term ‘soundscape’,

also coined by Schafer (1969) in order to describe our sound environment, is a central concept in the development of the interdisciplinary field that can be called Sound Studies.

Moreover, the impact of the concept in anthropology becomes immediately evident in the pioneering ethnography of Steven Feld (1982/2012), which marks the awareness of anthropologists in sound culture and addresses the soundscape as a cultural system. Feld, apart from being the theoretical proponent of ‘acoustemology’ – an epistemological model that exceeds the primacy of vision in western art and science – is one of the first anthropologists to experiment expressively with sound and open an alternative path of anthropological articulation, which involves a more sensory and cognitive level of cultural understanding. Referring to his own acoustic compositions, which represent the soundscape of the rainforest as perceived by its residents, Feld refers to the legacy of Murray Schafer for the concept of soundscape as a musical composition, and not as a supposedly authentic ‘imaging’ of reality.

From a different field and view, sound walks, audio walks and listening walks are often related to the theoretical approach of promenadology (Burckhardt) and *flânerie* (Baudelaire and Benjamin), because – as artworks – they invite the walker/listener into a wandering within an “aurally augmented” public space. Lucius Burckhardt, deriving from the field of architectural design and sociology, uses the human body in motion in order to study urban space (2006/2015). In search of a tool to investigate the material and social world that unfold together within the urban environment, Burckhardt proposes a broad approach to urban space – promenadology, whose principal methodological tool is walking. The sensory intake of the built environment is thus being enriched by the urban imaginary of wandering and daydreaming; promenadology is a proposal to establish a theoretical framework based on walking, which brings together – socially, culturally, materially, technologically and artistically – frameworks and networks.

The *flâneurs*’ legacy as explorers of the modern city is certainly innate with the imaginary creation of modernism. Walter Benjamin leads a significant theoretical role both by referring to Charles Baudelaire as a wanderer in the city of modernism, and by taking over the role of the wanderer in his work on arcades (*Passagenwerk*) (1927–1940/2002) which was unfortunately never completed. The concept of the passive walker in the city was transformed in the 1920s by André Breton, who used walking to experiment with automatic writing and to trigger certain social attitudes in public space. The political stake is crystallised even more clearly in the ‘50s, with the term ‘psychogeography’, a set of ideas and practices developed within the artistic current of Letterists. Criticising Urban Geography, the Letterist International (and later the Situationist

International) identifies a function of enforcement and monitoring within the city, by exploring the emotional/psychological impact of urban planning and architecture to its inhabitants. Guy Debord’s psychogeographic wandering manual in the late ‘50s identifies and proposes a liberating dimension of the ‘*dérive*’, which he describes – in the Situationist International – as “a mode of experimental behaviour linked to the conditions of urban society: a technique of rapid passage through varied ambiences” (Situationist International, 1958).

Locative media art practices (audio walks) use open-source, freeware or commercial platforms that combine locative media technology, music/sound compositions, narratives and performance arts by applying them onto a mapped area. These platforms are tools for creating an environment of “augmented aurality” within public space. The user of such applications can attach sounds on the map of an area, and later, when the listener is physically situated at the point of this attachment, s/he can hear the pre-located sounds, through the operating system/environment of a mobile phone. The application detects the user-listener’s location via GPS and plays the geolocated audio files, where they have been pre-located by the user.

Locative media technology aims to reverse the process through which only certain cultural expressions become part of the cultural heritage, offering the community a tool to engage in these processes by linking the real space with people’s collective memory. As Rebecca Solnit writes, introducing us to her work on the history of walking, “the most obvious and the most obscure thing in the world” (Solnit, 2000, p. 3), the research on walking offers us the paths and meeting points leading “into religion, philosophy, landscape, urban policy, anatomy, allegory, and heartbreak...” (Solnit, 2000, p. 3).

The result of these practices can be collaborative maps and audio walks about and inside the city, the way its residents are experiencing it. Itineraries are thus created that escape from the concrete, primarily visual, and panoptically designed urban planning, by suggesting a new cartographic model that could represent various layers of perception and experience of urban space, based on mobility rather than stasis. This model includes time, the subjective glance, the relational and emotional layers of experience, and finally, it is open to a polyphonic narration about *space*, at the process of its transformation into *place* through a “walking ethnography”, as Tim Ingold (2000) would suggest.

Strolling within an aurally augmented city is an open-ended artistic gesture, ready to be re-interpreted and re-toured by each listener. These platforms are a tool for ‘*détournement*’ (Situationist, 1958), both by subverting linear interaction with the urban environment and highlighting hidden soundscapes, narratives, sounds and minor historiographies, all while appropriating the widely spread format of tourist guides into a medium for non-touring and non-guiding, but still impelling the listener into strolling. The notion of “augmented aurality”, as used in the artistic practice of sound walks and audio walks, consists of the intervention on space with audio means. This intervention is an experience of immersion to a hybrid environment between material and potential reality, which employs the multiple levels of the constantly transforming notion of public space: structured and virtual environment, social networks, digital communities.



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## THE END OF AN ERA: AUDIO-WALK COMPOSITION

Portbou (Spain), 30<sup>th</sup> September 2021

The audio-walk composition “The end of an era” is based on the written correspondence of Walter Benjamin with Gretel Karplus (later, Gretel Adorno) and Theodor Adorno, in the period from 1933 to 1940. Excerpts from the extensive mail correspondence together with fragments of their literary influences (translated in English), are composed in an itinerary that links together various landmarks in Portbou, Walter Benjamin’s last place of residence, where his legacy dwells vividly. The audio-walk was originally presented as a geo-located composition, still accessible in Portbou through [Echoes.xyz](https://echoes.xyz) locative media platform.

The work was homage to the deceased philosopher who fled Germany and then France, so as not to be captured by Nazis in the surroundings of World War II. His exhaustion and torment became unbearable as he was waiting in Portbou for his fate to be decided. In the audiowalk “The End of an Era”, his correspondence clearly shows the slow and difficult road from carefreeness to the rise of Nazism in Europe, from work and holiday plans



shared with friends to a suicide letter addressed to them. The listener can roam Portbou and listen to these letters combined with soundscape and musical compositions (Dana Papachristou & Yorgos Samantas), walking from the hotel where he was staying to his memorial by Dani Karavan, overlooking Portbou.

“The End of an Era” sound map on Cartophonies website (The Cartophonies website explores the contemporary sound experience by creating a sound map of different locations around the world.)

To listen to the audio-walk “The end of an era”:





## RADIOWALKS

“RadioWalk” is a cycle through which RadioTeatar affirms and explores the innovative format of the radiowalk. It is a peripatetic radio drama performance, an interaction of walkers with the landscape, soundtrack they listen to in their headphones, and sometimes also live performances. The aim is to create a kind of ‘kopfkino’ (inner cinema) for the walker, or even a special kind of an intimate ‘radio to go’.

Technically, a radiowalk is easily feasible. The production needs are not big, it uses the simple methodology of a children’s treasure hunt and can thus be open to authors who are exploring radio formats for the first time.

In working with and for the young, it offers exceptionally large artistic possibilities; children can create their own radiowalks as a result of school workshops. Radiowalks could even be used in the school system to create a peripatetic way of diving into some parts of the curriculum, literature etc. In comparison to an already established term ‘soundwalk’ in the world of contemporary art, seen as a title for several types of walking with some kind of the soundtrack in your ears, we see the radiowalk more openly, able to include almost all of the radio broadcasting formats of contents, combining storytelling with reportage, radio drama, radiophonic documentary, music and live act.



“Soundwalk for babies”. Photo by Lara Varat

The first three “RadioWalk” cycles of Radio Theatre gathered new audiences and authors in Zagreb, Rijeka and Dubrovnik around what is an innovative practice in our cultural context, and we believe that its recognition and development are just beginning.

For RadioTeatar, it is clear that the radiowalk form represents another way of a possible meeting point between radio and theatre, so it matches our research and artistic goals perfectly. Some of the radiowalks had been based on the educational research of the B-AIR program, such as “Soundwalks for babies”, “Streets are also feminine”, “Radiowalk for Benjamin” etc.

# RADIOWALK FOR BENJAMIN

Portbou (Spain), September 2021

The collaboration of our team member and artistic director Pavlica Bajsic Brazzoduro and AAU\_CRESSON / ENSAG project partner started at the winter school in Grenoble where Pavlica presented her research and the radiowalk, a new format created by merging of a soundwalk and a theatre performance. Due to COVID restrictions, this participation and presentation were only possible online, but they also intensified the communication and collaboration between the project partners RadioTeatar and AAU\_CRESSON / ENSAG.

It resulted in September 2021 in Portbou, a small port on the border of France and Spain (only 1000 inhabitants), where Pavlica Bajsic Brazzoduro and her 10-year old daughter Zvonka presented an artistic production in memory of Walter Benjamin who died there running away from the Nazis. It is a radiowalk format dedicated to him and his writings for radio and for children, using also sounds from German radio archives. In its form, a radiowalk is based on the children's treasure hunt and is therefore inspired by children and their responses. Benjamin's writings for children are thematically very intriguing for this format.



Soundwalk in Portbou, Spain, September 2021



From Pavlica Bajsić Brazzoduro's "Travel Diary", published in "The World of Culture" in June 2022, telling how she and her daughter created the "Radiowalk for Benjamin":

*"The two of us are preparing a radiowalk that will actually end in silence at the place of Benjamin's phenomenal memorial, which leads you up the stairs to the sea all the way until you are stopped by the invisible plexiglass in which you see your reflection. And behind it is a straight line of open sea. I am writing the text that comes to my mind as we are walking; we seek places for sound installations for which I prepared a recording of Brecht's song "Little Radio" in German, which we used in the Berlin performance "Eter uber Berlin" in 2016. We will place small speakers in the narrowest passage which even has Benjamin's name, because it is located near the hotel where, also on a September night, only in 1940, he took his own life after crossing the same difficult hills through which we drove, and managed to cross the border, hoping to escape to America. But due to a sudden change in procedures between Spain and France, upon arriving in Portbou, Benjamin was told that he would actually be deported back the next day. Desperate, he took a large amount of morphine that night. They say that the group of refugees who were with him during the crossing was however allowed to continue unhindered on the same day.*

*We are looking for a small square for Zvonka's performance of the song "J'attendrai" ("I will wait") on the violin. It is a song that was a counterpart to Lili Marlen in France during the Second World War. My niece Nina Bajsić adapted it on one occasion and I find in it some almost mantric power. The French from the conference call me and ask if they can do both the English and French version of the walk. I would love to, but it's really too difficult for me in 48 hours, my dear French people. Wow, at a late age I set my first boundaries. My little girl and I measure how long it takes us to walk from various points in order to maximally adjust the soundtrack broken into 13 parts for this kind of sound walk. I am consulting colleagues from Greece about the soundwalk application, which is still in the pilot phase. Later in the apartment, I finish the text with which I will take the conference guests on a sound walk through the recordings. I am also editing recordings of Benjamin's radio dramas for children from the Bauhaus archive sent to me by a former assistant from Weimar, Fabian. I am creating the world of radio on the fly, extremely site specific, it is determined by space, I am inserting moments of performance, interactions of walkers with a stone, a door, a shop window, I am creating Portbou in another dimension and I am excited about it. Languages abound from the recordings I process, German, French, Catalan, Croatian. I understand most of it.*

*And I realize that this is what I love to do the most."*



Photo by Pavlica Bajsić Brazzoduro

# SOUNDWALKS WITH STUDENTS

## Rijeka (Croatia)

In 2021, in the peak of Covid time, Pavlica Bajsić Brazzoduro started a collaboration with students from the Academy of Applied Arts in Rijeka (Department of Acting & Media) and simultaneously with students of the Bauhaus University in Weimer (students of experimental TV, prof. Jakob Hüfner), striving to combine our experiences of the radiowalk concept with VR (Virtual Reality).

Students from Weimer were in charge for the VR part, and students from Rijeka for the writing and recording of the soundwalk. The project was titled “Life Jacket” and it combined the historical content about the sailor from Rijeka who worked at the ship “Titanic”; the entries from the found diary from one Croatian passenger that survived that catastrophe; the walk through the remnants of the former “Hotel Immigrants” that was built for the purpose of emigration hundred years ago; and personal impressions of our students.

During one semester we worked partly online, partly Pavlica Bajsić Brazzoduro would come to Rijeka with the writings, audio recordings and illustrations to be finished by our students. The final part was planned to happen live, with all students meeting in Rijeka, finalizing the work and performing our walk. Sadly, this was not possible, due to Covid restrictions.

However, the outcomes of the project were great. Students from both cities had an precious opportunity to collaborate on such an experimental combination of radiowalk and VR.



Photo by RadioTeatar

Also, Pavlica Bajsić Brazzoduro was invited to propose a curriculum on Radio Art for the Academy in Rijeka and was promoted to the position of assistant professor.



# DOCUMENTARIES STEP AHEAD



Photo by Luka Hvalc

# JOURNEY AT THE EDGE OF THE NIGHT

## A radio documentary about dr. Evgen Bavčar

For Evgen Bavčar, sound is the companion drawing the contours of his surroundings, the world, people, events and sensations. The night journey to the break of day raises profound questions about human existence, differences, exploitation, the struggle for justice, the environment, freedom and the intimate desire for duality, the sun and a new spring.

The radio documentary about dr. Evgen Bavčar "Journey at the edge of the night" was realised by Radio Slovenia as a joint project between First Program, the Ars, and Val 202. It was also filmed in the spring of 2023 in Lokavec near Ajdovščina, on the island of Capri, and in Naples.

Concept was designed by Mojca Delač and Luka Hvalc and screenplay by Mojca Delač, Saška Rakef and Luka Hvalc in cooperation with dr. Evgen Bavčar. Director of the radio documentary is Saška Rakef, dramaturges Saška Rakef, Mojca Delač and Luka Hvalc and sound designer Urban Gruden.

To listen to the "Journey at the edge of the night":



Dr. Evgen Bavčar and Mojca Delač in the recording of the radio documentary "Journey at the Edge of the Night". Photo by Luka Hvalc



**Evgen Bavčar, Dr.h.c.**

Philosopher, photographer, writer, activist  
Slovenia and France

## COMPLICITY OF THE BLIND AND THE RADIO: Working with the crew of RTV Ljubljana on the “Journey at the edge of the night”

Working with the crew of RTV Ljubljana on the relationship between the visual and invisible reality allowed me to relive some of the notions of sightless existence. In terms of the cognition of reality, us blind people are in a kind of complicity with the radio broadcasters, whose creativity addresses an invisible ear that is also, metaphorically speaking, blind. Radio is a medium for the transmission of the word, which makes content visible to its unseen audience. This passing from one reality to another, shows us how the modern world is oculocentric, meaning that the reality of our perception is more an image than a word, be it spoken or heard.

The radio medium is a unique universe, a treasury of words, a continuation of a narrative culture that was essential when most people were still illiterate. Even some famous figures of human history, such as Homer or Milton, were spoken orators and yet they communicated to us the deepest truths of their existence, their cultural milieu.

The trip to Capri offered proof that the world we inhabit also contains sound images, phonetic fragments, unlike the much more familiar and recognised visual reality. For the crew, night became a domain of a different sight, a realm of otherness



Self-portrait by Dr. Evgen Bavčar

that validates the nightingale's singing as a symbol of the natural troubadour. It strives to overcome the deserted monotony of the night, to fill the silence and make sense of it with its presence. "Journey at the edge of the night" is involved in the desire to give words, sounds, noises, cries a new meaning, an as yet unknown value in competition with the purely visual perception of the world. The blinding of the birds in their refuge on Capri, as depicted by Axel Munthe, therefore recalls the life context of the blind throughout history, who by natural necessity made sense of the word – because they embodied the word that, as such, is blind. Despite this characteristic, it allows us to see beyond the usual avenues of visual perception, beyond the realm of vision and the input of the right brain hemisphere. Several scientists have stressed the difference between the left and right halves of our best, most universal organ. Modern society favours the right hemisphere at the expense of denying the spoken word as an expression of the blind, either realistically or as a metaphor of duration in time.

The difference between the two types of perception is vast by its very nature. Sound is defined by a speed of 300 metres per second, light by 300 thousand kilometres per second.

Night thus symbolises duration, and day the moment of simultaneity of an image formalised by photography, film, video. Images rush, words become. We realise this differentiation of specificity when listening to the nightingale in the duration of the night, while accepting the otherness of the word of the blind man, which carries vision within it. Let me point out that in German universities, until the invention of photography, many pictorial works in painting were described. Describing visual reality is one of the still under-exploited possibilities of the radio medium, which I myself have tried out a lot on the French radio network

France Culture, for example in the series "Painting with eyes closed". Blind and sighted listeners are on equal footing when listening to descriptions from a radio receiver. The deep complexity of creating the content of "Journey at the edge of the night" is thus an important step into the still under-exploited possibilities of the radio medium. This collaboration, in a very specific and deeply egalitarian democratic way, ordains the word as a kind of creature of the modern gospel, which says that in the beginning was the word, and therefore also the radio word. I am pleased to have shared this precious new word with sincere interlocutors and collaborators who were able to move into a universe of different perceptions.

Our friendly cooperation proved that man should not be held hostage to the visual, but that we can access the night equally as well as the bright side of the day. The Slovenian writer Karel Širok wrote about the blind nightingale in 1922 already. With Mojca Delač's team I felt like one of those blind birds, not only in listening to the world but also in calling out to the world in the name of my own words, my own experience of reality. As I shared the silence of a May night with the friendly RTV crew, I remembered Lorca's verse about the cricket, which he describes as the sounding star, the *estrella sonida*. Something like that was the tiny bird that sang faithfully to us through the dark night, adorned and enlivened by our words in a quiet sonic reciprocity.





Recording of the radio documentary "Journey at the Edge of the Night". Photo by Luka Hvalc

## JOURNEY AT THE EDGE OF THE NIGHT THAT HAS CHANGED MY DAY(S)

*"What a joy it is! What grace to be able to create within a team of people who inspire and drive you, who pursue the same goal, share the effort, the days of success and the nights of agony. How fortunate one is to be able to share her work with others. And perhaps, in some way, contribute to seeing things and the world differently."*

I vaguely remember my words capturing the concluding thoughts at the public premiere of our documentary on dr. Evgen Bavčar, but I recall the feelings strongly. It is almost impossible to truly articulate the tangle of pride, satisfaction, surprise, fatigue, and happiness that was woven by the threads of creativity on that evening. The threads that had been wrapped around the event as we, the authors of this radio piece, wrapped ourselves in the cocoon of the exploration of the world that dr. Evgen Bavčar opened for us.

It is the trust and the excellent collaboration of this internationally recognised philosopher and visual artist, who warmly welcomed us into his thoughtful world of the night, that we need to primarily thank. For without it, the creation of the documentary would not be possible. From the very beginning, our first and core aim of inspiration was – the sound. However, we (the authors) needed to listen more carefully to the world of blindness to see the plot that was our sonic star of creative guidance.



Mojca Delač and Saška Rakef in the recording of the radio documentary "Journey at the Edge of the Night".  
Photo by Luka Hvalc

The journey took us to many places, from Lokavec to Capri, from the firm grounds to the sea and even up in the sky.

Coexistence in time transcends spatial limitations, just as sonority enhances what the eye can see. What does this mean through the ears and

lenses of our documentary? I hope it opens deeper questions of our existence, the complexity of the human being and its comprehension of the world. I hope it takes the listener to new places, broadens the horizons of knowledge, and opens space for thoughts about love, freedom, migrations, passion, exploitation, humanity, longing, and mortality. One night – enough for a lifetime of substance.

Our documentary lives solely through the ears of the listeners. I can only hope that there will be as many opportunities for it as possible. And that the duet with the nightingale will continue to evoke memories of that night in May when we set up microphones to catch it.

For me as the author, this project has also brought an exceptional opportunity to get experiences with a new genre, to work within a very creative, professional, and inspiring team, to develop new concepts of thinking in the work process, to gain a lot of new knowledge and skills that I will be able to continue using in my work. And most importantly, this night has changed my days. I dare say that my ears will never find them quite the same again.





Lokavec at night.  
Photo by Evgen Bavčar

## MY EXPERIENCE IN THE B-AIR PROJECT: FOR MORE RADIO JOURNEYS AT THE EDGE OF THE NIGHT!

It was a really nice journey, a radio journey at the edge of the night. For me as a journalist, participating in the B-AIR project was an entirely new experience. The primary advantage was teamwork with various profiles of radio professionals: journalists, radio director, sound engineer. Despite all being from the same media company, we seldom get a chance to work together deeply and strategically. This project allowed us to function as a creative team from the beginning to the end of the working process. We did many things in a completely different way from established practice.

Preparing different broadcasts was exciting, especially working on a radio documentary about the polymath Evgen Bavčar. I have almost 20 years experience as a radio journalist, but it was the first time I was able to create content and format so thoughtfully, precisely, and in such a multidisciplinary way. We first held in-depth interviews with the protagonist. That was highly important because we found a very special story behind his life and work. We developed it and upgraded it with field-work. Capri, Naples, Lokavec, and Ljubljana were our stations.

In the process, we used different techniques of interviews, resource analysis, sound recordings, and developing the script. It was also a great experience for me working on the final production in the studio.



Journalist Luka Hvalc and director Saška Rakef recording the radio documentary. Photo by Mojca Delač

Collaboration with professional and superb experts opened a new perspective on modern radio production. I have learned a lot, and I am now applying this knowledge in my daily journalistic and production activities.

The radio documentary “Journey at the Edge of the Night” was a joint project between three programs of Radio Slovenia, and it was truly delightful. I hope we can do a similar project again. Here’s to more radio journeys at the edge of the night ...





Recording of the documentary-feature radio play "The Whisper of Memories" in the Loška Valley. Photo by Saška Rakef



# THE WHISPER OF MEMORIES:

## A documentary-feature radio play

This participatory documentary-feature radio play for children and adults emerged in cooperation with children, the elderly, and radio creatives who drew a sound map from the tales and narratives of the past and present in the Loška Valley in Slovenia. The rich documentary materials intertwine with the story of the boy who is carried into the sky by the eagle, taking him on a flight over plains, mountains and caves – and from once upon a time until today.

To listen to the  
“Whisper of memories”:



### Credits:

#### Director and concept author:

Saška Rakef

#### Screenplay:

Ana Obreza

#### Sound recordist:

Urban Gruden

#### Sound design:

Darja Hlavka Godina

#### Music artists:

singers of the Lož Valley Pensioners' Association, and the folk singers Vida Truden and France Anzeljc

#### Teaching methodology expert:

Ana Čorić

#### Ethnologist and anthropologist:

Katarina Juvančič

#### Editing mentor in the pedagogical process:

Marta Medvešek

#### Narrator:

Blaž Šef

### With the participation of:

Milena Kraševac, Sonja Lipovac,  
Anton Mestnik, Milena Ožbolt,  
Andreja Ravšelj, Miha Razdrih, Jožefa Strle,  
Alojz Troha, Boža Troha, Peter Troha,  
Fani Truden, Vida Truden, Ida Turk,  
Tone Udovič, Janja Urbiha, Leonida Zalar,  
Gašper Modic, Aljaž Dujo, Lea Lenarčič,  
Urh Anton Mlakar, Tadej Mihelčič,  
Patrik Ožbolt, Urška Ožbolt, Živa Palčič,  
Vili Strle, Marina Trivunčević,  
Martina Trivunčević

Fiction Editorial Board

Recorded in the studios of Radio Slovenia in  
December 2023



## SOUNDSCAPES AND SONIC SENSIBILITIES IN LOŠKA VALLEY: “The Whisper of Memories”

The B-AIR project called “The Whisper of Memories” (*Šepet spomina*) was initiated and lead by the radio director Saška Rakef and the team comprising the sound engineer Urban Gruden, sound artist Marta Medvešek, dramatist and musician Ana Obreza, musical pedagogue and researcher Ana Čorić and Katarina Juvančič, anthropologist, ethnologist and singer-songwriter.

The objective of the fieldwork project component was to collect and map the sounds of Loška Valley (*Loška Dolina*) as perceived by the locals, primarily through intergenerational dialogue involving primary school children and the older generation, specifically their grandparents. Their interactions, employing ethnographic and journalistic methods of collecting material, contributed to the creation of a radio play for children that was broadcast nationally. Simultaneously, sonic data were collected for creating a comprehensive sound map of the valley.

The central theme of the radio play revolves around the story of a young boy named France, who day-dreams of having wings to fly while working in the fields with his family. He is picked up by an eagle, and together they soar across his native land encompassing hills, valleys, forests, streams, lakes, and villages. Throughout this journey, France witnesses and hears many things. Time unfolds differently in



Recording of the documentary-feature radio play “The Whisper of Memories” in the Loška Valley  
Photo by Saška Rakef

fairy tales, and by the end of his airborne adventure, France has aged into an old man. The eagle returns him to where it initially picked him up, revealing all the visible and auditory changes in the landscape and the ways of life that are now forever altered. What he saw and heard during his extended flight on the eagle's back is reflected in the sound material collected from the locals and utilized in the radio play.

In the process of gathering stories related to sounds, local customs, traditions, leisure activities, and the daily lives of yesteryear, children not only conducted interviews with older locals and their relatives on-site but also actively participated in sound editing and screenplay writing as co-authors during and after our visit. While conducting interviews on-site, they received guidance from Saška Rakef for interview questions and commentaries, and from Urban Gruden for sound recording. Throughout the post-fieldwork process, they continued to receive coaching from Ana Obreza for radio play screenwriting, as well as from Marta Medvešek and Ana Čorić for sound editing in online sessions on Zoom.

During our stay they, the participants were also mentored by Leonida Zalar, the school librarian, who served as a main liaison between the local community, kids and the researchers.

Our 'home base' for the week was the Elementary School "Stari Trg" pri Ložu, where librarian Leonida Zalar introduced us to students from Primary 6 to Primary 9 (ranging from age of 12 to 15) interested in collaboration. They could participate as interviewers (conducting interviews with older locals or their own grandparents, neighbors, or other villagers), recording technicians, and, in both the parallel and subsequent phases of the process, as sound editors and screenplay writers. Initially,

approximately 40 students expressed some level of interest in collaboration, but ultimately, only 11 took part in the fieldwork, engaging in interviewing, recording, and later participating in sound editing and screenplay writing.

### Methodological framework and coding

The focus of the project on-site was to gather data for the radio play using a qualitative method of semi-structured interviews. Qualitative methods comprising of interviews and fieldwork are "therefore crucial for constructing comprehensive picture on any given landscape" (Uimonen, 2017, p. 117).

The tapestry of our investigation unfolded not only through the efforts of adults but also in collaboration with children who played pivotal roles as interviewers. The adult team comprised Saška Rakef, Ana Obreza, and Katarina Juvančič, with Ana Čorić and Marta Medvešek assuming the role of observant participants during the interviews. Urban Gruden, instrumental in recording all audio materials, not only fulfilled the technical role but also assisted the children in the recording process. Saška contributed her expertise by guiding the children in formulating questions and intervening when necessary.

Over the course of five days, we immersed ourselves in the rich cultural landscape of Loška Valley, conducting a series of interviews with approximately 15 people. Engaging with individuals spanning various age groups, genders, and backgrounds, the children-turned-interviewers posed inquiries that delved into the essence of personal sonic experiences. From eliciting reflections on the most and least cherished sounds from childhood to exploring fears associated with particular auditory stimuli, the questions reflected the children's curiosity.

Initially tentative, the questions posed by the children evolved in sophistication and depth throughout the five-day process. Their heightened sensibility toward inquiries related to soundscapes and their growing competence in articulating more intimate and unconventional questions marked a transformative journey. The evolving nature of their queries, subsequently complemented by the contributions of the broader research team, enhanced the depth and specificity of our exploration into the intricate realm of auditory memories and experiences.

Thematic analysis is an approach to qualitatively analyse data from interviews, aiming to uncover recurring patterns through the identification of codes and themes. During the coding process, notable or pertinent ideas articulated by interview participants were singled out. Codes that convey similar concepts were then assembled into overarching themes. Additionally, these overarching themes can encompass related subthemes, creating a structure within the analytical framework.

The coding developed in this acoustic inquiry embraced a classification system, delineated as follows:

#### I. Nature Sounds:

- a) Weather elements (wind, sleet, rain, etc.)
- b) Hydrological elements (water in its various manifestations)
- c) Ambient environments (caves, echoes, leaves, trees)

#### II. Animal Sounds:

- a) Birds & wild animals
- b) Domestic animals
- c) Mythical animals



### III. Social Sounds:

- a) Mechanically generated sounds (clocks, bells, hand saws etc.)
- b) Humanly crafted sounds (singing, music, whistling, talking, shouting, calling, local dialect)

### IV. Work Sounds:

- a) Interior workspaces (kitchens, living rooms, bedrooms)
- b) Exterior work environments (fields, wetlands, forests)
- c) Transportation sound (automobiles, carts, trains, buses, furman, etc.)
- d) Industrial sounds (mills, sawmills, chainsaws, construction sites, factories, etc.)

While a degree of thematic overlap existed within these categories, the paramount objective lays in structuring the coding system to align with the overarching research inquiries. This arrangement served as a strategic framework, facilitating a nuanced exploration of the multifaceted dimensions of sound within the study's purview.

### Methodology

The main method of data collecting very much reflected the ethnographic fieldwork which constitutes the basis of ethnological and anthropological research, involving the first-hand study of people and cultures in their natural environments. It is a method of gathering data and gaining a deeper understanding of social practices, beliefs, and behaviours of the local population. Fieldwork typically involves extended stays in the community being studied, allowing ethnologists, anthropologists and other researchers to immerse themselves in the daily lives of the people and to build



Photo by Saška Rakef

relationships. While the rest of the research team (Rakef, Gruden, Medvešek and Čorić) commuted from Ljubljana to the Loška Valley on a daily basis (approx. 65 km one way) – with the exception of Ana Obreza, who lives locally – I decided to stay with one of the informants and his wife who is my cousin, for the duration of five days, to get a better sense of the place and trying to immerse myself into communal spaces and connections.

Ethnography-based research was focused on the acoustic qualities of people's lives and the cultural meanings associated with sound within a specific community or context through intergenerational interaction. Saška Rakef was prepping elementary school children to talk to their older relatives and locals in order to learn about the importance the sound played and plays in their lives, and interviewees

were also encouraged to ask children about their sound perception. Our method involved the use of semi-structured interviews and participant observation to explore the ways in which people perceive, experience, and engage with sound in their everyday lives and to gain insights into the subjective experiences and cultural interpretations of specific sounds.

The ethnographic intergenerational work also included a visit from four retired women to elementary school to discuss the sounds of their youth, with researcher's visit to the local folk singer's weekly rehearsal. Due to lack of time some interviews were conducted only by researchers themselves.

### Theoretical framework

In all the stages of the process – ethnographic fieldwork as well as radiophonic and artistic (radio play) work, we employed the principles of collaborative and participatory ethnography, emphasizing active collaboration between researchers and the community. This approach challenges the traditional power dynamics in research and seeks to create more equitable partnership between researchers and the community. Inclusion of local elementary school children as active participants, collaborators and co-creators of the content of interviews as well as the radio play provided a more comprehensive view of daily life, social dynamics, and cultural practices within a community, where their creative input was not just facilitated but also encouraged by researchers, teachers, parents and the interviewees alike.

This type of collaboration also promotes ethical practices by recognizing the rights and perspectives of young community members and encourages researchers to consider the impact of their

work on future generations. It also helps children to gain new skills outside the school curriculum, connects them with the older members of community outside their family ties and helps them to develop aural sensibilities to their environment.

However, in working with children it's essential to approach their inclusion in the research, technical and artistic processes with sensitivity and ethical considerations. Informed consents and the well-being of the children involved were considered as a high priority in all stages of the process.

The unedited audio material gathered in the field by both researchers and local children will be accessible to community members through the B-AIR online platform in its entirety. Consequently, this resource could serve as a foundation for ongoing research and artistic projects, such as sound mapping of the valley, the creation of new school radio plays and documentaries. These endeavours aim to enhance local capabilities, empower children and the local community, promote sustained collaboration across generations (children & mentors, children & adult locals, children-to-children) and hence ultimately foster positive change in their social environment.

The theoretical framework of the anthropology of sound and soundscapes that was laid by a pioneering work of Steven Feld in the 1980s that explores the relationship between sound, culture, and emotion, was also employed in the research. The book is based on his fieldwork in the Bosavi rainforest region of Papua New Guinea, where he lived among the Kaluli people. Through an ethnographic approach, Feld delves into the intricate ways in which sound shapes and reflects the emotional landscape of the Kaluli. Feld argues that sound plays a crucial role in expressing and shaping emo-

tions within a cultural context and introduces the concept of the “acoustemology”, a term he coined to describe the cultural perception and knowledge of sound. In the context of the Kaluli, acoustemology refers to how they understand and interpret their sonic surroundings. This includes not only the natural sounds of the environment but also the sounds produced by human activities, rituals, and music.

Hearing, especially in our ‘Westernized’ culture, is often perceived as hierarchically inferior to sight, among other senses such as smell, touch, and taste. Shifting the focus to hearing as the primary area of research challenges dominant narratives regarding how a particular natural or cultural phenomenon is experienced. Engaging with the auditory aspects of culture provides opportunities for reimagining fresh perspectives on comprehending and grasping a culture. Our thesis posited that, within the sonic dimensions of daily experiences and interactions, individuals construct meaning and establish connections with one another through the sense of hearing. This offers “immense insights into a range of issues pertaining to the present-day political equations of power, governance, control and conflict, inflected by globalization, technologization and digitization (Kumar, 2022, p. 139).”

Similar to the Helmi Järviuoma and Lesley Murray's study of cultural transformations through transgenerational sensobiographies we conducted ethnographic studies on individuals born in the 1940s and 1950s, with some born even in the 1930s and children born in 2000s. This allowed us to comparatively explore their sensory connections and experiences growing up with, as well as without computers and digital devices, to observe if there were any significant changes in perception of environmental sounds and sound sensibilities.



Closely connected to the topic of sound perceptions and narratives is the concept of collective social memory. This collective social memory serves as a shared point of reference formed by the recollections of individuals within a shared social context. These recollections, functioning as social sense-makings, are constantly negotiated, shaped, and transformed through dynamic, active processes within the communities. Or as Barbara Misztal defines it: “Collective and social memory are both defined as group’s representations of its past, both the past that is commonly shared and the past that is collectively commemorated, that enacts and gives substance to that group’s identity its present conditions and its vision of the future (Järviluoma, 2009, p. 140).”

These theoretical premises influenced the ethnographic material that assisted us in shaping the research questions regarding sound memories, perceptions, and recollections in a specific location, namely Loška Valley.

### Research questions

*What constitutes a soundscape at a specific location and time? What role do sounds play in the lives of local people? How do they perceive various natural or ‘man-made’ sounds? Which ones are considered pleasant, and which ones are not?*

Soundscape refers to the connection between humans and their auditory surroundings, encompassing both objective realities and subjective perceptions. For the purposes of this research and with the objective and subjective, physical and symbolic, external and internal acoustic assemblages in mind, we’ll use the definition of soundscapes as the “totality of all sounds within a location with an



Recording of the documentary-feature radio play “The Whisper of Memories”. Photo by Saška Rakef

emphasis in the relationship between individual’s or society’s perception of, understanding of and interaction with the sonic environment” (Payne et al., 2009; Grinfeder et al., 2022, p. 2).

The perception and interaction with the sonic world are heavily influenced by the environmental surroundings that help to shape social, collective and individual sound memories.

Loška Valley is situated near the Croatian border in the southwest of Slovenia. The municipality of Loška Valley, covered with dense forests and karst fields that flood during the rainy season due to its porous limestone geology, encompasses an area of 166 km<sup>2</sup>. It has approximately 3,770 inhabitants and a population density of 23 people per km<sup>2</sup>, which is significantly below the country’s average population density

of 102 people/km<sup>2</sup>. The area is rich in water, forests, fields, and wildlife, all of which contribute to shaping the soundscape. Additionally, the soundscape includes industrial elements such as a metal factory, wood processing plants, and sawmills located in the valley.

Qualitative research has shown that individuals tend to differentiate between pleasant and unpleasant sounds, as well as their most and least favourite nature and human-produced sounds. Moreover, they distinguish between sounds associated with everyday routines and work and those connected to leisure time. These parameters play a significant role in organizing their soundscape.

Most favourite sounds are primarily associated with the sounds of nature, childhood, and leisure time, though not exclusively. The perception and interpretation of sound are correlated with the pleasant or unpleasant external contexts surrounding the sound experiences, including experiences within family, community, and school systems. Similar to Uimonen's research on sound preferences among school children from Strathdevon Primary School in a Scottish village called Dolar, the most pleasant sounds in all three surveys conducted in 1975, 2000, and 2011 were consistently identified as bird singing, stream sounds, rustling leaves, as well as (human) voices and (mostly domestic) animals (Uimonen, 2017, p. 126).

Our interlocutors and collaborators, whose names will be changed to protect their identities, also describe the sounds of nature as predominantly pleasant. Birdsong (larks, swallows, cuckoos, owls, goshawks etc.), ranks very high, as does the sound of water, especially in connection to children's play, and the sounds of domestic animals, mainly cows and horses.

For example, Mila cites birdsong, rustling leaves, and small sounds of nature as her favourite sounds. Alenka's favourite summer sounds were and remain the croaking of frogs by the lake, the flight of birds nesting near Lake Cerknica, and the sound of tractors driving hay from the mowed meadows or the lake bed.

Majda is also very fond of the sound of the wind, bird singing and frogs croaking. "Birds could be heard singing near our childhood home in Jermondol. Later, when we lived in the village of Igavas, we were lulled to sleep every night by the chorus of frogs. The frogs croaked, and we drifted off to sleep." The sounds of wild animals from the forest did not frighten her and were not perceived as unpleasant. "When we lived in Jermondol, those sounds never scared us because there was a forest around us, and we heard many sounds from it. An owl hooting, a deer grunting; in the winter, we heard wolves howling in our meadow. In the fall, when deer mated, they bellowed. The hawk often flew silently over our house and preyed on our chickens. Often, it would take one of them away."

The stories of sounds become alive when described in a sonically detailed, thick narrative such as Francka's story of the goshawk, in connection to the chores in the fields: "Where it was mowed and then raked, the plane was smooth, and you could see from the top whether there was something inside... not you, but the birds could. There were goshawks, but mostly buzzards. They made sounds like "piu piu" all day long. The best part was when they got their balance, they trembled, fluttered with wings, and then plunged downwards when they saw a bug or something. Sometimes, they also grabbed a slowworm because they had a great view from up there. This was going on all day while you were

raking. This image is still in my head. ... This sound never bothered us. You lived in it."

Sensorial specificities – sometimes also encouraged by the ethnographer as the sound memories are not always instantly available to us – also contributed to more vivid sonic memories in people's narratives.

Francka describes the sound of a beech tree she admired during a raking pause. "When you lie back for a bit, it was so terribly beautiful for me when we sat under a beech tree. Even if it's hot, there's always a breath of fresh air. Beech trees have thick, waxy leaves. When a beech tree rustles, it shakes. You tend to forget it, but then you start to remember, and it comes back – the memory."

Marija remembered how she loved the babbling sound of dunking a bottle into the water. In her opinion, the most beautiful sounds are those of water – not at the beach where everyone is splashing and screaming, but the slow running of water, which brings back memories.

For a retired forester like Ivan, the sounds of the forest are the most favourable. He describes them as the "harmony of living things and trees, because trees are also living things." His preferred sound in the forest is the time when it starts to snow. "It's so quiet in the forest; not even a bird chirps. That expectation of something new is interesting."

Surprisingly, quite a few people mentioned the falling of a spruce tree, cut down by loggers, as one of their most favourite sounds:

"I don't know if you've ever been around when a spruce is falling? It is like the sea when a ship sails, and it



spreads out. ... We usually went in the morning... I also went to cut down trees because my brother was much younger, and I had to go along when that big spruce was cut down. When it fell, so much of that air was compressed that it felt like it was going to suffocate you. The air pressure just piled up, and when the spruce plunged to the ground, it returned to normal again. A beautiful sight. It was the same with beech, but the spruce is more elegant.” (Francka)

Rozka often goes with her husband to cut down trees or listens to others cutting down trees. “The most beautiful sound is when a spruce falls to the ground, and you know that it fell properly – it wasn’t left hanging, and it does not pose a danger. ... ‘Shoop,’ and you feel it fall to the ground.” For her, this is the most beautiful sound because it makes her feel safe.

People also described the ‘unsafe’ sounds – those that posed imminent danger or threat to them, some in connection to the wars their ancestors lived through (their parents and grandparents being afraid of planes because of bomb raids during the Second World War – the sounds of WWII are still in the living memory of some older locals), sounds of ambulance cars, but mostly the sounds of natural disasters and changes in weather patterns that have intensified in the last decade or so.

The dreadful sounds of the ice storm in the winter of 2014, which destroyed thousands of acres of forest land and left people without electricity for days, are very much alive in the memory of the locals. The language they used to describe the sound of devastation was very metaphorical (“trees crying”, “hearts breaking”, “front line”).



Recording of the documentary-feature radio play “The Whisper of Memories”. Photo by Saška Rakef

“Every now and then, the tree would creak, and when it finally broke, your heart would ache because you knew – you could see how much it was broken. But now, everything has overgrown.” (Iva)

“It sounded like the battlefield front line; it was so loud and terrifying.” (Silva)

“During the night, it began to rain, and the rain kept freezing; then it felt like being on the front line. Trees snapping, cracking, creaking – trees giving

way under the weight of the ice. Terrible sounds echoed from the forest. There were also loud noises as the ice began to melt, and pieces of ice fell to the ground.” (Gašper)

“Now I know what it means when the trees are crying. From Racna mountain, you could hear the trees cracking. It was terrible, powerful; they cracked, they creaked – truly, the trees were crying.” (Rozka)

Metaphors serve as powerful tools for communication, interpretation, and conceptualization of people's embodied experience as these sounds undoubtedly are. Metaphors aid in sense-making by offering imaginative and evocative ways to represent complex cultural dynamics or emotions. Metaphors are frequently employed to convey emotions. When individuals describe their feelings, they may use metaphors to paint a more nuanced picture of their emotional state.

Changes in climate patterns also reflect in the soundscape and pose a certain threat or unease, unpleasantness.

Rozka also claims that she didn't use to be, but now is afraid of the sounds of thunder and lightning storms. She also observes the decline in the health of trees. She loves to collect chestnuts, but "almost all chestnuts are now diseased, and therefore, they lose their leaves already at the end of July, not only here, but also in many other places."

"The wind used to be different than it is today. Nowadays, it instils fear; it is scary", says Silva. In her youth, it was gentle when it was getting ready to rain. The rustling was not harsh; the walnut trees rustled lightly. Three years ago, a linden tree fell on their house. Back in the day she remembers the wind as being soothing, dreamy. She listened to it in the evenings when she and her mother sat outside on a bench, winding down at the end of the day.

Lea observes a disturbed migratory pattern of swallows she loves so much. She usually rushes to work in the morning, and her everyday sound is the children's commotion in the elementary school. Additionally, there are swallows that always return and chirp in June. When she returns

to school again in August, she expects the chirping; sometimes, a swallow even wanders into the library. However, this year there were none, even though they are usually still around in the first and second weeks of September when they gather for the journey south. She talked to the cleaning lady, expecting to have to clean the windows again because of the swallows, but they left early. "The first time you open the window, everything is still quiet in the library; even the book heroes are still sleeping. When I open the window, there is usually a lot of chirping, flying over, sometimes a swallow crashes into the window with its beak. That's why we see that the windows are covered up, so that it doesn't happen. But this year there were no more. I ask myself: Is this some kind of sign, no? Why did the swallows fly back so early? Will it be winter so soon, or will it be cold so soon? Because, in my opinion, there was enough vermin for them to eat."

While some wild animal sounds are pleasant to some, they are annoying or frightening to others. The bellowing of deer is a sound that some find non-disturbing, while others find it annoying. Perhaps the reason this particular sound was mentioned by so many is that we were in the valley during the deer mating season, and the bellowing was a predominant wild animal sound at that particular time, making it an important part of the soundscape at that time of the year.

Mila also emphasizes that our perception of the same sounds as pleasant, unpleasant, or fearful depends on the context of whether it is daytime or night time. "The secret of the forests here lies in the absence of daytime sounds. Together with the darkness, the intensity of the night's voices increases, causing our eyes to widen, and fear to set in. During the day, birdsong is soothing, but at night, it becomes terrifying. The forests of Notran-

jska are inhabited by large beasts, such as bears, wolves, and lynx."

For the majority of the interlocutors, their favourite sounds are connected to their childhood and haven't changed much in their adult years. Sound memories are particularly pleasant, especially when they are connected to relational memories—being somewhere and experiencing something with people you felt safe with, even if the situation itself did not feel safe at the time.

If pleasant sounds are linked to the feeling of safety and well-being, unpleasant sounds are connected to feelings of danger, threat, insecurity, and annoyance. According to Uimonen's previously mentioned research, the most disliked sounds among primary school pupils in all three studies were the sounds of traffic. However, in recent years, human voices (54%)—such as teacher shouting, mother's voice, people screaming, and crying babies—have also become prominent (Uimonen, 2017, p. 128).

The sounds of traffic and industrial, mechanical noises are often cited as unpleasant by the local people in Loška Valley, but even the level of unpleasantness of these sounds varies. Silva finds the sound of motocross bikes and four-wheelers highly unpleasant. They "go through the ears". On the other hand, the sound of traffic and transport from people's youth brings fond memories.

Majda remembers the sound of a car as a novelty and, therefore, something exciting, as she describes the embodiment of that sound: "The roads were not asphalted. At that time, very few cars drove towards Jermendol. We knew what kind of car was coming by the sound of the engine working its way up that hill toward us. It was a special sound that has been



ingrained somewhere inside me, and I can still hear it today.” Sounds of horse carts and carriages were also perceived as pleasant. “The first ones were hobnailed, they creaked and rumbled as they drove over the sand,” Marija remembers.

Comparing the mechanical sounds of the past (pleasant) with the ones in the present (unpleasant) is a recurring topic in conversations.

“It’s hard to recall those times. At that time, there were no tractors, engines, or lawnmowers. Today, lawnmowers, saws, and circular saws keep humming. In the past, log sawing was done by hand – thick trees were sawed by two people, and if the logs were small, a shorter saw was used and sawed by one person,” Majda claims.

While some locals complain about the sound of a sawmill as “being sick with the noise”, others, who might not live in a direct vicinity of industrial complexes, describe a more nuanced attitude towards the modern machinery.

Rozka, for example, describes the sounds of a sawmill as a 24-hour disturbance for locals, especially if the mechanism is not properly lubricated. Sometimes, she describes the sounds coming from a sawmill during the day as pleasant – sounds of vehicles, excavators, loaders, logs moving, and boards falling to the ground. “Machines help us a lot. Their sound is benevolent when you know it’s real, that the device is working well.” She gets disturbed if the sound changes, as she immediately knows that the device has broken. However, she dislikes the sound of a chainsaw in the forest.

Gašper also states that the night shifts at the sawmill can be heard, yet they don’t disturb him, as one can adopt these sounds like the sound of a train in



Recording of the documentary-feature radio play “The Whisper of Memories”. Photo by Saška Rakef

Ljubljana, he claims. The sawmill has been there since his childhood. The first sawmill was already built near the manor of the mountain Snežnik, and these sounds have been a part of Loška Valley for quite some time. “The industrial aspect, with sawing and chopping down trees – this somehow belongs to the Loška Valley.”

Mechanical sounds appear to contest and challenge people’s perceptions of the pleasantness or unpleasantness of the soundscape the most.

*How did our interlocutors describe sounds and acoustic environments? What other sounds are closely*



*linked to people's memories? Are there additional common topics that sounds express, dispute, or confront? Do shared sonic memories and experiences form any kind of acoustic communities, and if so, how did researchers contribute to shaping them?*

Here we delved deeper into how people listen and construct their sonic environments and create acoustic communities. "Acoustic community is any soundscape in which acoustic information plays a pervasive role in the lives of the inhabitants (Truax, 2001; Uimonen 2017, p. 118)". Acoustic community therefore refers to a group of individuals who share a common soundscape or auditory environment. This term is often used to describe a community or group of people who experience and engage with similar or shared acoustic elements, such as sounds, noises, and environmental audio. The concept highlights the communal aspect of the auditory experience, emphasizing the role of sound in shaping the shared experiences and perceptions within a specific group or community.

The shared sounds of work chores, rituals, gatherings, and play construct people's acoustic community. Our interlocutors speak about the embodied memories of such events, which resonate sonically in their memory.

In this region, dormouse meat, once popular in ancient Rome, remains a local delicacy, defying its disappearance in much of modern Europe. The traditional dormouse hunt, called "*polharija*", continues in early autumn. Hunters employ wooden traps, avoiding dormouse hollows to maintain fairness. The event has evolved into a familial and communal affair, resembling a village fete, fostering bonds through shared hunting stories.

The hunt's associated sounds vividly embed themselves in people's auditory recollections, especially the sounds the dormouse creates in the forest.

"The sound of dormice includes screeching voices as they climb from their nest to the tree; these rodents communicate with each other. If the owl, their natural enemy, is heard, they fall silent", said Rozka.

Although traditionally, dormouse hunting was not considered a female activity, fathers used to take their daughters into the forest after the nightfall to lay traps and later to see if any dormouse got caught. Rozka and Mila have fond memories of spending such quality (and mostly silent or whispering) time with their fathers.

"In the forest, one must walk in silence, attuned to the sounds of the wilderness – the calls of animals, the rustle of leaves. The most enchanting experience occurred when they extinguished the light and absorbed the calls of the owl and the dormouse, along with the gentle rattle of the wooden trap." (Rozka)

"One had to listen; being loud meant nothing would be captured. The sounds of people whooping around would distract the dormice, making them susceptible to capture. If an owl happened to hoot, it was a known fact that nothing would be caught that night. The owl, being the natural enemy of the dormouse, ensured that they did not emerge from their holes." (Mila)

However, Gašper vividly describes the hunting procedure and rituals in detail.

"The night is alive with crackling, screeching, and whistling as animals move through the forest. Even a small hedgehog creates such a clamour in

the woods that it resembles a wild man stomping about. The dormice themselves contribute to the forest symphony with their climbing and whistling up and down the trees, adding an intriguing aspect. Often, during dormouse hunting nights, the sound of a trap being activated can also be heard."

"While some people may be dismayed by dormouse hunters, these individuals are ardent nature enthusiasts. They strictly adhere to hunting seasons, never pursuing dormice out of season, and take care to ensure that traps do not harm other animals. The trappers possess a deep understanding of dormice, harbouring a genuine affection for these creatures, and express gratitude towards them in their own way."

He also mentions the importance of sociable sounds within this acoustic community.

"I would connect the sound of a crackling fire with the sizzle of a sausage cooking over the flames and the noise of a bottle being opened. When trapping, it's crucial to ensure hydration and prevent a dry mouth. ... The forest is filled with the sounds of walking, accompanied by snapping twigs, often in complete silence to avoid startling the dormice. Occasionally, there are bursts of joyful shouting by the fire when someone successfully captures a plump dormouse."

Local folklore stories are also infused with sonic qualities. Gašper's associated the sound of sleet during the ice storm in 2014 with Valvasor's tale, which asserts that if you walk through the forest and hear the crack of a whip and the breaking of branches, it means that somewhere nearby a devil is driving dormice to graze. The coat of arms of the Loška Valley features St. George slaying the dragon, and for



him, the most distinctive element is the sound of the dragon. “I’m sure that you can still hear it in the evenings if you listen carefully. If you go into the forest and look up, you can hear some sort of a dragon. Some people may think it’s an owl, a bear, or some kind of deer, but in the end, we just agree that it’s a dragon.”

There are many rich sound experiences in connection with the indoor, and even more with the outdoor communal work.

Indoor sounds were mostly associated with the kitchen – the prominent indoor workspace that was perhaps the most acoustically abundant place in the house, filled with the clattering of plates, spoons, and the crackling and burning of fire in the stove. Mila also mentioned the sounds of a spinning wheel, once heard from people’s kitchens and chambers.

The outdoor sounds were often associated with communal field work, such as ploughing, mowing, raking, hoeing – chores in which our interlocutors participated from their childhood days.

“The sounds of our childhood are associated with animals and work. Roosters and hens roamed freely around the yard; when a hen laid eggs, she clucked. There were also the sounds of a horse neighing and a cow mooing. The boys who went to work bought Tomos mopeds; after two o’clock, the air was filled with this sound. Perhaps there was even the hum of a lawnmower and the screeching of a cart. Sounds from childhood are more beautiful than those that came later, such as lawnmowers and tractors,” tells Silva.

A lot of people describe the sounds of roosters, hens, horses, cows, and dogs as the prominent



Educational work for the recording of the documentary-feature radio play “The Whisper of Memories”  
Photo by Saška Rakef

animal sounds of their youth. These sounds continue to be very much present in people’s lives. Gašper, who moved to the rural valley from the nearby town of Cerknica about 15 years ago, recalls that these sounds prepared him for country life. “The best thing is to sit under a pear tree and listen to an old lady who goes to milk the cows while shouting: ‘Be still, move, come on!’”

“I am woken up by roosters every morning in the village. At five in the morning, when the sun starts to rise, we already hear roosters; I think there are at least ten of them in our village.” He also hears the sounds of tractors, as nearly every house in his village has a little farm.

Local people fondly recall the sound of mowers and harvesters and at the same time expressing

the loss of the traditional skill, communal spirit and sonic aliveness of such events.

“When it was time to mow, the mowers first had to prepare their tools. They would grind their scythes, working until they achieved a nice, thin edge, but then the scythe still needed further sharpening. While having lunch, they would pause several times to grind. When five mowers were grinding their scythes simultaneously, the sounds were remarkable! Even the act of grinding itself produced a distinct noise.” (Francka)

While researching the soundscape and social memory in a village called Skruv in Sweden, Helmi Järviluoma discovered that the reminiscence is full of a sense of a loss, as people were speaking “of sounds

which have vanished, and of the fading away of a vibrant village life. They indeed drew the map of the past into the present, bringing their own bodily and localized past into the present experience” (Järviluoma, 2009, p. 149). Our participants also intricately mapped their personal and localized history onto the present experience in which the memory of the past played a more positive and binding role, as seen from Francka’s statement. Informants constantly travel back and forth between the past and present (Järviluoma, 2009, p. 142), swiftly shifting perspectives. They navigate their experiences in the moment with humour or critique of today’s way of life and the connected soundscapes.

“When mowing starts today, all you hear is the hum of the tractors and nothing else. Sometimes, you can hear the exulted sounds of mowers and other voices. Now, there is a lot of clunking up and down.” (Majda)

“Today, you don’t hear hand mowing anymore because it’s hard to find a person who still knows how to do it, given the prevalence of buzzing from all kinds of mowers. There is no longer suitable equipment for grinding. When I was little, I rarely heard the clatter of the scythe, but sometimes it could be heard continuously during mowing, as the scythe blunts quickly.” (Mila)

“Now, the field can’t be heard at all because no one works there. Back in the day, there was ploughing, digging, and mowing. Every task has its own sound – even a hoe has its distinct sound, as does someone digging with a pickaxe or sawing wood by hand. They used to saw, zzzzzzz (*žiga-žaga*) with a handsaw called ‘amerikanka’ (American woman, in translation). Today, all you hear is a chainsaw.” (Francka)

Remembrance brings out the reflective knowledge of the past, and when that which has passed is contrasted with today, critical reflection follows, claims Misztal (in Järviluoma, 2009, p. 150). Järviluoma also argues that we need productive remembering far more than we need productive forgetting. Local memory has the potential to confront the myths perpetuated by cyber capitalism and globalization, challenging the denial of time, space, and place.

There is no denying the importance of time and the church bell culture in the social memory of the villagers, resisting the out-of-place and out-of-time perspectives imposed by cyber-driven modernity.

In Francka’s words: “I grew up next door to a church. The chiming of the church bell created a sense of ritual. Humanity has gone through various cultures of order. At seven o’clock, the bells rang, signalling that everyone needed to get up and go to work or school. At noon, people waited in the woods or in the fields, anticipating the chiming of the bells. Aha, the bells will chime at noon. They managed the order so well. In the evening, when it was time to rest, the Ave Maria bell rang again, signalling that the day’s work was done.”

The humanly organized sounds, in the form of church bells and alarm clocks, that divided time into work/school and after-work/after-school activities were deeply embedded in communities and are still ringing in people’s ears.

Majda recalls: “Mom was going to work and was afraid that we (her daughters) would fall asleep. I remember the alarm clock rattled loudly, chattering away. Mom put it on a plate to make it even louder. That was terrible. That sound effect still echoes deep in my brain. ... On the way to school, I could hear a church bell if the wind blew in the right direction.”

The sounds of communal singing in churches or other choirs, as well as the sounds of accordions and church organs, were also highlighted by a few participants. Additionally, we recorded several local singers performing traditional ballads and other folk songs, along with a choir comprising retired local women, to explore the local folklore repertoire.

Marija in particular expressed the love of the local folk music as music that “drops into her heart”. She identifies with it and feels that it is a part of her. She also recalls village fete, and the sounds of accordion, screaming boys, stomping on wooden dance floors, and spinning.

There are also ambient, explorative, and playful sounds from childhood deeply embedded in people’s memories, as illustrated by Barbara’s story: “My brother and I once discovered an echo. In the house in Jermendol, where we lived (I was 5.5 years old when we moved out), one day, my brother called me while facing the forest in Gornje Poljane, and we heard that voice once more. At that time, we were children, unable to fully grasp the phenomenon, and we believed there was a man mimicking our words. So, I decided to call my brother’s name, and this echo repeated it. Excitedly, we shouted various words – “house,” “road” – curious if the echo would mimic them as well. And indeed, it did, because it was an echo. Now, that old house of ours is long gone, and the echo has disappeared too. It was our first childhood experience, something mysterious.”

Children’s play was often connected to work chores and also to school. Silva remembers how she used to hide in the big pile of raked leaves that rustled as she recalls her sensory experience.



School sounds are closely associated with the sound of a school bell and will be elaborated further in the following chapters.

Children's off-school and off-work time was with filled with play. According to the locals, they particularly liked to play in or by the streams.

Mila preferred to listen to the brook babbling under the mountain Snežnik castle when she was a little girl. The sound of water was soothing. At the same time, it stirred her fears because she grew up with her grandmother, who was full of different stories. Her grandmother used to say that "water pulls", as there was not always an explanation for accidents in the water.

Francka remembers: "The water was ours. Where you live, you do all kinds of good things and stupid things. Kids are kids. The stream was full of fish, trout, but not the kind that are now fed with briquettes; rather, those that were fed with other fish, providing a completely different kind of food. Although it was forbidden, they were caught. We lived on fish. You also have to get used to the water, just like sailors have to. We've been wading in that water since we were little; no one caught a cold, even though the water was so cold. And there, we learned to swim."

In Marija's memory, catching tiny fish (called *filke*) involved the sound of bare feet splashing and scuffling as quietly and slowly as possible to surprise the little fish. She also recalls the sounds of swimming: "There was splashing, screaming, and bubbling. We also bathed in streams; there was always an older child in the company who had the command and looked after the younger ones – we formed a natural community. Everyone had their own role and their own duties in such situations." She also remembers



The crew at the entrance to Križna Cave  
Photo by Saška Rakef

concrete communal washboards by the streams, before the washing machines were brought into the households (before 1968). "Washing had a *slop, slop, slop* sound – when you heard it you knew that someone was washing laundry and that the washing place was occupied." "And cows from all the farms used to go to communal watering places to drink water. The masters shouted, the cows mooed, their poo splashed. They drank the water and went on."

Communal places were filled with sounds that now echo only in people's memory; they are now silent.

*What role does silence play in the locals' perception of their soundscape?*

Silence was often mentioned in people's narratives – not a passive absence of sound but a dynamic and culturally mediated form of communication. Therefore, understanding the social context is crucial for interpreting the function of silence – how it is expressed, interpreted and valued.

Due to abundance of water, the silence in people's perceptions is often linked to quiet moving of the still water and floodings of the fields that are common in this region due to its porous limestone geology creating intermittent lakes, caves, sink holes, swallets, sinking streams and springs and other karst phenomena.

Gašper associates silence with the slowly moving water: "I always associate floods with tranquillity, peace, a slight murmuring of water, a drop dripping into water... I associate silence more with floods. It seems to me that when the valley floods, it quiets down a bit. No one works in the field anymore because the field is under water, so everyone stays at home more. If you maybe walk along this flooded field with a boat, you can really hear such silence, maybe some bird somewhere up there... There are no terrible sounds. I would rather say that, more than any other sound, I associate silence with floods. ... Water can be a threat, but it's the one thing we can't live without. There is a lot of water here. People here live with water and floods; in the spring and autumn, they know that it is necessary to prepare for water, to remove things. The water comes slowly, and they are used to it. ...

Here at our place, there is a blissful silence, which can be quite scary for someone who is not used to it.”

“If Loka itself floods, the drumming is heard, and a thick layer of water falls over the stones. When there was more water, there was no more sound, only silence.” (Marija)

“When there is pure silence at night, you can hear sounds from the Golobina sinkhole (near the village of Dane). The old people said that the water stays for three days and drains for three days.” (Majda)

Silence is also connected to the deep time experienced in the local Križna cave, a naturally preserved 8 km wide cave with 22 underground lakes reachable by boat. The cave explorer and guide, Janez, talks about the deafening silence as well as the deafening noise that can both be experienced at certain times in the cave, depending on the water flow and the amount of precipitation. “The cave can be so quiet that you can hear your heart beating, your ears ringing... or it can be deafening. The water can rise and roar so much that it takes a lot of effort to stand next to it. The least sounds occur when there is a drought. That’s when we say the cave is dead – nothing is happening, no dripping. There are more sounds during floodings. The most beautiful thing is when there is a strong storm outside; it hits hard through the cave ceiling, drips everywhere, and you can hear the trickling, the murmur of the drops. After a long drought, this is the most beautiful sound you can hear – the water is coming.”

Mila reckons that we often take sound for granted, and we have to think hard to truly hear it. She is especially aware of this because she works as a guide in the Križna cave, where the absence of sounds is complete, except for human sounds and dripping

water. “That’s when you start to realize how many different sounds there are when you come out of the cave or when you go into the cave, and how that rare sound in the cave is so much more intense. ... People are shocked when the lights go out, experiencing how dark the darkness is, and there is no pure silence because the cave is full of water, and the sound of water is strong. Otherwise, the cave can offer pure silence, an experience you cannot find elsewhere. To me, pure silence is a much worse experience than pure darkness.”

*What kind of sound competence is being cultivated and who cultivates it? What is the role of researchers in this process?*

“Random sounds of everyday life cannot be dismissed as having no cultural significance. Such sounds, unknowingly, shape and punctuate our social life. They instil a kind of auditory unconscious that organizes our communications,” claims Kumar (2022, p. 139).

Enquiring about both random and more distinctive sounds in a local community initially proved to be a challenging task. People found it difficult to recall their auditory memories, as the process of making unconscious sensations conscious and articulating them was not a common practice. Many mentioned that sound is rarely a conscious consideration and can be challenging to recall initially. Interestingly, in Western culture, sight is often elevated to a higher cultural value compared to other sensory experiences.

Soundscape competence involves the ability to comprehend environmental sounds as meaningful. I would claim that researchers played an important role in stimulating people’s interest in their own – individual or communal – soundscapes.

Following the initial interviews, many older participants returned with additional stories, sharing further experiences related to sounds, recalling more and more nuanced details about their sound histories and memories.

The continuation of ethnographic fieldwork proves vital in allowing individuals to assert their connection to the soundscape, providing a platform for exploration and potential transformation. The Loška Valley holds immense significance for its local inhabitants, and many consider it the most beautiful. However, there are moments of melancholy as people observe changes such as forest, pastures and meadows overgrowth, the asphaltting of prized fields, and the intrusion of noise. These alterations, along with the impact of major noise sources, have compelled some residents to sell their homes and relocate. Despite these and other challenges, locals we encountered still praise the valley’s breath-taking sights, an abundance of nature and a high quality of life. The ethnographic exploration captures not only the evolving soundscape but also the emotional attachment and environmental changes that shape the community’s identity.

Children actively cultivated sound competence not only through formal education, including school curriculum and extracurricular activities, but also by engaging in hands-on experiences facilitated by the research team and a school librarian. These experiences encompassed interviewing older generations, visiting villages, exploring diverse soundscapes, listening to narratives, and exchanging their own perspectives on sound. Additionally, their involvement in radiophonic work, sound editing, and the creation of radio play screenwriting, among other activities, played a pivotal role in nurturing their comprehensive understanding of sound.



*How do sound knowledge, experience and sensibilities translate from one generation to the next? What kind of exchange is taking place? How did children help to shape the fieldwork and artistic process?*

The theory articulated by Järviluoma, emphasizing the mediated and produced nature of the past through acts of remembering, aligns with the poignant quotes that follow. The assertion that “the past is always mediated and produced through acts of remembering, in which we present ourselves to ourselves and others” (2023, p. 12) underscores the dynamic and subjective nature of memory.

The quote by Francka that says: “People move on with the world, leaving traces behind. When you get a little older, there is a lot to remember,” encapsulates the inevitability of change and the profound impact it has on individuals as they age. The notion of leaving traces behind hints at the imprints people create throughout their lives, suggesting that these traces serve as markers of personal and collective history.

The subsequent quote from Marija, “Every one of us, old ones, carries at least one book in our heads; if you don’t have anyone to tell it, it’s sad because it dies with you,” amplifies the significance of personal narratives. It accentuates the idea that memories, akin to unwritten books, contain a wealth of experiences and insights. The sadness expressed underscores the potential loss when these stories remain untold, as they represent a unique perspective that fades away with the individual.

The final Marija’s quote, “No one laughs anymore, no one is in a good mood anymore, no one is interested in anything anymore, everyone is like in an exile, we are all rushing somewhere,” captures a sense of societal change and perhaps a lamentation about the loss of joy and connection.



Recording of the documentary-feature radio play “The Whisper of Memories”. Photo by Saška Rakef

It resonates with the idea that as people rush through life, the depth of engagement with the past, and by extension, with each other, may diminish.

In connecting these elements, one can see a narrative thread that weaves through the theory of mediated memory and the poignant expressions of individuals reflecting on their past. The interplay between personal recollections and societal changes adds layers of complexity to the understanding of memory as a dynamic and context-dependent phenomenon.

The theoretical framework proposed by Järviluoma, emphasizing the mediating role of memory in shaping individual and collective identity, finds

resonance in the dialogues and reflections presented in the subsequent quotes. The act of young people recounting their experiences to older family members or adults is therefore not merely a recounting of events; it is a process of self-presentation and self-production. The younger generation, in narrating their important paths, actively contributes to the ongoing construction of their identity (Järviluoma & Murray, 2023, pp. 12–13).

The observation that different generations harbour different memories is mirrored in the interactions between a school boy Mirko and Silva. Their discussion about sounds reveals not only the diverse auditory landscapes they experience but also the

personal significance attached to these sounds. After the initial uneasiness, they connect over the experience of star gazing and enjoying the sounds of meadows and nature, highlighting the nuanced nature of intergenerational communication.

The dialogue between Majda and a schoolgirl further underscores the temporal dimension of memory.

“We usually also hear the school bell, shouting, and running in the corridors, teachers shouting in other classes, and other students not listening. Even the children who answer can still hear, and the rustle of papers as they write the tests,” the girl says.

Majda replies, “We were also restless. On top of that, the floor was not smooth; it was rough. Some pupils came to class with shoes on, and we moved the chairs. There was also shouting. We, children, haven’t changed.”

The girl’s description of contemporary sounds in the school environment prompts Majda to reminisce about her own school days, emphasizing that, despite the temporal gap, certain elements of restlessness and commotion persist. The exchange serves as a poignant illustration of the interconnectedness of past and present, where the soundscape acts as a bridge between different epochs.

The difficulty faced by older interviewers when asking children about the sounds they hear reflects the challenge of bridging generational gaps. The inclination towards moralizing rather than genuine curiosity suggests a potential disconnect in understanding the contemporary experiences of younger generations. This aligns with the notion

that the past is not a static entity; it is subject to interpretation and influenced by the perspectives of different generations.

Marija’s inquiry about how a young girl imagines the former times and her expressed desire to live in that era further encapsulate the interplay between memory, perception, and longing. The girl’s belief that people were happier in the past and the preference for the bygone era highlight the subjective nature of nostalgia and the selective lens through which individuals view history.

In essence, the dialogues and reflections illustrate how memory and the sharing of experiences contribute to the ongoing construction of identity, intergenerational understanding, and the complex interplay between past and present.

### Conclusion and possibilities for future research

In our exploration of the intersection between people and their environment, a fundamental inquiry emerged: How do individuals derive meaning from their surroundings through the medium of sound? Specifically, we sought to unravel the intricate ways in which people establish connections with themselves and others through the creation of soundscapes, thereby nurturing their sonic sensibilities.

Through a comprehensive analysis of rich ethnographic material, generously provided by the collaborative efforts of children and their mentors, we gleaned some insights into the relational nature of sound. It became evident that individuals perceive and experience sound in relation to one another and the broader world. This sensory engagement, aptly termed “sensory remembering”, unfolds as a collective and relational endeavour

(Järviluoma, 2023, p. 5). Participants weave connections among past and present experiences, environmental elements, their own identities, and the beings that may or may not be influenced – a concept encapsulated by Venäläinen as ‘commoning’ (Järviluoma, 2023, p. 5). The practices of remembering are deeply situated and embodied, prompting us to embrace the term ‘social remembering’ to underscore its dynamic and non-static nature, in contrast to the more traditional notions of social or collective memory.

However, as our exploration unfolded, numerous questions lingered, awaiting further investigation. The community’s sonic evolution and the transformative nature of its soundscapes remained uncharted territory, prompting us to propose a longitudinal research initiative. This endeavour would delve into the changing nature of sound over the years and explore how the community, both as individuals and a collective, has undergone sonic transformations.

In the spirit of fostering a deeper connection and understanding among community members, we advocate for more transgenerational sound gatherings. Emphasizing the importance of intergenerational sociability, we believe that older members of the community stand to gain valuable insights from the youth (not just the other way around), as they collectively navigate the sonic landscapes of the present.

Furthermore, we propose the continuation of collaborative efforts with elementary school children to cultivate their sound sensibilities. A noteworthy suggestion involves the development and maintenance of dynamic sound maps – a living, transgenerational project that not only captures the evolving



sonic identity of the community but also serves as a repository for dialects, old customs, beliefs, and both tangible and intangible heritage. This multifaceted approach aligns with our commitment to ongoing exploration, understanding, and preservation of the intricate tapestry woven by sound within our community.

### Post scriptum reflections and offerings

The participatory documentary radio play, titled “The Whisper of Memories” (*Šepet spomina*) caters to both children and adults. It is a collaborative endeavour involving children, elderly individuals, and radio creators – specifically, screenwriter Ana Obreza and director/concept designer Saška Rakef. This creative team crafted a sound map using narratives from both the past and present in the Loška Valley. The radio play made its debut on Slovene national radio on December 18<sup>th</sup>, 2023.

The Loška Valley community we collaborated with eagerly anticipated the premiere, and people were profoundly touched and moved by the narrative of the radio play in which they actively participated and contributed to its creation. According to the local librarian, Lea, all the children expressed a sense of pride and value knowing that their creative ventures were appreciated and included in the radio documentary play. This collective endeavour remarkably united the community, and the children listened to the radio play together in the classroom.

In January 2024, Lea will organize a listening session in the school library, providing an opportunity for all the older individuals who participated to come together for collective listening, thereby reinforcing the aural community practice. Our research team is enthusiastic about joining them in this celebration.



Children sound art makers receiving certificates for their endeavours. Photo by Leonida Zalar

The participatory, collaborative, transgenerational, cross-cultural, and multidisciplinary (artistic and humanistic) research, initiated and carried out by the Slovene National Radio and, specifically, the B-AIR project, has proven to exert a profound influence on the emotional lives and sonic perceptions of both individuals and communities. It nurtures enduring connections, friendships, and bonds that reverberate through the sounds we collectively explored.

P.S. Meanwhile, sound artist Marta Medvešek crafted another sound documentary using material collected during our fieldwork, titled “Forest is” (*Gozd je*), which was broadcasted on the National Radio on December 20<sup>th</sup>, 2023.



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Recording of the documentary-feature radio play “The Whisper of Memories”. Photo by Saška Rakef





Community work for the recording of the documentary-feature radio play "The Whisper of Memories". Photo by Saška Rakef



## LIBRARY OF SOUNDS: Towards deep listening *with and within* the community

“The Whisper of Memories” (*Šepet spomina*) started as an experimental project created by Radio and Television Slovenia and facilitated by the team of professionals in sound art and music.

Members of the team working on “The Whisper of Memories” were Saška Rakef (radio director), Urban Gruden (sound engineer), Marta Medvešek (sound artist), Ana Obreza (musician and writer), Katarina Juvančič (musician and anthropologist), and Ana Čorić (community musician and music pedagogue).

The aim of the project was to map the sounds of the Loška Valley in Slovenia, through the intergenerational dialogue, with results coming in several formats: the documentary radio drama; the audio-portraits of the residents of Loška Dolina, in the form of recorded interviews edited and broadcasted in the local radio; and the radio miniatures inserted in the Echoes app (that uses geolocations where the maker can insert the sounds).

In terms of pedagogical outcomes, the project aim was to support school children in carrying out different aspects of the process: navigating the story and collecting legends from the area; learning how to record and do the interviews; making the interviews; writing a script; and sound design. The pedagogical

support to children was carried out in two ways: (1) through live encounters with children in school and the community; (2) in online workshops.

### Live encounters in the Elementary School “Stari Trg” as a nucleus of the community

School children and elderly people, as residents of Loška Dolina, came together in the Elementary School „Stari Trg“ during five days between September 18<sup>th</sup> and 23<sup>rd</sup> 2023. On the first day, 15 children from 4<sup>th</sup> to 9<sup>th</sup> grade gathered in the school library. It is important to say that the school librarian, Mrs. Leonida Zalar, was the one who initiated the idea, linking the school with the Radio and Television Slovenia. In the background of this initiative are Mrs. Zalar’s activities in the school library where children come for the books in the compulsory reading program, but also for extracurricular activities linked to the reading challenges under the Slovenian national program “The Reading Badge” (*Bralna značka*). Every year she organises school radio in the library as an improvised studio space where older children read excerpts from children’s literature so that younger children can listen to it. In that process, Mrs. Zalar invites sound engineers from Radio and Television of Slovenia to help with the recording part. School radio workshops were also a stimulus for the school trip to visit the Radio

and Television Slovenia studios in Ljubljana. This is how the first contact happened, leading to the project “Whisper of Memories”.

This chapter presents the process of collaborative creation of the radio drama by children and other residents of Loška Valley, professionals working there, the crew of Radio Slovenia and the members of the B-AIR project team. Facilitated by Saška Rakef, Ana Obreza and Marta Medvešek, the creation process followed after the three initial days when the focus was on children learning how to make interviews, map the sounds of the Loška Valley, record sounds, and use technology properly.

### VIGNETTE: Collaborative professionalism in the Križna Cave (*Križna jama*)

On the last day of the live-encounters, the whole professional team and the children went to the Križna Cave, the only naturally preserved cave in Slovenia open to tourists, known world-wide for its underground lakes. Although the children have already visited this cave, for them this was an opportunity to interview the local expert about it, as well as to approach the cave in a different way – through listening and recording the soundscape.



In the thematic analysis (coding) of pedagogical processes, interactions and group dynamics, several important topics emerged: those of the liminal space, freedom, silence, and in particular of professional learning community – community of practice. Related to that, here is the progression of the quality of interview questions asked by children in the collaborative process of situated learning with professionals:

#### Child to child:

Which sounds do you hear in the cave?  
Which sounds do you hear now, when we are sailing in the lake in a boat?

#### Radio director to child:

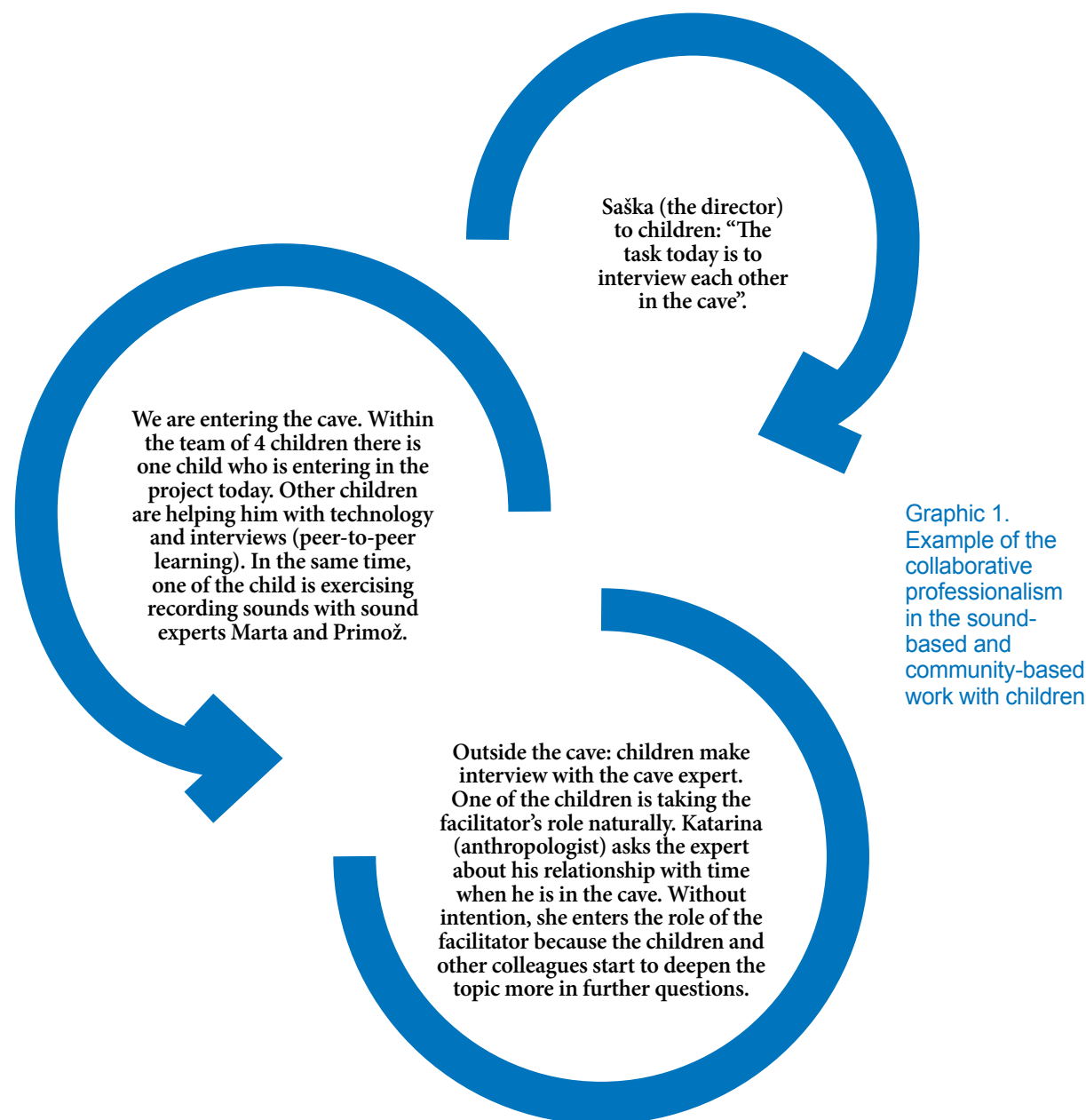
Which sound is the most impressive for you?  
Why?  
Tadej, you are a musician. Do some sounds remind you of music?

#### Anthropologist to the cave expert:

So, you said that you were playing in the cave when you were a child?  
("Yes, we played the research expedition game! We were finding bones and bringing them outside. And we were listening to old people telling scary stories.")

#### Child to the cave expert:

How do you feel when you go to the cave?  
How would you describe the sound of the cave to someone who has never been to the cave?  
("It's so quiet that you can hear your heartbeats.")  
Which sounds are still here, but could disappear soon? It might be good to record them!



## Scenario writing workshop

The scenario writing workshop facilitated by Ana Obreza started in September 2023 in the Elementary School “Stari Trg” on the fourth day of live workshops, and continued in the next weeks both in live and online formats (since the facilitator lives near the school, so she was able to see the children in-person). The workshop was occasionally co-facilitated by Saška Rakef, the radio director, who had the bottom-up insight in the all artistic and pedagogical processes. From the radio director’s insights, the collaborative process with children (facilitated both by Ana and Saška) was full of mutual listening, which resulted in a deeper approach to the individual and collective writing process and the text itself:

*“We developed different ways of approaching the text. Very perceptive and good materials were created. Ana and I decided to do all the exercises together with the children. So for each exercise 4 texts were created (everyone wrote their own text), then we debated what was interesting within each individual approach, in which ways it could be further developed.... I think that this approach became successful because the children would set off with their full imagination to describe the situation (in contrast to the beginning, when the texts were just a summary of documentary statements). Ana’s and mine goal was to start writing as freely as possible, to explore different ways of playing with language and the sounds of language. After each meeting, the plan was for Ana to make a compilation of the four texts, combining parts from each text.”*

Saška Rakef, director and author  
of the concept

Here are the exercises developed during the scenario writing workshops:

### E1:

#### Let’s start from the legend:

Facilitator started with the story from her childhood in Loška Valley, about a boy who didn’t want to go in the field to pick potatoes, so the eagle lifted him up and carried him across the whole valley. The story was told to her by her grandfather. She gave the name to the boy – France.

#### The story goes like this:

*France is an eleven-year-old boy. He likes to go to school, but there are days when he has to skip classes because of urgent work in the home farm. Such a day is today, when potatoes must urgently be planted– a long, endless field of potatoes. The brother steers the ox, the father plows, and he places the tubers in the ground. The monotonous work has neither end nor finish, and France immerses himself in the sounds that fill the spring air. The birds sing, the cuckoo crows, the woodpecker knocks. France tries to imitate the sounds and at the same time thinks about the birds – how nice it would be to have wings, to detach yourself from the muddy ground and take to the sky, to fly over the home fields and the village, to fly to the school and peek inside, to fly around the bell tower and visit good old mother in the cemetery, to fly across the valley long and wide, to*

*travel on the wings of the wind right there to the Father Snežnik (Snowy) mountain... In response to his thoughts, wings rustle next to him and an eagle descends to him. France doesn’t hesitate and together they take to the air. They fly over Loška Valley, its landscapes change below them, and so do the seasons. As the seasons pass, they descend closer to the earth, watching what people do, what happens among them... as spring rises into summer, and summer dries up into autumn with rain, autumn turns into a blizzard and a silent winter... until warmer winds bring spring to the land again. Then the eagle drops France in the same place where it picked him up. There is no more potato field, no more ox, no brother to drive it and no father to plow. The field is now a meadow, and the carriageway next to it is an asphalted road on which a car or a rumbling tractor sometimes drives. The birds still sing, the cuckoo still crows, the woodpecker still knocks. France is now an old man, telling his grandson on the lawn stories about the old days when children wouldn’t go to school if they were needed at home for work, and people picked potatoes in the field instead of buying them in the store.*



**E2:**

**Choose one memory and start from there:**

Which memories can you recall the most from the interviews you recorded with elderly people from your village? Pick one memory and get in the France's shoes. Imagine that you are looking at this memory from the eagle's wings (from the top, as neutral storyteller).

**E3:**

**How to fly in another scene?**

Let's see what happens next! Where are we flying next? Let's imagine and write a scene.

**E4:**

**Use your senses:**

Think about yourself either as an eagle or a boy. What's the weather like in the sky? Is it windy? Hot or cold? Use all your senses to describe the flight.

**E5:**

**Future:**

Think about the Loška Valley in something like 70 years (let's say in year 2097). France is very old now. What would the eagle see 70 years from now? How do the roads look like? Are there still cars on the road? The people and their clothes? What are they doing?

**E6:**

**Feelings:**

How do you feel when the eagle lifts you up in the air for the first time?

**E7:**

**Let's go deeper:**

Children were given transcripts of excerpts of the interviews about dormouse hunting ('puhanje'). Tasks:

**Step 1.** Remember the feelings of dormouse hunting – walking in the autumn forest in the evening; if you have no experience in dormouse hunting, try to immerse yourself in it with (the) power of your imagination. Write down your memories, feelings, and impressions from dormouse hunting and walking at night in the forest.

**Step 2.** Read the transcripts of the excerpts from the interviews. Choose one person's story – the one that appeals to you the most is the most interesting.

**Step 3.** In the way we tried in the today's workshop, write down the inner monologue of France (or the eagle) who observes the scene from above, OR of the person you have chosen (e.g. Janje). When writing, be inspired both by what the actual person said and by your own experiences and thoughts (what you wrote in Step 1).

**Step 4.** Include a few selected documentary excerpts in your writing, or quotes.

\* You can also write in the way of poems or dialogues... find the way you enjoy the most!

**E8:**

**Can you imagine a different childhood?**

**1. Read** the passages carefully. Try to imagine little Pepco and little Peter. Are they diligent students or are they mischievous?

**2. Imagine** growing up in a time when schools still punished children with "donkey benches" (the bench where you have to sit when you weren't behaving well) and whipping and writing sentences dozens of times on the blackboard. What could you have done (alone or with your friends) to deserve punishment? What kind of punishment would such an act entail?

**3. Describe** the situation: it can be done as the inner monologue of a child who messed something up and is being punished, or as if France is observing and commenting on it. In any case, it is good to relive your own experiences of mischief and the punishment that followed. How did I feel when I realized that recklessness comes with punishment? Did I have a lump in my throat/did my tears pool/did my stomach tighten?

**4. Include** a selected short excerpt (a sentence or two) of the interview transcript in your text.

\* If you are more challenged or enjoy writing in a dialogue or a poetic form – go ahead."

## Sound editing workshop

The scenario writing workshop facilitated by Marta Medvešek – and followed by the researcher-pedagogue Ana Čorić and the radio director Saša Rakef – started in September 2023 in the Elementary School “Stari Trg” at the second day of live workshops. In the next two months the workshop continued online (on Zoom), since the facilitator lives abroad, so she was able to see the children only online. From the very first sound editing workshop in school, the team of professionals had an idea to make it as a participatory process that fosters self-directed learning and supports children’s authorship. The workshop had two participants, a 12-year-old and a 14-year-old child, who were present in the workshops for the entire duration of the project. There was another child interested in the workshop, who came once, but eventually decided to go to the scenario workshop. The initial idea of the sound editing workshop, discussed by the team of professionals, was to go in the direction of the sonic postcards. The aim was to enhance children’s imagination and make them think which parts of the stories/interviews are important to them, which sounds they would use in their sonic postcards, etc. The initial idea was also to put all recorded material and sound art made during the workshops in a sound map at the website, as acoustic heritage, as well as to insert sonic miniatures in the Echoes app in real locations.

The specificity of this workshop was the collaborative dimension of the process. The facilitator asked the researcher to propose and facilitate ideas for the exercises for the purpose of the exploration of possible levels of deep and concentrated listening. During the onsite and online workshops the process of peer-to-peer learning occurred. What could also be noticed is that children took the role of facilitators as ‘digital natives’ and native Slovenian speakers, showing the adult facilitators (as ‘digital immigrants’) advanced methods related to the technology they used, as well as teaching them Slovenian language (since they are both speaking Croatian).



Radio director Saša Rakef in dialogue with children-interviewers  
Photo by Ana Čorić



**E1:**

### **Make a soundstory:**

Make a short story using only sounds, without talking.

*Additional idea:*

\*\*\*CONNECTING WITH THE SCENARIO WORKSHOP: Pick the part of a scenario or a story written by your friends in scenario workshop. Read the text and record your voice. Add soundscape with sounds from the Valley.

**E2:**

### **Topic-based story:**

Pick a topic that emerged from all the interviews we made with elderly people – something that was often repeating and that you think it's important (e.g. forest, silence, school, childhood, etc.). Go through all of the interviews and choose parts that can describe this topic well. Make a miniature based on that topic.

**E3:**

### **Building a sound image around the story:**

Pick one of the recorded interviews. Cut out the parts you don't need in Reaper (or other software). It is enough to leave only one phrase if you want to build a sound image around it. Are there any sounds in the interview that you don't need (e.g. a church bell)? If you need to remove some important parts of the speech, maybe you can find another solution for the story – and narrate part of it by yourself! What other sounds do you need for the sound image?

Listen to the interview carefully to detect the sounds that the speaker is talking about. Go out and listen to your surroundings (water, leaves, children playing, traffic, church bells, animals...). What sounds can you hear? Record the sounds with the Zoom (and headphones) in the Snežnik mountain, or elsewhere in Loška Valley. Try to stand still and record 5-10 minutes of each sound. Upload the sounds in the common folder.

**E4:**

### **Let's dive into sound!**

Your miniature lasts for a minute. How can you make it 3 min long? Let's dive into the listening experience.

*Additional ideas:*

\*\*\*LISTEN AND COPY: The task is to listen to some short radio play or a miniature made by the professional artist from the radio, and explore detailed work on sentences and sounds. How can we say more with less? This exercise helps diving deep into listening.

\*\*\*SHOW US YOUR FAVOURITE PLACE: Think about your favourite place in the Valley. Write a short text about it to describe why it is so special. Read the text and add sounds to present the place to the listeners. The miniature will be on the Echoes app right in the location you're talking about!

To listen to the documentary radiodrama "The Whisper of Memories":



To listen to observations of the professional team about the process:



# EVALUATING AUDIO WORKS FOR THE YOUNG AND THE VULNERABLE





# EVALUATING AUDIO WORKS FOR THE YOUNG AND THE VULNERABLE

Evaluation of audio artistic works for babies, toddlers and vulnerable groups is still underdeveloped and scarce. In order to create space for interdisciplinary research of artists and scientists to create programs and audio works for babies, toddlers and vulnerable groups we are developing different methodologies for evaluation.

We evaluate how sound and music address babies, toddlers and adults who care for them and what the basic prerequisites of listening materials are that are helpful and meaningful for the child.

Evaluation methodology is based on observation research, expert groups' insights, interviews with teachers, and parents' observation. On the basis of our annotations the action research is conducted by artists and scientists in joint creative processes. In this interdisciplinary work of artists, psychologists, teachers and parents, the observation protocols, interview questions, and criteria for the interpretation of behaviour, play and drawing of babies, toddlers and vulnerable groups are made.

Understanding the effect of joint listening of babies and their caregivers is also within the main scope of evaluation. The analysis of audio works that help caregivers to better connect with their babies and toddlers and to build secure and attuned relationship is conducted.

A special part of evaluation is devoted to making audio art with children as performers in radiophonic theatre plays. The methodology used for this purpose is game-based research, as well as focus groups with the adult creators and performers of the radiophonic theatrical plays.

Special focus is placed on creating evaluation strategies for monitoring the sound-art production developed for hospitalised children, deaf and hard-of-hearing children and children with severe physical disabilities.

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## DEVELOPMENT AND TESTING OF A QUALITATIVE METHODOLOGY FOR THE EVALUATION OF ARTISTIC AUDIO WORKS FOR INFANTS AND TODDLERS

The subject of evaluating artistic radio works for the youngest is a significant challenge. Firstly, because it addresses the most fundamental questions about the needs of children and the meaningfulness of creating artistic radio works specifically for this population—essentially, the question of purpose. The second challenge is the selection of criteria for evaluation, and the subsequent challenge is to design an appropriate methodology for assessing the effects of audio works on infants and toddlers.

We approached these challenges on multiple levels simultaneously. Interdisciplinary teams of experts in psychology, neuroscience, music education, and didactics, as well as artists, were formed. They collaboratively developed artistic works and tested them in various listening contexts.

The central evaluation group consisted of three experts: a developmental psychologist and psychotherapist, an expert in the psychology of music and educational psychology, and an expert in music education and didactics. This group established the basic evaluation methodology based on consultations with a media psychologist and the editor of children's and youth programs at RTV Slovenia, who has extensive experience in systematically monitoring the responses of the youngest to media content. Before planning developmentally appropriate evaluation approaches for radio works for the youngest, we thoroughly examined foreign literature in this field and examples of best practices.

It is essential to emphasize that this field is poorly researched even internationally. Throughout the entire project, we continuously refined and modified the methodology based on experiences at each action

step of the project. Evaluation criteria and recommendations for creating radio works for the youngest were sharpened throughout the project, as diverse effects and potentials of this type of art were revealed.

**Research Objectives:** The goal of the action research was the same as that of the project: creating sound art for infants, toddlers, and vulnerable groups. The objectives included a theoretical overview of sensitizing children and adults through musical and sound art, and the importance of auditory sensory perception for the experience, development, and emotional regulation of the youngest. Additionally, they focused on researching sensitization through radio artistic works, developing an evaluation methodology, implementing the evaluation of artistic events, using evaluation results in the planning and creation of artistic events in the steps of action research, and presenting research results.



To achieve these goals, we first sought theoretical foundations to understand the importance of sound and music, as well as methodology to determine the effects of sound and music on the development and experience of the youngest. Because the creation field for children under 3 years old is still very new and unexplored, with few existing works, there are also no established criteria for in-depth evaluation of these works and their contribution or impact on development and experience. Through the project, we aimed to shape a methodology for the evaluation and contribute new insights into the field of creating sound art for the youngest. We were particularly interested in the role of sound in a child's experience, and which characteristics of sound and music art have the greatest impact in this context.

We evaluated the resulting works step by step, developing evaluation methods for each work and group for which the work was created. Through ongoing evaluation of the effects of individual sound and radio artworks on listeners (infants, toddlers, and their caregivers), we determined which elements of these works most strongly influenced the attention and interest of infants and also triggered interest and attention from adults toward the child. Simultaneously, after each step of the research, we incorporated new findings into the planning and preparation of the next cycle of events for infants, toddlers, and vulnerable groups.

**Research Questions:** The following research questions were formulated:

1. How to continuously evaluate and plan the creation of sound-musical works for the youngest? (Action research, first step: webinars, collaboration with experts in music education and didactics, developmental psychology, psychology of music, neuroscience)
2. Which methodology to use in the evaluation of sound-musical works for the youngest? (Action research, second step: systematic observation)
3. Which factors encourage and support engagement in listening to sound-musical works? (Evaluation results, third step: sound and musical elements and length of musical works, interaction between children-parents (educators)-performers, physical space (external noise (Sonja Jeram), spatial equipment – kindergartens, radio, Old Power Plant)

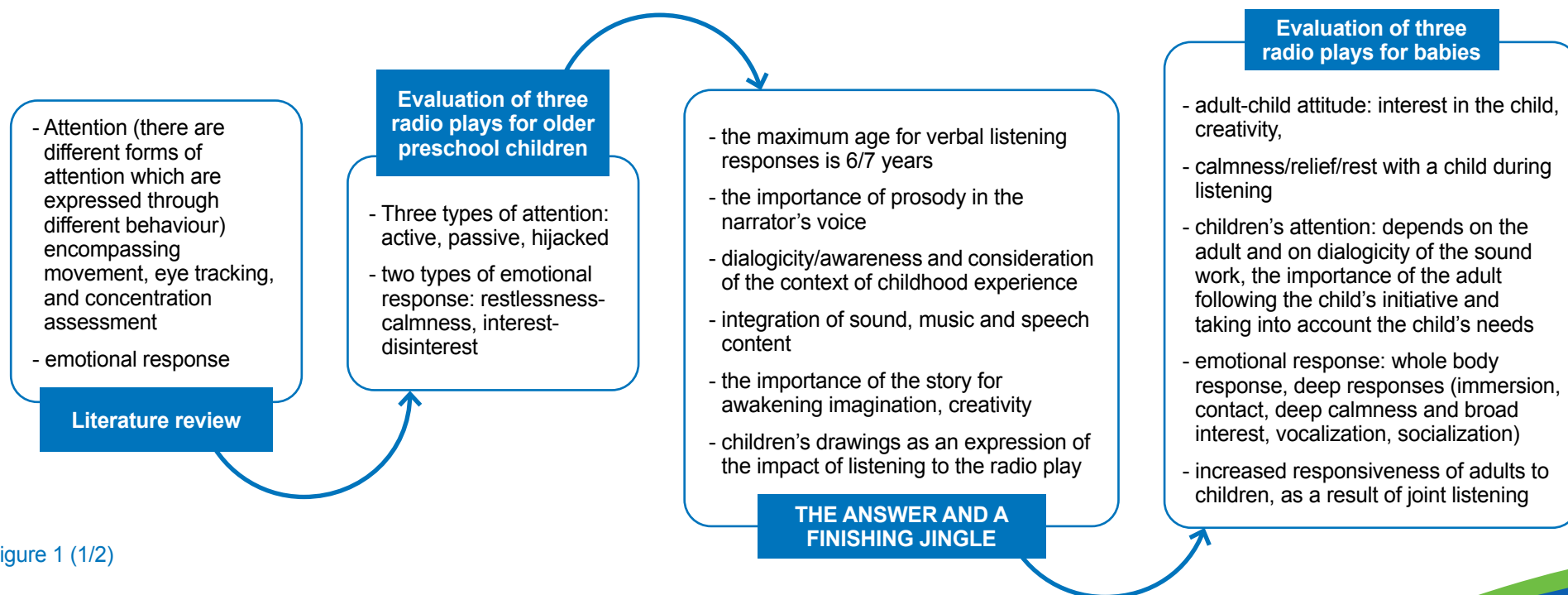


Figure 1 (1/2)

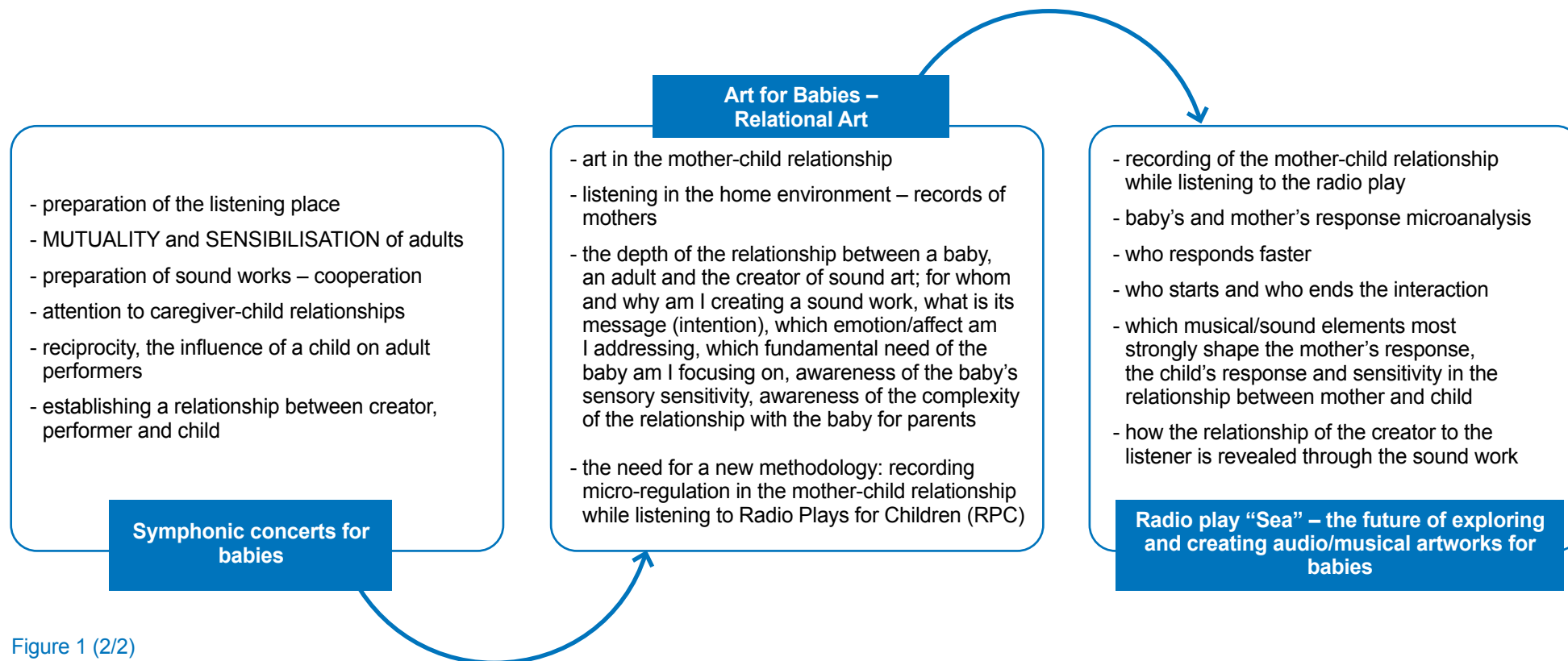


Figure 1 (2/2)

### Research Progress:

Based on the reviewed literature and in line with the nature of the project, which involved collaboration between creators and professional associates to develop new works for infants, toddlers, and vulnerable groups, we opted for qualitative research and an action research approach that allows **real-time adaptation to events and the development of practices that, through careful planning and evaluation, lead to the set goal: creating sound art for infants, toddlers, and vulnerable groups.**

The research unfolded in four steps:

**Step One:** Situation analysis and formulation of theoretical guidelines for creating artistic audio works for infants, toddlers, and vulnerable groups. The development of the creation and evaluation methodology began with the formation of a series of webinars based on the situation analysis. These webinars served as a starting point for the creators of artistic audio works and as a basis for selecting the evaluation methodology for researchers.

**Step Two:** Development and selection of the evaluation methodology and evaluation of radio works for pre-schoolers and vulnerable groups.

**Step Three:** Development of the evaluation methodology and evaluation of audio works for infants and vulnerable groups.

**Step Four:** Formulation of guidelines for creators and the creation of a set of protocols and methods for evaluating works for infants, toddlers, and vulnerable groups.



## FIRST STEP OF THE RESEARCH: The formation of theoretical and practical backgrounds for the evaluation

The initial step of our research involved reviewing the current state of research and practices in this field and examining relevant scientific literature. In the first action step of the research, our goal was to empower future creators of sound-musical works with content from the field of developmental psychology (cognitive and socio-emotional development of infants and toddlers), psychology of music (perception, cognition of sound and music in infants and toddlers, musical preferences of infants and toddlers, development of musical abilities in infants and toddlers), and music didactics (how to create optimal conditions for listening to sound-musical material, how to approach listening didactically, and which elements stimulate a child to attentive listening and participation).

Parents, educators, teachers, music educators, psychotherapists, and various other professionals interested in the topic joined the webinars along with the artistic creators for the youngest. The response to the webinars was significant and resonant. Below is a detailed description of the content of each webinar.

The content of the webinars was selected based on the expressed needs of creators and artists involved in the B-AIR project, who were creating new sound-musical content for the youngest. Eight webinars took place in March and April 2021, addressing various aspects of creating for infants and toddlers in an interdisciplinary manner. Each thematic block began with a theoretical framework related to the overarching topic, followed by interviews with experts in specific areas who illuminated practical aspects of the content.

1. **“Sound, Music, and the Brain”**: Dr. Anka Slana, a cognitive scientist, introduced the basics of sound perception, addressing questions about defining sound, the production and processing of sound stimuli in the ear and brain, and the richer perception of music at higher volume.
2. **“Positive Effects of Sound and Music”**: Prof. Dr. Zvezdan Pirtošek, head of the Department of Neurology at the University Medical Center in Ljubljana, and Albinca Pesek, a music pedagogue and sound therapist, discussed practical aspects of the positive effects of sound and music in educational and health contexts.
3. **“Developmental Guidelines in Creating Artistic Encounters with Art for Children”**: Dr. Katarina Habe, a music psychologist, presented the main characteristics of cognitive and socio-emotional development in the preschool period, emphasizing the importance of considering these characteristics when creating content for the youngest.
4. **“Connecting Theory with Practice”**: A conversation with media psychologist MSc. Martina Peštaj and the artistic director of the Ljubljana Puppet Theatre, exploring various media and theatrical content for the youngest.
5. **“Listening and Responding to Sound and Music in Early Childhood”**: Dr. Katarina Zadnik discussed music pedagogical content, emphasizing that auditory perception is a physiological process that is a prerequisite for listening and a skill that needs to be learned.
6. **“Practical Aspects of Listening for 3-4-Year-Olds”**: Dr. Katarina Zadnik discussed practical aspects of listening with music educators Sara Smrekar and Alenka Podboj, focusing on the development of hearing and listening in the earliest childhood from the perspectives of Slovenian kindergartens and the internationally recognized educational concept of Edgar Willems.
7. **“Music Education Program for Infants and Toddlers”**: Ana Čorić, a Croatian music educator, discussed a music education program for infants and toddlers in a conversation with Vida Monestar from the Music Together organization.
8. **“Cognitive-Emotional Listening to Music in School”**: Ana Čorić hosted Dr. Valnea Žauhar and Dr. Sabina Vidulin to discuss their book on cognitive-emotional listening to music in schools, highlighting the importance of a cognitive-emotional approach for increasing attention, motivation, listening habits, and acceptance of artistic music.

The webinars comprehensively addressed the developmental and didactic aspects of auditory perception and cognition in the earliest stages of children's lives. The webinars were conducted in English, and the participants were diverse, including educators, teachers, doctors, parents, psychologists, inclusive educators, and artists. The feedback from participants was extremely positive, and the content served as guidelines for B-AIR artists on how to approach the creation of suitable sound-musical content for infants and toddlers.

In this review, two fundamental areas of evaluating artistic works through children's responses have emerged:

- The area of attention
- The area of emotional response

From a methodological perspective in researching the experiences of such young children, the repertoire is not very extensive and primarily relies on:

- Observation
- Monitoring changes in behaviour
- Observations of adults caring for these children

For preschool children, additional methods for monitoring their experiences include:

- Drawing
- Behavioural expressions such as movement, vocalization, imitation of behaviour
- Play
- Limited speech (some existing studies have also been conducted through conversations with children, revealing to what extent and at what age children can articulate their experiences mentally).

## THE SECOND STEP OF THE RESEARCH: Observation of the responses of older preschool children to radio fairy tales

Based on the state-of-the-art review, we found that the fundamental criteria for evaluating the impact of artistic works on a child's experience are monitoring the child's attention and their emotional-behavioural response. This is because preschool children typically experience things holistically, unconsciously process stimuli, and express behaviour rather than consciously processing and verbally articulating ex-

periences. Nevertheless, we were interested in what children could say or which words they would use to describe their listening experience, how attentive they would be to the content, and which part of the content would mentally engage them the most.

The key goal in the second research step was to check the consistency of children's responses to radio fairy tales through (1) verbal responses from children (interviews with children), based on their (2) behavioural responses monitored with observational protocols, and based on their (3) artistic expression (drawing children's drawings).

We formulated:

- Observational protocols for researchers/observers
- Interview questions for conversations with children
- Semi-structured interviews for conversations with the preschool teacher
- Instructions for creating an anecdotal record of observation for observers
- For the purpose of data triangulation, the listening sessions were recorded, and external observers also completed observation protocols

In the first period of the project, three new radio fairy tales were created for preschool children ("Fearless Fairytale" (Peter Svetina), "She Once Lived, She Still Lives" (Nataša Konc Lorenzutti), and "Pixie's First Superheroic Case" (Gaja Kos)). Each of them had a specific structure of basic elements (sound, speech, music) and also relationships between these elements (one element in the

foreground, others in the background; equal intertwining of elements; and transitioning from one to another, layering of sound levels, and different complexity of the sound landscape).

The goal of the second evaluation step was to find out how preschool children perceive radio content, radio fairy tales, and how they are invited to engage with art through them. We were interested in which sound-musical elements are crucial for arousing the interest, emotional response, and attention of preschool children. We wanted to determine which artistic elements of radio material allow children to have an aesthetic experience, enter into deeper artistic experiences of reality, and through that, develop a sense of security, sensitivity, and inner responsiveness.

In the evaluation part, 54 five-year-old children from three different kindergartens in Ljubljana were included. The fairy tales were played for the children twice over a two-week period. During the listening sessions, appropriately trained observers were present in each group, forming an anecdotal record of observation. After listening, the children drew the fairy tale and had an interview with the observer. The results were obtained through data triangulation; based on children's drawings, interviews with children, and anecdotal records of observers. A qualitative thematic content analysis of interview content, analysis of children's drawings, and analysis of children's behaviour observation were conducted.

We explored the child's attention through their overall posture during listening. We used the question: how much and/or which parts attract the child's attention, for how long, and in what way (what type of attention).



When exploring the emotional experience of children listening, we were interested in the impact of the work on the emotional response of children or how the artistic experience affects the child, what emotions it evokes, and how deep/intense the child's response is.

Through this step of observation and research, another crucial and perhaps the most important area of research has emerged, which we were not previously attentive to:

The influence of radio works on the relationship between the child and their significant adult and the significance of the relationship between the child and the adult for the overall listening experience.

In Table 1, we present the obtained results:

FAIRY TALE	Content analysis of answers	Drawing analysis	Listening behaviour	Musical structure of the fairy tale	Connection of all data sources
<b>FEARLESS FAIRYTALE</b> (Peter Svetina)	Clearly recognized characters, clear details, the sound clearly attracts attention, the only story completely recalled by a child, the only one where children add characters not present in the fairy tale	Greatest variety between drawings, vivid colours, joy	Attentive listening, children sit , immersion in the story, interest, they repeat the sounds, get involved even with small movements in the rhythm	Single male narrator that changes tone and style depending on the content, music/sound equally intertwined with speech	Clear line of attention and understanding of content, good tracking of voice and sounds at the same time, sound helps to understand and follow the story, the child takes the story as a whole, emotionally interesting, the most attractive in terms of attention
<b>SHE ONCE LIVED, SHE STILL LIVES</b> (Nataša Konc Lorenzutti)	Fewest mentions of persons, strong attention to music, songs, many details, many small pieces of content recalled but not the whole story , most generic answers	Drawing most limited in colours and characters, without a clear plot	Quiet listening, the children lie on their backs, sometimes they turn to their stomachs, they listen, they try to follow and understand (they are immersed, they occasionally indicate the rhythm with their feet)	A story in rhymes, each role is spoken by a different person including children, narrator explains the story.  Sound elements are a constant basis for the action, major and minor scale melody, the sound of a flute	Sound and music take the leading role before speech, speech attracts attention only when it is really expressive and not backed by music, dialogues are stronger than just reading rhymes,  the child takes the general flow of the narrative and some detail, emotionally soothing, in terms of attention the most demanding fairy tale
<b>PIXIE'S FIRST SUPERHEROIC CASE</b> (Gaja Kos)	Clearly perceived persons, least detail retrieved, least attention to sound, electroacoustic musical phrase that repeats twice draws attention, least recalled content	Most vivid colours, girls draw girls, boys draw boys, most expressed joy	They sit and listen, attention is drawn to the main characters (a boy and a girl), attention is greatest at a loud sound that continues with electronic music, they respond with head movement and restlessness	Different voices for different people, also interpreted by children. The story is connected by the narrator,  sound elements are the basis of the action, only a short electro-acoustic melody is prominent	Emotionally intense in terms of attention, electronic music overwhelms the child's attention, cognitively too demanding, musically very fluctuating, certain details strongly attract while the whole does not, the child does not follow the story, absorbs only parts of the story

Table 1: Illustration of a triangulation analysis of radio fairy tales in terms of sound/music, children's speech and behavioural reporting, and drawings

Based on the collected results, we have reached the following important findings:

- Listening to audio content is challenging for children, and they need to be specially prepared for this activity, provided with a safe environment, and the presence of an adult to make them feel secure.
- Listening should take place in a specially prepared space at a time when children are adequately prepared and comfortable, allowing them to move freely and create their own space and way of listening. Preparation for listening and choosing the right time when children are not hungry or overly tired is also crucial.
- The sensitivity of children's perception of sound is extremely high. Sounds that are too intense and/or associated with electronic sounds from everyday surroundings can capture a child's attention to the extent that it hinders the listening experience, preventing exploration and focused, deep listening. Instead, they overshadow all other aspects of experience and lead to saturation.
- The dynamics, rhythm, and dialogical nature of a story are crucial for maintaining children's attention.
- Stories where individual elements are interwoven equally leave a stronger impression on a child's experience.

It is essential for the audio image to follow the prosody and rhythm of the human voice.

Regarding the **selection of evaluation methods**:

- Children up to 4 or 5 years old are verbally reserved and find it challenging to express their experiences. Therefore, the analysis of interviews primarily relied on qualitative indicators, such as whether the child responded to questions, whether the responses were in single words or sentences, the themes contained in the sentences, specific people or characters mentioned, the use of adjectives, and how the child named the content mentioned. Attention was also paid to whether the child understood the question (e.g. a question like "Did you hear the music?" to which the child responded, "No, there was no music but I heard the guitar").
- Children's drawings are a suitable form of expression of experience for children aged 3 and older.
- The written response of adults largely reflects children's experiences and contributes significantly to the evaluation.
- From the perspective of radio plays, it was found that works most appealing to children aged 4 and older are those with a well-integrated audio-verbal structure, a clear dramaturgical design, and a rhythm in the story's progression.

#### **Additional evaluations in the second step:**

After conducting the first research of the second step in our study, we set some additional questions and found answers in additional listening sessions in different contexts.

1. Is the age upon entering school (6-7 years) the threshold at which children can describe their experiences more accurately, or is this threshold even later (7 to 8 years)? The "Fearless Fairytale", which proved most suitable in the initial research, was listened to in the first grade of primary school as well. We were interested in how listening to the "Fearless Fairytale" would work in regard to this age group, i.e. whether it would be interesting for children aged 6 and 7 during the transition from symbolic/imagination to concrete logical development, and what would attract them to it. We also focused on the ability of children to describe their experiences. The research methodology remained the same so that we could compare the results with those obtained in kindergarten. We used protocols for observation, creating drawings after listening, and anecdotal records of observers and educators.

The main findings of the comparison between preschool and school children in listening to the "Fearless Fairytale" were differences in that first-grade children mentioned much more of the story content, described the course of events, and more distinctly responded to the humorous parts of the story (the whole class started laughing when the "tale fell on its bottom"). The concreteness of the events was in the foreground, but they did not understand the more complex message of the story, which was that when the tale comes to the hospital, the hospital turns into a fairytale world. There was also more fidgeting during listening since the children were sitting at desks and not on the floor, where they could have moved more freely.



Based on the analysis of children's drawings, we can conclude that younger students, compared to kindergarten children, more effectively used the entire space on the drawing in the visual representation. All drawings included the use of various colours (more colours than in kindergarten children's drawings). The hospital is most often depicted on all the drawings, and other frequently appearing elements are the sun and the heart. The leading element in the drawings is the representation of the person taking care of the tale when it is in the hospital bed. The drawings reflect various emotions of joy, recognizable in the smile of the main character of the story.

2. Can we judge which radio fairy tales will have an equally powerful and positive effect on pre-school children based on the experience with the "Fearless Fairytale"? The play, based on the evaluation with preschool and school children, proved to be the most suitable for older pre-school children. Its outstanding radio features that most attracted older preschool children to the world of listening were: the rich musical and sound texture, balanced representation of voice, music, and sound, an interesting story, duration up to 10 minutes, and the prosodic and pleasant narrator's voice. Based on these criteria, we selected three additional works from a wide range of radio fairy tales for older preschool children in the Radio Slovenia archive, along with the "Fearless Fairytale". We also selected five radio plays published on the radio portal. In this way, we wanted to promote the idea of shared listening, i.e. children listening together with adults, and introducing listening as a special form of work with children in kindergarten. Regarding the listening framework, we prepared listening instructions, emphasizing that it is crucial to prepare children for listening, equip the listening

space appropriately, ensure comfortable seating, and allow free movement of children. We also recommended that adults listen together with children and be present throughout.

The evaluation of these four pieces in kindergartens throughout Slovenia was conducted as part of the first Slovenian radio play festival for children – "Listening Together". We sent a specific selection of radio works to kindergartens and asked them to listen to the fairy tale with children and send us their feedback, drawings, or group art projects that children would draw after listening, either with or without the kindergarten teacher. The selection of radio works we made available included fairy tales for an older group of children, as well as radio plays for the youngest. These were the works:

- "Fearless Fairytale"
- "The Bear and the Hat"
- "Dragons in the Opera"
- "Thief's Banquet"

The data from these observations largely confirmed the findings obtained in the first round of research. Each observation by educators and the analysis of children's drawings illuminated some special factor or aspect.

The most common responses of educators to the idea of listening together were as follows:

- "Children were relaxed and listened with interest during listening."
- "Listening was an interesting experience for all of us."
- "Due to the great motivation of the children, we listened to the radio play for several days."

- "Children wanted to hear another story, so we agreed to repeat everything after lunch."

The idea excited them because they had not practiced this kind of listening before. They were surprised at how different children's behaviour is when listening together and how intense the effect of such listening is. Most educators were not familiar with radio plays and would include them in their daily work in the future. They noticed that listening to radio fairy tales is a very welcome activity that calms and excites children, helps them focus on a specific atmosphere, and contributes to the rhythm and calmness of activities within the kindergarten. In addition, they began to think more creatively about how to approach certain topics and promote activities required by the kindergarten curriculum. They also began to consider how to incorporate listening to radio fairy tales into the treatment of these topics and activities.

The response to all fairy tales for older children was positive and exciting. The stories appealed to children, who talked a lot about them, enthusiastically drew pictures, and were creative and imaginative in their creations. Most children wanted to listen to fairy tales again the next day. Ten older kindergarten groups participated in the event, one of which chose to listen to the "Fearless Fairytale" together.

"Based on the responses, it is evident that the teacher's reaction indicates that, in response to the children's engagement with listening, she herself began contemplating creatively enhancing the topic they were addressing within their curriculum by incorporating radio plays for children as a didactic tool:

“The fairy tale excited them so much that we played it again the next day. We chose it because it was connected to the theme we were covering at that time (traffic safety and first aid). The children listened to the fairy tale with enjoyment and concentration, and they could share a lot about it.”

Considering the reactions and results of these listening sessions, we can confirm the previously established criteria for creating radio plays for preschool children and the presentation of radio plays for children in kindergartens through a national radio project that connects different kindergartens and enables teachers to officially integrate this new method into their daily routine.

With this, we concluded the exploration and evaluation of radio plays for older preschool children. The results helped shape the foundation and basic guidelines for researching more advanced material: radio plays for infants and toddlers up to 3 years old.

### THE THIRD STEP OF THE RESEARCH: Sound and radio art for infants and toddlers up to 3 years old

In this investigation, we based our research on the following **assumptions**:

- a. For infants and children up to 3 years old, the presence of an adult who is attentive to the child, provides security, and introduces them to listening is crucial.
- b. The listening space is essential, emphasizing the opportunity for free movement, touch, and participation in listening.

- c. The youngest children primarily focus on interaction and dialogue with adults, responding strongly to the adult’s intention and adapting to it.
- d. The auditory composition should be suitable for the sensitivity of the youngest children in terms of frequency spectrum, rhythm, volume, tempo, and musical structure.

These assumptions were initially tested through pilot performances of radio works for infants and their parents or caregivers. We reinforced these findings through collective listening sessions of the works in the youngest kindergarten groups (as part of the Radio plays for children Festival – “Listening Together”) and shared listening experiences of radio plays for children with mothers and infants in their homes.

The highlight of the research was the comprehensive evaluation of symphonic works for infants, through which we finalized the guidelines for creating in this specific domain. Within these contexts, we conducted several evaluations of radio plays designed for the youngest group (1 to 3 years old) and symphonic works for infants, entering the third step of action research.

#### 1. Live pilot performances of radio works for groups of infants, toddlers, and their parents

Evaluations of these works were initially conducted in live settings with groups of infants and toddlers along with their parents (live performances for parents and infants were held in the presence of a musical animator):

#### At the B-AIR meeting in Cuneo, Italy

1. Live performance of the radio play “Musical Kitchen” in a library for a group of parents with infants, featuring a musical animator.
2. Live performance of the radio play “Chitter-Chatter” for a group of parents with infants.

#### At the Radio Play Festival at Cukrarna, Ljubljana

1. Live performance of the radio play “Musical Kitchen” for a group of parents with infants, featuring an animator.

#### At the Festival of Radio Plays for Infants and Toddlers – Listening Together

1. Live performance of the radio play “Chitter-Chatter” in a park near the Old Power Plant in Ljubljana.
2. Live performance of the radio play “Sea” at the Old Power Plant venue, featuring an animator and the use of puppets.

### 2. Listening to radio plays in kindergartens

A more extensive evaluation of these works took place as part of the festival of radio plays for babies and toddlers titled “Listening Together”, involving 30 kindergartens across Slovenia.

For younger groups, the only available radio plays specifically designed for infants and children up to 3 years old were “Musical Kitchen”, “Chitter-Chatter” and “Sea”.

In kindergartens, children listened to the selected works alongside their teachers. They were prepared for listening, choosing an appropriate time during the day for the radio play’s content.



## RESULTS: Pilot evaluations of radio works for infants and parents:

1. Within the B-AIR Days in Cuneo, we performed “Musical Kitchen” (Library) and “Chitter-Chat-ter” (in the park) live. The researcher observed the performances and gathered feedback from some parents and other adults present.

**“Musical Kitchen”:** The performance took place in a special space within the children’s section of the library. Fifteen parents with children could attend. The floor was padded, allowing parents with infants and toddlers to comfortably settle. Before the performance, the researcher addressed them, providing instructions for listening. During the listening session, a musical artist was present, communicating with the children solely through gestures and mimicking individual sounds. Children could play with spoons arranged on the floor, move around, play with parents or the animator, or simply listen.

**Observations:** Most children listened with interest and deep attention, while parents were reserved in interacting with their children, mainly due to the presence of unfamiliar adults (research team). After the first listening, they expressed a desire to hear the entire radio play again, without the presence of the researcher, animator, and other adults, and they became even more playful with their children.

Children played with spoons, showed interest in instruments, and felt secure in the space.

Parental responses: “Interesting experience, too short.”



Radio director Saška Rakef in dialogue with children-interviewers. Photo by Ana Čorić

**“Chitter-Chat-ter”:** After the “Musical Kitchen”, parents with children went to a nearby park, where they were joined by other parents who were unable to attend the performance due to limited space in the library. In the park, 40 pairs of parents and children gathered, each equipped with a small speaker playing the radio play “Chitter-Chat-ter”, and they set off for a walk. Each pair chose their direction, activities, and actions. The observer monitored and documented the events. The most interesting observations were as follows:

- Children proudly carried their speakers, joyfully listening. Some spontaneously imitated sounds, shifting their attention outward to trees, meadows, bird singing; some touched tree branches, trunks, leaves, and one child lay under a tree and fell asleep.

- Initially, they only listened and chose their path through the park. When they heard familiar sounds, they repeated them with the recording, singing along.
- Parents easily focused on their child and the walk, each pair developed a unique relationship, choosing their path through the park.
- The atmosphere of listening and the entire event was filled with joy, interest, deep concentration, and calmness; none of the children were restless or cried.

After the performance, parents made the following statements: “I would like to have these plays recorded to listen to them in the car during drives when the child is restless and bored.” “Excellent, very fun and interesting; my child enjoyed it, and so did I.” “The child was attentive throughout.”

2. During the radio festival, we organized a live “Musical Kitchen” where a musician, while listening to the musical performance, produced individual sounds. Children had the opportunity to hold a spoon, touch various containers, and engage with the music.

Three observers followed the performance, using the Piccolo scheme to observe positive adult-child interactions (warmth, responsiveness, encouragement, and teaching). Parents also filled out a questionnaire about their observations. Eight parents with children attended the performance.

Based on the results gained through the **questionnaire for parents**, we can conclude that all parents rated the content, execution, and listening space of the radio plays for children positively, with an excellent rating (5 to 7 parents). Two parents, however, rated the duration of the performance as moderately good with a suggestion that the radio plays for children should be longer. One parent gave a moderately good rating to the sound/musical aspect of radio plays for children but did not provide any specific comments.

**Descriptive responses** from parents mainly fell into the following categories:

**(1) Child’s reactions:** concentration and calmness, tranquillity, and relaxation (11 statements), socialization among children.

**(2) Radio plays for children:** Children were captivated by both the sounds and the performer. Parents suggested that the event could last longer, expressing a desire for more similar events.

**(3) Parents’ wellbeing:** Excellent positive feelings, calmness, and excitement about their children’s behaviour and the overall flow of the event. They noticed the kindness of people, but were bothered by the presence of spectators without children, recording, the heat in the room, and poor marking of the space.

**(4) Parent-child relationship:** The situation allowed parents to peacefully observe their children and feel the desire to connect with their child even more.

“It ‘forces’ you to stop and gives you the opportunity to focus on your child, to truly see and observe them!”

Results from the observation of parents’ behaviour towards children using the **Piccolo observation scheme** showed that most outlined features were:

1. **Warmth:** Was prominently present in all parents.
2. **Responsiveness:** Parents were responsive to their children.
3. **Encouragement:** Parents mostly supported their children in their activities.
4. **Teaching:** There was no teaching because parents did not feel the need for it.

The fundamental insight from this performance was that the safety and friendliness of the space and execution are crucial prerequisites that create a suitable atmosphere for listening. The most surprising realization for parents was how deeply attentive such young children can be, and how

they explore in a relaxed manner. It could be concluded that through radio plays for children performance, parents’ sensitivity to children and the need for relaxed, safe, and artistically high-quality events for shared listening were revealed.

3. As part of the radio play festival for the youngest audiences, “Listening Together” we performed the radio plays “Chitter-Chatter” (in the park near the old city power plant) and “Sea” for a group of infants and toddlers with adults in a specially equipped part of the hall in the Old City Power Plant, as well as in a kindergarten for a selected group of children with their teachers. Additionally, some kindergartens listened to the “Musical Kitchen” and “Sea” in the kindergarten and then sent us children’s creations and feedback from the teachers.

3.1 Live performance of the radio play “Sea” for a group of moms with infants.

Thirteen parents with their children attended the performance.

From the analysis of the provided responses gained from **the questionnaire for parents**, it is evident that all parents (13) rated the music, props, musicians, duration, the quality of the sensory experience, and the impact of the performance on children as excellent (82 responses) or very good (17 responses). Only one response of moderately good was given by one parent regarding the content, and one response was satisfactory from a parent in response to the performance space (with an explanation: “Parents need guidance on what and how to experience through the performance; it seems we



all got a little scared, I, for example, would need someone to remind me to listen”).

**Descriptive responses** from parents form the following categories:

(1) **Children:** relaxation, calmness of the children, no fear in children (24 responses), interesting for children (17), encourages interaction and movement (2).

(2) **Parents:** the predominant feeling was relaxation, acceptance, calmness, and attention to infants. “A super break for moms.”

(3) **RIO:** pleasant and relaxing music, an excellent message, takes you into a fairy tale world, a rich sensory experience. “New sensory experiences for the baby.” “Excellent, children enjoyed it, as did adults.” Performance: beautiful puppets, even more puppets (12), attention from the performer and interaction with each individual child. “Calm music, beautiful puppets, space dedicated to children.”

(4) **Positive space:** the possibility of movement, a pleasant atmosphere, a sufficiently large space, freedom

Results of the observation using the **Piccolo scheme** reveal as follows:

(1) **Warmth:** Was prominently present in all parents.

(2) **Responsiveness:** Was prominently present in all parents.

(3) **Encouragement:** Was slightly present

because it was not necessary; the children felt safe.

(4) **Teaching:** Moderately present; parents named puppets, explained things to children, directed their attention to one of the puppets.

Based on these observations and the anecdotal record of two observers, it can be concluded once again that the prerequisite for listening and enabling full entry into the artistic experience is, first and foremost, the presence of parents with children and a space that must be pleasant, soft, allowing freedom of movement, and aesthetically refined. Puppets and the animator were also shown to be extremely important, as they could approach infants in a special and non-intrusive way. As a criterion for the adequacy of the work, the simultaneous deep calmness and intense interest of infants in following the sound part were confirmed once again. It was also evident in this event that the sensitivity of parents and their attention to children increased.

An important fact highlighted was the necessity to limit the age of children in such events to 2 years, as older children with their movement and liveliness or restlessness could pose a potential danger to infants

### 3.2 Festival “Listening Together”: Listening sessions in various kindergartens across Slovenia – Educators’ responses to listening sessions in kindergartens.

1. **“Musical Kitchen”:** Seven groups of children aged 1 to 4 chose the “Musical Kitchen”. They mostly listened to it twice, and it

greatly engaged the children in participation and creativity. Listening was an exciting and interesting experience for them. The children quickly started repeating sounds, using spoons, playing with them, and creating interesting things. The “Musical Kitchen” primarily sparked numerous ideas among educators on how to develop various skills in children through more didactic and playful games. It encouraged collaboration, conversation, recognition of familiar objects, play, creativity, and interest in all groups. The didactic charge of this play went beyond mere imitation and repetition of the familiar. It allowed children and educators to discover something new, interesting, and attractive through the known routine, opening up a spectrum of attention and creativity, facilitating the connection of different activities, and promoting various skills in children. Educators could use the play as a support for achieving various curriculum goals. Most groups listened to it at least twice, and some groups repeated the listening in the following days.

2. **“Chitter-Chatter”:** Two groups chose “Chitter-Chatter”, both times for calming down before lunch or naptime. Educators associated this activity with paying attention to sounds during a walk. After the walk, they played the fairy tale for the children, calming them down and helping them recognize sounds heard earlier in real life. Interestingly, educators observed that the children were more calm and patient with each other during lunch. The play clearly addresses attention to the external environment and, therefore, attention to each other, listening to the

surroundings, which also includes listening to others around you. The social aspect of this play was a surprise for the researchers, as it was not anticipated before. For one of these two groups, “Chitter-Chatter” became part of the daily ritual for calming down and falling asleep.

3. **“Sea”**: Four groups listened to “Sea”, choosing it as a bedtime play. Children calmed down and fell asleep while listening. This play proved to be the most challenging, as two educators reported that children were initially scared due to the unusual singing and sounds. In one group, they interrupted the listening and chose another, less demanding fairy tale for the children. In the second group, despite initial apprehension, they continued listening. The high female voice of the singer attracted the children, calming them down, and they fell asleep. In the third and fourth groups, educators used the “Sea” play for effective bedtime and no other responses were provided. Due to the introductory song about the fish Pharaonic, “Sea” is demanding as it transitions to a more symbolic and partly abstract level. It requires the listener, both child and adult, to surrender and allow themselves to mentally drift away while listening, then return. It addresses the emotional dynamics of mourning and awakening, suitable for more profound listening, especially for children and adults listening together, side by side.



Listening session in the kindergarten “Korena”, Zgornja Korena, Slovenia

Some of them were recorded during the listening, and the recordings were analyzed.

Three mothers chose to listen to the radio play “Sea” at home with their babies, each providing different responses to this experience. All of them listened to the play during breastfeeding or bedtime when they wanted to calm down together with their child. For two of them, actual calming occurred. One of the mothers experienced the play as a “complete disconnect,” a “rest,” and “as if time had stopped.” However, the third mother did not find the experience pleasant or calming. She perceived it as somewhat darker and, in some parts, even menacing. This mother interrupted the listening before it ended because she and her child did not feel comfortable in the sound environment created by the play. Perhaps contributing to this was the fact that the first two babies were girls, while the last one was a boy.

4. The radio play “Sea” was also listened to by mothers at home with their babies, who provided anecdotal recordings of their listening experience and answered a questionnaire tailored for them.

To further explore how the joint listening of each pair of mother and baby actually unfolds, a pilot test was conducted using video and audio recordings in a specially equipped studio. Initial results showed that this method could provide clearer and more detailed insights into the joint listening experience, which will be pursued for further research.

5. Evaluation of the symphonic concerts for infants and parents involved four perspectives.

We sought feedback from:

1. **Creators** for infants and toddlers, conducting semi-structured interviews with them and qualitatively analyzing the responses.
2. We designed an observation scheme for infants and toddlers, filled out by trained **observers**. We also utilized the Piccolo observation scheme to observe positive interactions between caregivers and children (warmth, responsiveness, encouragement, teaching).
3. We prepared questionnaires for **parents**.
4. We prepared questionnaires for **performers** (members of the symphony orchestra). Evaluation took place directly at three symphonic concerts, featuring four symphonic works for infants and toddlers. The concerts were held in the Radio Slovenia studio, which was spatially adapted for the youngest listeners. The space was arranged with a central area covered with soft rugs, allowing infants to crawl freely. Footwear was not allowed in the area. Parents sat on soft cushions around this space, so infants and toddlers were in their laps.



Some even fell asleep, while others could safely explore the environment and create social connections with others.

Musicians were arranged around the central stage, visible and approachable for both children and parents. All musical pieces were novelties and created purposefully. Recognizable Slovenian authors of contemporary classical music from younger generations were chosen as creators. The musical pieces were crafted as a kind of sound collage.

### **Analysis of the First Concert: Larisa Vrhunc – “So Quiet”**

During the first symphonic concert, composed by Larisa Vrhunc and titled “So Quiet”, two performances took place. The first, at 2 PM, was dedicated to vulnerable groups, while the second, at 5 PM, was designed for infants, toddlers, and their parents. There were 16 participants, including 11 boys and 5 girls, aged between 7 months and 5 years.

**Preparation of the Venue:** The concert space was meticulously prepared for infants and toddlers. Children were given soft rattles and fabric bags filled with crackling paper to create soft and gentle sounds. The audience sat on comfortable cushions and seating bags, while the orchestra musicians were arranged in a circle, allowing a clear view of various instruments, musicians, and the conductor.

**Detailed Venue Preparation:** Composer Larisa Vrhunc specifically equipped the space with two hanging bells positioned above the children’s heads. These bells, adorned with feathers and dreamcatchers, were intended for interaction with



Symphonic concert for babies and toddlers, RTV SLO. Photo by Adrian Pregelj

the children. Performing a concert for children with special needs highlighted how detailed venue preparation and compositions can positively impact the regulation of hypersensitive children.

**Effect of the Concert on Children:** In line with the composer’s statement that children are sensitive to stimuli, educators observed positive effects. Introverted children became more sociable, while extraverted ones became calmer.

The concert and the event acted as a regulatory factor, simultaneously calming and motivating. This was particularly noticeable in children with special needs, where such concerts can be extremely important.

**Parents’ Responses:** All parents were very satisfied with the concert. They rated the musicians/performers and the performance venue the

highest. Despite the somewhat less popular music and content, parents were thrilled with the sound environment, props, and the overall aesthetic experience.

**Performers' Responses:** The performers were well-prepared and positively assessed the conductor's leadership and the venue's preparation. However, they highlighted that the atmosphere was better at the beginning than at the end. They also pointed out the inappropriate duration of the concert and the complexity of the music. Three of them emphasized that the music should be more suitable for children.

**Conclusion:** Venue preparation, interactive elements, and detailed attention to the special needs of children are crucial for the success of concerts for infants and toddlers. Despite some criticisms regarding the music and the complexity of the work, parents and performers recognized the positive impact of the concert on children and called for more similar events in the future. Establishing these connecting and positive experiences in early childhood can have a significant impact on their overall development.

**Analysis of the Second Concert: "Defiance of the Glorious Children" by Svetlana Maraš and "Perpetuum Mobile" by Matej Bonin**

At the second symphonic concert for babies and toddlers held on Thursday, June 15th, two premieres of works by composers Svetlana Maraš and Matej Bonin were presented. The RTV Slovenia Symphony Orchestra, conducted by Steven Loy, was once again accommodated by the spaces of Studio 26. The first concert at 2:00 PM was dedicated to vulnerable groups, while the second concert at 5:00 PM was for infants,

toddlers, and their parents. The venue was arranged according to the needs of the children, who were seated in the center of the action on soft mats or sitting bags, surrounded by the symphony orchestra.

The second symphonic concert was performed twice, with a different order of compositions each time. In the first performance, Maraš' composition took the lead, while Bonin's was first in the second. Due to the nature of the concert (two pieces performed together), it was challenging to evaluate responses to each individual concert. Only a general difference based on the order of play and the overall listening process was observed. Therefore, the evaluation is more general.

**Piccolo Form:** In almost all pairs, a significant amount of warmth and responsiveness was clearly noticeable. Parents dedicated themselves entirely to their children, giving them full attention and being relaxed in their interactions. They remained physically and emotionally close to their children, following their lead and appropriately responding to their actions. Encouragement of children was evident, especially in supporting their decisions and allowing them to explore the space, musicians, and sounds in their own way. Parents showed slightly less enthusiasm for what their children were doing. Clear behaviour was also observed in praise, with parents either clearly praising their child or not praising them at all. As no props were included in the second symphonic concert, encouragement through playing with toys was minimal or non-existent. Teaching was also less pronounced due to the age range of 0-3 years. Parents mostly suggested activities to prolong the child's interest or talked with the child about the characteristics of objects, in this case, instruments.

**Parents' Response:** Overall, all parents were very satisfied with the concert. They rated the musicians/performers (98.9%) and the venue (96.8%) the highest. They liked the music (95.7%) and the content of the musical performance (93.7%). The concert proved to be a positive experience and had a positive impact on the child (92.6%). The symphonic work was considered an appropriate length (90.5%), and the quality of the aesthetic experience was also rated the same (90.5%). Props received a lower rating (73.7%), as they were not specifically included in this concert.

More than half of the parents (10/19) answered that they liked the music or composition the most. They highlighted that the music's calmness allowed children to relax and feel safe. Positive atmosphere in the room and the arrangement of the space were mentioned in five responses, while instruments, the opportunity for children's free movement, and the overall experience for the child were also appreciated. All parents, except one, gave positive responses regarding their child's feelings during the concert. Most children (10/19) felt excellent, and 6 children were relaxed. Parents noted that children were curious, exploring the space, reacting to sounds, and enjoying themselves.

During the concert, ten parents felt great, comfortable, and pleasant. Six of them emphasized that they were relaxed and calm. One mother mentioned sweating due to nervousness, without specifying the reason. One parent was vigilant to prevent their child from taking its neighbours' toys. All parents, except one, responded positively to the question about the concert's effect on their relationship with their child. They



highlighted that the effect was very connecting, unifying, and positive. Parents had fun, cuddled, listened to music, and enjoyed the concert. Only one parent stated that the concert did not affect their relationship with their child.

Parents expressed a desire for more such concerts, seeing potential in introducing music to the youngest listeners, educating audiences, exposing children to different instruments and classical music. They emphasized that infants and toddlers love music and believe it has a positive impact on their emotional development. They see potential outside the concert hall – in kindergartens, schools, and parks.

In response to the question “What bothered you?” one parent wished for a longer musical experience, while another felt the concert was slightly too long. It was also suggested that the number of children/people could be smaller, and there could be a break between compositions. Some comments were made about the musical work, suggesting it could be livelier and include solo performances by individual instruments.

Regarding the last question “Would you like more such concerts?” 18 parents answered affirmatively, while one parent did not provide an answer.

**Performers’ Response:** Fifteen performers completed the survey. All performers were excellently prepared for the situation (92.0%). They felt very good during the concert (82.6%). They rated the atmosphere in the hall at the beginning of the concert the highest (93.3%), while the atmosphere at the end of the concert was very good (85.3%). Children responded better (92.0%) than adults (85.3%) this time. They considered

the duration of the performance appropriate for children (85.3%). They positively experienced the conductor’s leadership (84.0%) and communication with him (80.0%). They also rated their interaction with the children (80.0%) similarly. While they agreed that the venue was very well-equipped for this event (82.7%), they had some issues with the orchestra’s setup (73.3%) – the orchestra had to move between the first and second pieces. The musical piece they performed was least convincing for them (70.7%). They rated the entire event very well (80.0%).

Ten performers answered that they liked the children’s visit, the atmosphere brought by the children, the proximity of the audience and performers, and the reaction of the children most. Three performers stated that they liked the relaxed atmosphere most.

Performers had the most issues or comments about the orchestra’s setup and movement between the first and second symphonic pieces. One performer also highlighted mobile devices, stating: “Phones. I noticed that infants’ attention shifted to technological devices when mothers were recording memories.”

Regarding suggestions for improvement in the last question, most responses related to the choice of music. Performers expressed a desire for more information about each composition and for instruments to play “normally” so that children could hear the basic sounds of each instrument. They also suggested a different choice of music, including Mozart, short and modern compositions. They mentioned considering the setup and movement of the orchestra, which took quite some time this time, was noisy, and musicians moved among the audience.

**Conclusion:** Both parents and performers rated the atmosphere in the venue, the arrangement of the space, and the musical performance highest. They highlighted good interaction between performers and children. They agreed that the duration and appropriateness of the musical performance were well chosen and suitable for children, despite some musicians providing suggestions for improvement. Although musicians had the most difficulty with moving the orchestra, this did not bother parents, and it was not emphasized in their responses. It is clear from the answers that everyone involved had a positive experience.

### **Analysis of the third concert: “Sense-S” by Petra Strahovnik**

The third concert, held on September 30, 2023, featured the “Sense-S” composition by Petra Strahovnik. It was performed by the RTV Slovenia Symphony Orchestra under the direction of Steven Loy. The uniqueness of the third symphonic concert lay in the addition of electronics and the performance of the magician Aljaž Šon. In the adapted space for a relaxed and comfortable experience for infants, toddlers, their parents and companions, the author also incorporated sound objects—balls emitting sounds. In this way, the audience became co-creators of the concert.

**Piccolo form:** Due to the (small) sample size of observers (5 pairs), Piccolo analysis is not meaningful.

**Parents’ response:** Overall, all parents were satisfied with the concert. They rated the musicians/performers (98.8%) and the performance

venue (88.8%) the highest. The concert proved to be a positive experience and had a positive impact on the children (85.0%). They also liked the props (82.5%), and the duration of the performance seemed appropriate (80.0%). They rated the overall quality of the aesthetic experience lower (78.8%), but the music and the content of the musical piece were deemed acceptable (75.0%).

**Parents' feedback:** The majority of parents (5 out of 15) responded that they liked the play and the combination of sounds, including the heartbeat sound. They also highlighted sitting on the floor, the atmosphere, spontaneity, props for children, and the magician's performance, which added extra excitement to the event. Half of the children (8 out of 15) felt very good during the concert, 4 were calm/relaxed, and one was at ease. One girl, experiencing the event for the first time, was a bit "in a trance," and one parent noted that the child felt restless.

Seven parents felt excellent, comfortable, and pleasant during the concert. Four emphasized that they were relaxed. Three parents felt uneasy during the concert due to the crowded space. One parent expressed anticipation—what would happen. All parents (except one) provided positive responses regarding the concert's impact on their relationship with their children. They highlighted the concert's highly connecting, calming, and positive effect. During the concert, they cuddled, listened to music, and enjoyed themselves. Only one parent stated that the concert had no effect on their relationship.

Parents emphasized the desire for more such concerts, seeing potential in introducing the youngest audience to music, educating listen-

ers, exposing children to different instruments and classical music. They suggested more short concerts and supported the idea of subscriptions, incorporating well-known classics (Mozart, Vivaldi, etc.). They also mentioned that focusing on individual instrument sounds, more melodic symphonic pieces, rhythmically expressive compositions, and greater interaction with musicians could be beneficial.

Regarding the question "What bothered you?" parents mentioned that the space was too small, making it difficult for children to see individual instruments; the number of props should match the number of children in the audience, as some were left without them and became upset; they also highlighted that the event was too long. Before the concert, parents wished for specific instructions/rules to be presented to them, as they were confused about what to expect from the event. They also suggested holding the event in the morning, to be more suitable for children.

The concert surprised most parents with children's reactions to specific sounds, their calmness, and diligence. They also appreciated the props, the magician, and the overall flow of the event.

On the last question "Would you like more such concerts?" 13 parents answered yes, and one answered no.

**Performers' feedback:** Nineteen performers filled out the questionnaire. Overall, the performers rated the entire event very poorly (47.8%). They felt very uncomfortable during the performance of the symphonic piece (45.6%), despite being well-prepared for the concert (68.2%). They considered the piece they performed very

poorly (43.5%), and the duration of the symphonic piece was deemed inappropriate for children (41.2%). They believed that both adults and children reacted similarly to the concert (58.8%). Although their interaction with children was good (66.7%), the atmosphere in the hall was good at the beginning of the concert (74.4%) but only acceptable at the end (57.8%). They had a positive experience with the conductor's leadership (67.1%), and their contact with the conductor was also good (68.9%). They rated highest the orchestra's arrangement (71.1%) and the venue's equipment (82.1%).

Five performers answered that they liked the children's attendance the most, the proximity of the audience and performers, and the reaction or response of the children. Among other responses, they also highlighted the magician, confetti, and good attendance.

Performers had the most criticism regarding the choice of musical piece. They pointed out that the composition was unsuitable for children; they didn't receive much information about it; the instruments they blew into or tapped on played "distorted" sounds; the composition was tiring and uninteresting, as certain parts repeated too often... They did not feel comfortable during the concert, and the event was labelled as too long for children. One performer, who is also a mother, emphasized: "Unpleasant sounds, anxious sensations, a feeling as if I were in a mental health institution. As a mother, I did not want to bring my children to the concert!"

Regarding the last question (suggestions for improvements), most responses again referred to the choice of music. Performers expressed



the desire to offer children a better musical experience. They also wished for more information about each piece, its content, and purpose. They mentioned that there was very little music in the symphonic part, and in this chaotic time they would like to play more pleasant sounds and melodies. Some responses also related to the organization of the event, as they had to wait (too long) between the rehearsal and the concert.

**Conclusions:** Parents and performers rated the preparation of the space and the orchestra's arrangement the highest. They also liked the props, although there were too few of them this time, causing individual children to be upset. Consequently, parents were nervous too. The interaction between children and performers was good, but parents emphasized that there were too many people, so certain children of the performers did not see well. Both groups were least convinced by the music and the content of the musical piece. The performers found the symphonic piece unsuitable for children. Parents and performers had many suggestions for improvements regarding the musical part. They mentioned that, in the future, they would like more contrasts, more rhythms and melodies, and, above all, instruments playing with their own sound. Both groups found the event too long.

## FINAL CONCLUSIONS

Based on the evaluation of symphonic concerts, the following findings can be summarized: Symphonic concerts for infants and toddlers have positively influenced the psychological wellbeing of both children and parents, as indicated by their responses and child observations. The satisfaction of both groups was evident, and positive effects manifested on emotional levels (relaxation, satisfaction, security), social levels (spontaneous creation of social interactions), cognitive levels (attention and concentration), and musical levels (rhythm, vocalization). Performers also perceived these aspects as significant and actively engaged in planning and thinking. The novelty and potential of this newly opened artistic space are encapsulated in the words of editor Gregor Pirš: "Adults 'followed' the children, thereby completely relaxing the atmosphere and opening a new perspective and emotional warmth: 'Contemporary symphonic music needs infants and toddlers, in terms of reflecting on humanity, returning to humanity, ... how we can reconnect with humanity and the mechanism of listening.'"

- **Responses of musicians:** Musicians' responses varied greatly. It would be advisable to explain the purpose of such concerts to performers before implementation, prepare them for it, and consider their preferences regarding the music they perform.
- **Challenges for music creators:** Composing for the youngest presented a challenge that they were not accustomed to. Those who considered the developmental characteristics of the youngest achieved more positive responses from the children, less unrest among them, and consequently, less effort required from parents to calm, inspire, and soothe their children.

- **Importance of coordination:** Exceptionally crucial is the coordination of all involved actors, including composers, performers, organizers, and experts, as they collectively exert the strongest influence on such events.
- **Parental responses:** Parents responded with the utmost gratitude and satisfaction to the opportunity for listening in a relaxed and child-adapted setting. The need for such events is evidently substantial.
- **Key success factors:** The safe and comfortable space provided for parents and children to listen, along with the freedom for children to move around, emerged as the fundamental factor in the success of such events. Another influential factor was the opportunity for interaction with musicians and the connection between children and musicians, which excited both parties and influenced the gentle execution of compositions, even if the performers themselves were not fond of them.
- **Challenges for all involved:** The entire situation posed a challenge for all involved, except for the children, who, within the context, could explore and respond to those elements of the experience that were most accessible and interesting to them, thanks to the safety and presence of caregivers.

## OVERALL EVALUATION CONCLUSIONS AND RECOMMENDATIONS

Based on the monitoring of the entire project, collaboration in the creation and execution of newly developed works has proven to contribute to:

- **Sensitization of parents and adult caregivers to children's experiences:** Numerous surprises emerged regarding how children can calm down without the efforts of adults, how they show interest in the world around them, and how clearly and deeply they express their experiences of the world.
- **Sensitization of artists:** Artists became more sensitive to what they perform, the sounds they bring to children, concerns about not offering pleasant sounds and music to children, enthusiasm for interaction with children during concerts, and curiosity in observing children's responses to radio works.
- **Dialogues in art:** The entire process of creating a dialogue between creators, listeners, and experts/evaluators was a significant surprise. Where this collaboration was more extensive and intense, the works proved to be stronger and more holistic, addressing both children and adults more powerfully.
- **Interaction and intent:** The sensitivity of the youngest to the intent of individual works was evident, with works being directed toward a specific goal or with less clearly defined purposes. A significant difference appeared between works based on sensitive monitoring and exploration of the children's world and those that focused more on the materiality of art.



Photo by Adrian Pregelj

- **Meaning, significance, and purpose of creating for the youngest:** One of the greatest surprises of the evaluation was the development of numerous fundamental questions related to creating for the youngest. These questions ranged from the nature of this process to specific technical frameworks and factors that such creation must consider. There was also creativity in seeking details of aesthetic experiences and the comprehensive integration of artistic messages into the world of intimate relationships between a child and their caregiver. It could even be said that such works have the greatest significance in creating a more delicate relationship between adults and their youngest.
- **Mutuality in the relationship between adults and children and considering the child in artistic creation:** The mutual relationship between adults and children and the consideration of the child in artistic creation were emphasized.
- **Development of an interdisciplinary team:** Throughout the entire process, from creating webinars and radio plays to experimental listening and concerts for infants, an interdisciplinary team of professionals from various fields developed. Together with artists, they created a new field of exploration and creation known as relational art, providing a space for mutual sensitization and the establishment of connections.





Photo by Adrian Pregelj

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## AUDIBILITY: EVALUATION OF AN ARTWORK AS AN ASSEMBLAGE OF MATERIALS, CONCEPTS, AND RELATIONS

How can we evaluate an artwork as an assemblage of materials, concepts, and relations, without losing sight of its educational and knowledge-production potential?

First of all, just a few words on our positionality as researchers of the “Audibility” project. We (Yorgos Samantas and Dana Papachristou) belong in the hearing majority, so we do not speak on behalf of our interlocutors. From this perspective *we seek to see, hear, listen, communicate, and inhabit the world* through differential sensory configurations, to quote Friedner and Kusters (2020, pp. 31–49). Among the variety of models (like the bio-medical, the charity/tragedy, the religious/moral model) of understanding and acting, with regard to our interlocutors, we adopted the social model of disability, which seeks to change society in order to accommodate people living with disability. It does not seek to change persons with disabilities to accommodate society. It supports the view that people

with disabilities have a right to be fully participating citizens on an equal basis with others.

Our method, our mode of creating pertains to a larger genre of socially engaged and workshop based art. We worked with Deaf and Hard of Hearing communities and individuals, deaf / hard of hearing / hearing artists and art practitioners, technologists, art students, education professionals, academic community, people with disabilities, creative professionals, contemporary art audiences, new media artists and the general public. We ourselves exist in these categories, as we are also learning from these processes, so we do not present ourselves as experts during “Audibility” workshops. Instead we work as facilitators.

Our evaluation method was intertwined with the artistic processes. We opted for participatory artworks, thus the evaluation method was embedded into the artistic processes. The workshop-based

approach gave us the opportunity to make collective choices together with the participants, namely the artists, our team in Twixtlab, the Deaf and Hard-of-Hearing children and young adults, and the valuable team of the educators in the school. We were working all together and there were many choices that have made literally together.

Apart from the artistic choices in all artworks, we were dealing with discussions, questions, disagreements and alterations proposed by the participants. All arguments were discussed towards collective decisions. If the proposed alternative idea was impossible to be realised, we had an open discussion to explain the reasons we are not opting for it.

There was an open exchange where we, as educators, as facilitators, were sharing tools to be used multi-modally in the workshops, as tools and



knowledge. Our artistic intention and gesture included making an artist out of everyone involved, and facilitating collaborative works. These knowledge and tools, shared by the core “Audibility” team, as well as by our collaborators and artists in residence, enabled learning and co-creation together with Deaf and Hard of Hearing children and individuals inside the School’s classroom, but also in Twixtlab’s space, and lately in the National Opera of Greece. All of these workshops were offered freely and in open forms, in accessible places and with all our attempts for full inclusivity.

At the end, we also produced a video for each series of workshops at the school which was leading to the production of the artworks, and showed once again this video to the children, so as to get their feedback. This process was very useful both to do and watch, and very important for our internal and joint evaluation, as the videos were really easy for the children to understand, to grasp the entire plan behind the series of workshops and to see themselves actively participating.

In a more internal process, the reports from our part are highly contemplating on these processes, both mentioning our success in the field and critically looking into all deviations, all the different paths we took, detouring from our initial plans, the ones in the papers.

As it can be understood, our evaluation here was not of a quantitative approach, but was based on collective bodies formed by discussion and collaboration, in qualitative ways and with a concrete anthropological approach, evaluating not only the reception of final artistic works (as ‘end products’, or ‘outcomes’) but also the processes that lead to them. In our team, we worked with anthropologists, musicologists, musicians, designers,



Graphical score created by students. Photo by Yorgos Samantas

composers, education professionals, academics, artists, but we didn’t include medical professionals in this part of the program, as we wanted to approach deafness culturally and not in terms of impairment, deficiency or lack.

Together with the workshop-based approach we asked artists and researchers involved in the program to write us a report and a reflection text on what worked and what didn’t work, how they viewed the process, what tools they used and their contemplation on the production of the artwork. Based on these reports, we wrote the curatorial texts, having again in mind that the end work was not the goal *per se*; instead we shifted the focus once again onto the process.

We have connected these activities with academia as well. We have already written a chapter in a collective book about disability and four papers concerning our outcomes and procedures. There we presented the program and our theoretical approaches, the theory we are affiliated with, the academic path we base our creative plans on. Academia, with all its processes, constitutes the cornerstone of evaluation, always based on peer-reviewed systems and procedures of assessment. So, our academic approach has always been peer-reviewed, leading as well to alterations in many of our initial points and, of course, we were constantly adding new realisations from our field ourselves, as our work is an ongoing process for ourselves too.

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Festival of Radio Plays for Babies and Toddlers, RTV SLO, March 2023, Ljubljana, Slovenia  
Photo by Adrian Pregelj

# ARTS-BASED AND GAME-BASED EVALUATION

During the B-AIR project, my focus as a researcher was on developing both new formats of the sound art and music mediation, and methodological tools for doing research with creative teams of authors and performers. I used arts-based and game-based research tools in interviews with performers and creators of radiophonic theatre play “The Tree that Sang”, as well as with children-performers in the radiophonic theatre play “Wars of the Worlds”<sup>1</sup>.

For example, in the interview (15.7.2022.) with the author of the radiophonic theatre play “The Tree that Sang” I did biographical narrative research using a diversity of resources as the material for analysis (semi-structured arts-based interview, written graphics, video recording of the theatre play, scenario, etc.). Through the biographical research I wanted to map a person’s artistic and learning path, as well as to link it with the reflection on the artistic work.

Similarly, I did biographical research in a reflection session with practitioners who did soundpainting workshops (see more in Chapter I: “Children as explorers in a sound adventure”), using the element of a river as a metaphor for a journey of learning and engaging with music personally and professionally:

Past	<b>Questions:</b> Who are you as an author, performer and a dramaturge? Please, describe your musical path. How did you enter in the radiophony? What is your favourite sound? What does being a part of RadioTeatar Bajsić & Friends mean to you?
Present	<b>Double diary:</b> guided self-reflection on the process of working on the theatre play, as well as a retrospective scenario (text) analysis.
Future	<b>Postcards:</b> think about the lessons you learned during the process of creating the theatre play for children and with children. Please, write your messages on the postcards and ‘send’ them to your recipients. To whom would you like to write them? Teachers? Musicians? Children?

Table 1. The interview protocol

Quotation (from scenario)	Commentary
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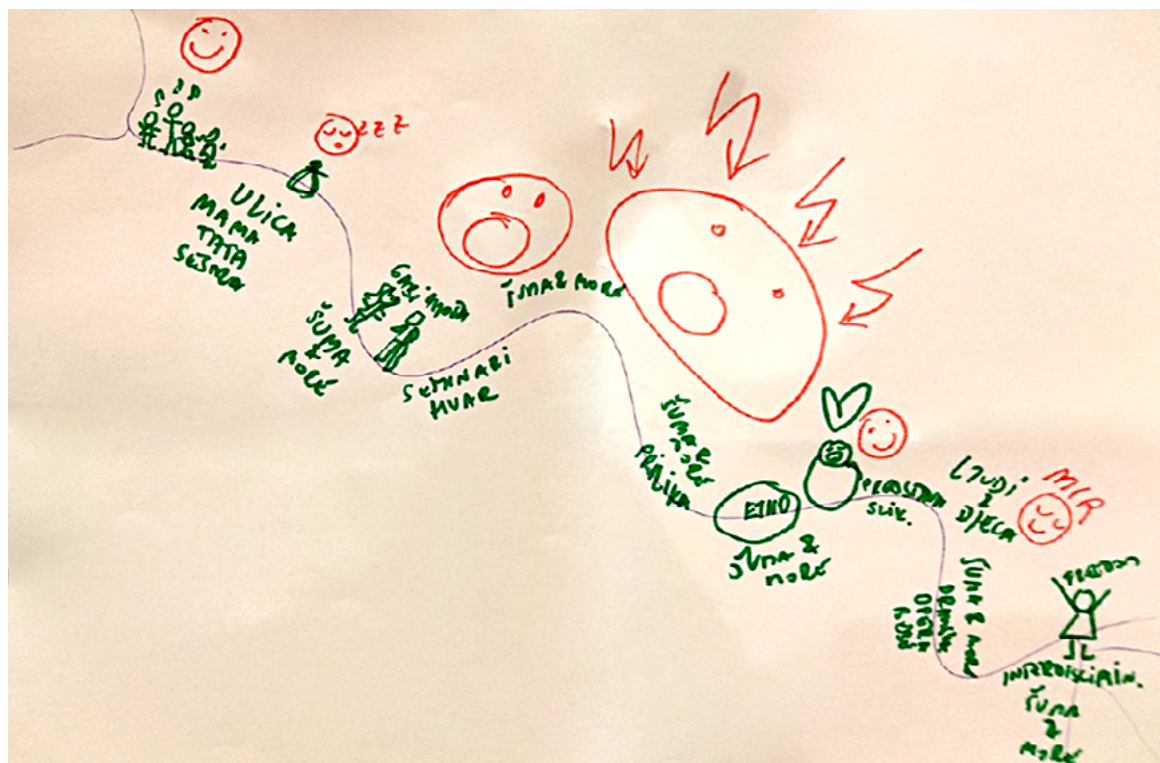
Table 2. Double diary (retrospective scenario-analysis)

Examples of questions used during the retrospective scenario-analysis:

1. **Think about the creative team of performers, and the audiences.** How did the making-of process look like? What is the role of interaction with the audience?
2. **Let’s talk about:** (1) the relation(ship)s (Violin and Cello, Man and instrument; classical and innovative; old and new; freedom and responsibility) (2) and the approach to the content and the diversity of artistic expressions (the story is told through the sound, music, theatrical act and author’s text).

1 More about the radiophonic theatre plays can be seen in Chapter I: „Children as soundmakers in radiophonic theatre play“ and „The Tree that Sang and Wars of the Worlds“.





Picture 1. Biographical research – using the river as a metaphor of the music learning journey  
Photo by Ana Čorić

Did you, while working, have in mind that the text has some kind of pedagogical/didactical task?

- a) *woods - searching for the material;*
- b) *instrument workshop – Amati makes and raises instruments;*
- c) *life journeys;*
- d) *concert stages;*
- e) *searching for the new sound.*

**3. Explorations:** (1) text as music & music as text; (2) sound pedagogy & music pedagogy.

**4. In-between spaces:** (1) the overlapping spaces and the discordance spaces; (2) performance spaces; (3) artistic performance vs. pedagogy; (4) culture of looking/visual culture vs. neglected culture of listening; (5) stimulating imagination of performers and the imagination of children audiences; (6) performer as an author and an active participant/performer/protagonist vs. the child in the audience as an author and an active participant/performer/protagonist.

In the radiophonic theatre play “Wars of the Worlds” I combined arts-based and game-based research in order to keep children-performers in the performing mode, as I knew in advance that the research will be carried out in the time between two shows performed on the same day. As I wanted to explore some questions related to the theatre play itself, as well as some of their attitudes towards sound, theatre, and radio, I have decided to construct a sort of a ‘memory game’ as a research instrument.

Steps of constructing the research instrument were:

- (1) writing down possible questions for the semi-structured interview;
- (2) grouping the questions and forming the order of the game, because for me as a researcher it was important to have certain stable points in the discussion to keep the logical flow;
- (3) drawing symbols and writing associations as ‘riddles’ related to those questions;
- (4) making pairs (symbol + word).

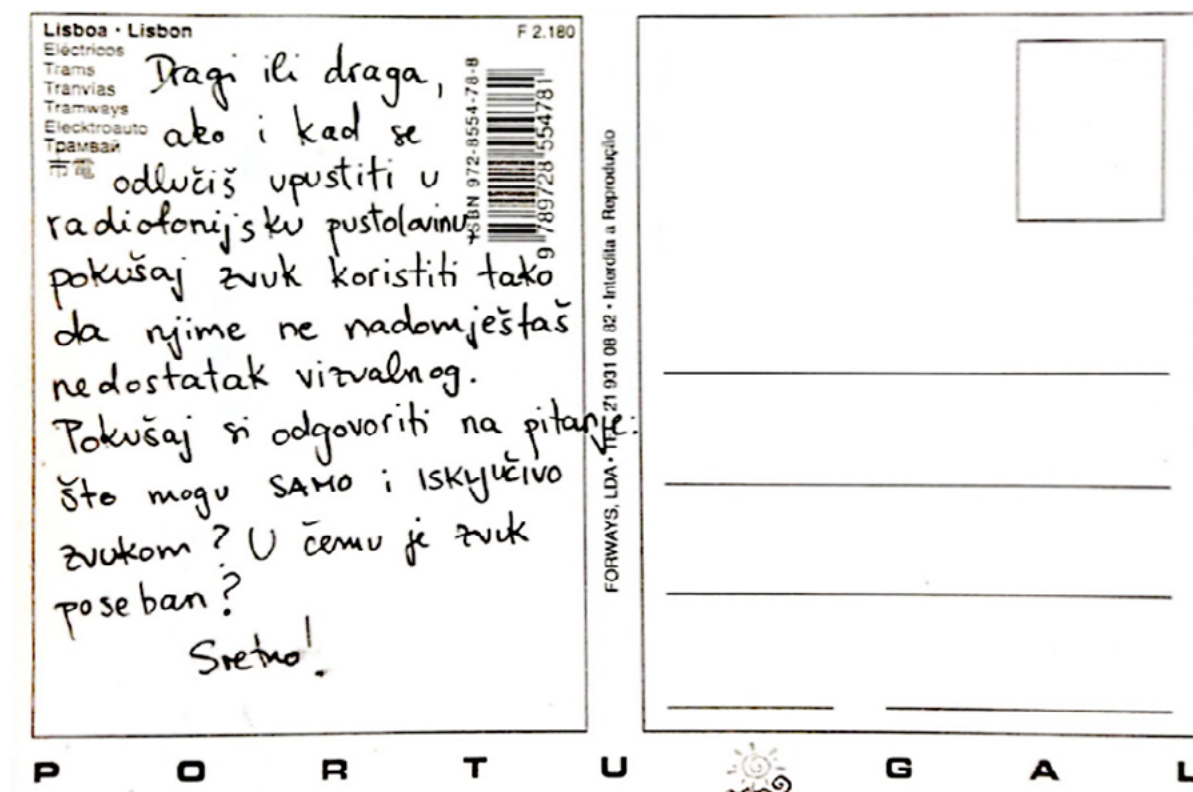
As in the popular ‘memory game’, the idea was to find a pair. In this case, the only rule I told to children was that there were papers with words and papers with graphics, and that the idea was to pair each graphic with the word. Each graphic had a hidden number somewhere in the drawing, and this is how I managed to keep the order of topics. Children managed to find out numbers in the drawings, but they could pair them with words only after ‘solving the mystery’ of questions that I asked following each graphic. In this way children managed to maintain the concentration for more than 40 minutes.

At the end there was a reward on the last paper – tickets for the storytelling festival. Limitations in this research were numerous. Since the show “Wars of the Worlds” wasn’t performed many times because of the pandemic lockdowns, I had only one chance to try the game out. Besides that, there weren’t many children in that particular occasion, and also I had to respect the ethical procedure and ask only children who accompanied by parents who needed to sign the permission form.

Semi-structured interview as a cooperative and self-reflective memory game consisted of several topics of interest:

1. Getting to know each other and the game
2. Children, radio and listening
3. Theatre and the transition to the “Wars of The World”
4. Child/artist and interaction with audiences
5. Power dynamics (interactions between children, actors and director on the stage)
6. Sound effects
7. Learning by doing (what do you get)
8. When I grow up, I will be...

In the continuation of the text, all the graphic-word pairs are listed, accompanied by some main questions asked. Some parts of the game are described in the Chapter I: “Children as sound-makers in radiophonic theatre plays”.

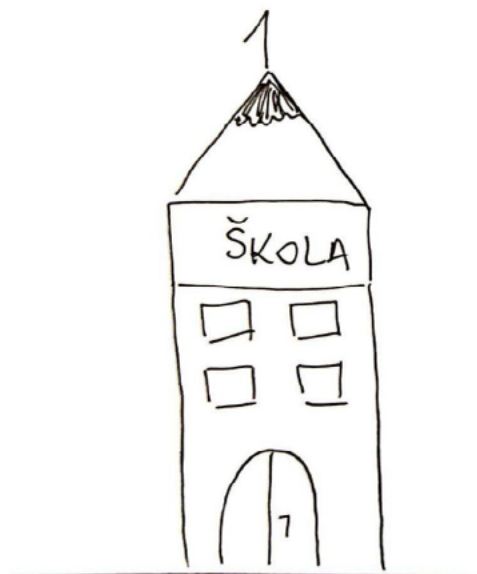


Picture 2. Postcard written to the practitioner<sup>2</sup>  
Photo by Ana Čorić

2 As ‘musical’ postcards were part of the radiophonic theatre play, this is where I took the idea to use this element in the research, too. Translation of the postcard from Croatian: *Dear You, if and when you decide to embark on the radiophonic adventure, try to use sound without trying to replace the lack of visual. Try to answer the question: What can I do ONLY and EXCLUSIVELY with sound? What makes the sound special?*







Picture 4. Pair no. 1 – Getting to know each other  
Photo by Ana Čorić

UPOZNAVANJE

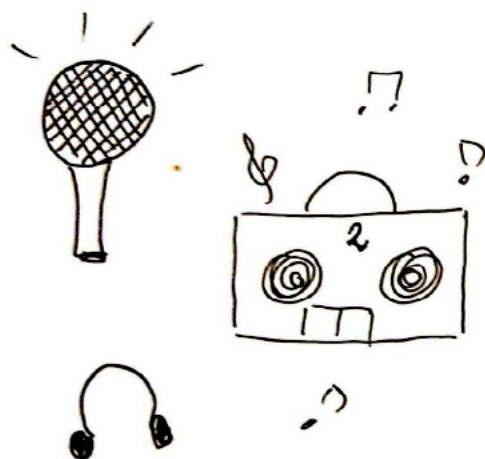
#### Question(s):

1. How old are you and which school/class do you attend?



#### Questions:

2. How come that you like the radio? Do you like it more than the mobile phone, computer, or TV? What makes radio different from the phone, television, etc.?
3. Is the radio considered 'cool' among your peers? If not, how would you explain to them that the radio actually *is* cool?
4. Do you like simply to just listen to the radio, or the music? Is it boring when there is no screen?



ZATVORENE

OČI

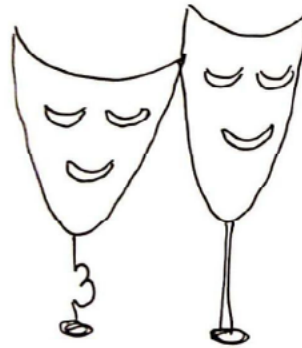
Picture 5. Pair no. 2 – Exploring relationship to the radio as a medium  
Photo by Ana Čorić





### Questions:

5. Do you like to go to the theatre?
6. How, when, and why did you get involved in radio theatre plays?
7. What would you say to other children as advice – why to come to the theatre? What is special for you in the theatre?



KAZALIŠTE  
JE  
COOL!

Picture 6. Pair no. 3 – Exploring relationship to the theatre  
Photo by Ana Čorić



### Questions:

8. What is your role in the theatre play “Wars of the Worlds”? How did your process of preparation look like?
9. What do you think, in which way would the theatre play “Wars of the Worlds” be different if it was without the children?



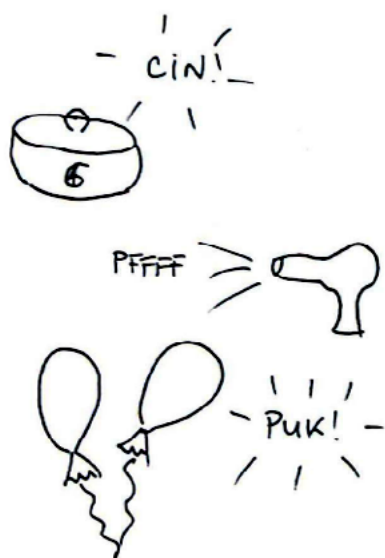
ULOG-IRAJ  
SE!

Picture 7. Pair no. 4 – Exploring the role of children as performers in the “Wars of the Worlds”  
Photo by Ana Čorić



S MAMOM  
NA  
POŽORNICI

Picture 8. Pair no. 5 – Exploring the relationship and power dynamics with the director and other actors in the “Wars of the Worlds”. Photo by Ana Čorić



ZVUČNI  
EFEKTI

Picture 9. Pair no. 6 – Exploring sound effects in the “Wars of the Worlds”  
Photo by Ana Čorić



#### Questions:

10. What do you do on stage in the “Wars of the Worlds”?
11. Are you an artist, then?
12. What does Pavlica (op. ur. director of the theatre play and mother of one of the children) do in this theatre play?
13. What do other adult actors do on stage?



#### Questions:

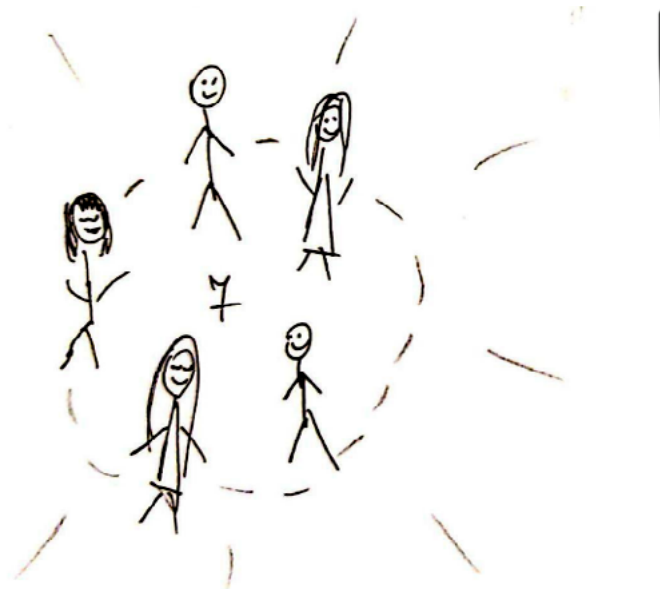
14. Can you tell me a secret: how can I make some sound with an ordinary object that I have at home? You know, as you did on stage in this theatre play?
15. What is your favourite sound?





### Questions:

16. What do you like and what do you dislike on the RadioTeatar stage that you spend together with directors, actors and musicians?
17. Which part of the process was/is the most interesting – rehearsals, recordings, performances?
18. What did you learn in the rehearsals from your adult colleagues (actors, director, musicians)?



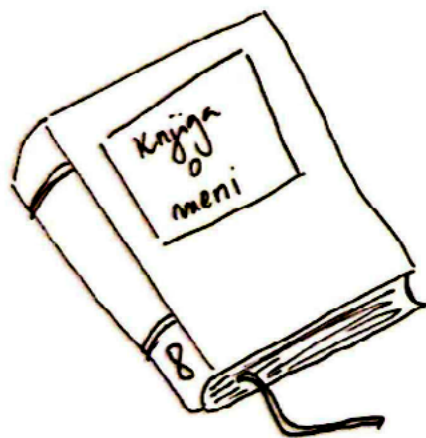
ZAJEDNO

Picture 10. Pair no. 7 – Exploring the 'community of practice' in the "Wars of the Worlds"  
Photo by Ana Čorić



### Questions:

19. What do you want to be when you grow up?
20. If you could choose for yourself one vocation that you have seen here in RadioTeatar Bajić & Friends, which one would you choose and why?
21. Do you want to keep doing arts when you grow up?



KAD NARASTEM  
BIT ĆU...

Picture 11. Pair no. 8 – Exploring the artistic "possible selves" in the "Wars of the Worlds"  
Photo by Ana Čorić

## AIR CHANNEL



Photo by Katja Kodba



(B) – A I R  
B S T R A C T I N I T Y  
D I O

**Jan Jona Javoršek**

Head of Network Infrastructure Centre, Jožef Stefan Institute, Ljubljana, Slovenia

**Joh Dokler**

Software developer, Seven Past Nine, Ljubljana, Slovenia

**Miha Valenčič**

System architect & Developer, VMA d.o.o., Ljubljana, Slovenia

**Gregor Pirš**

Composer, Cellist, Head of Music ARS Program, Radio Slovenia, RTV Slovenia

[jan.javorsek@ijs.si](mailto:jan.javorsek@ijs.si)

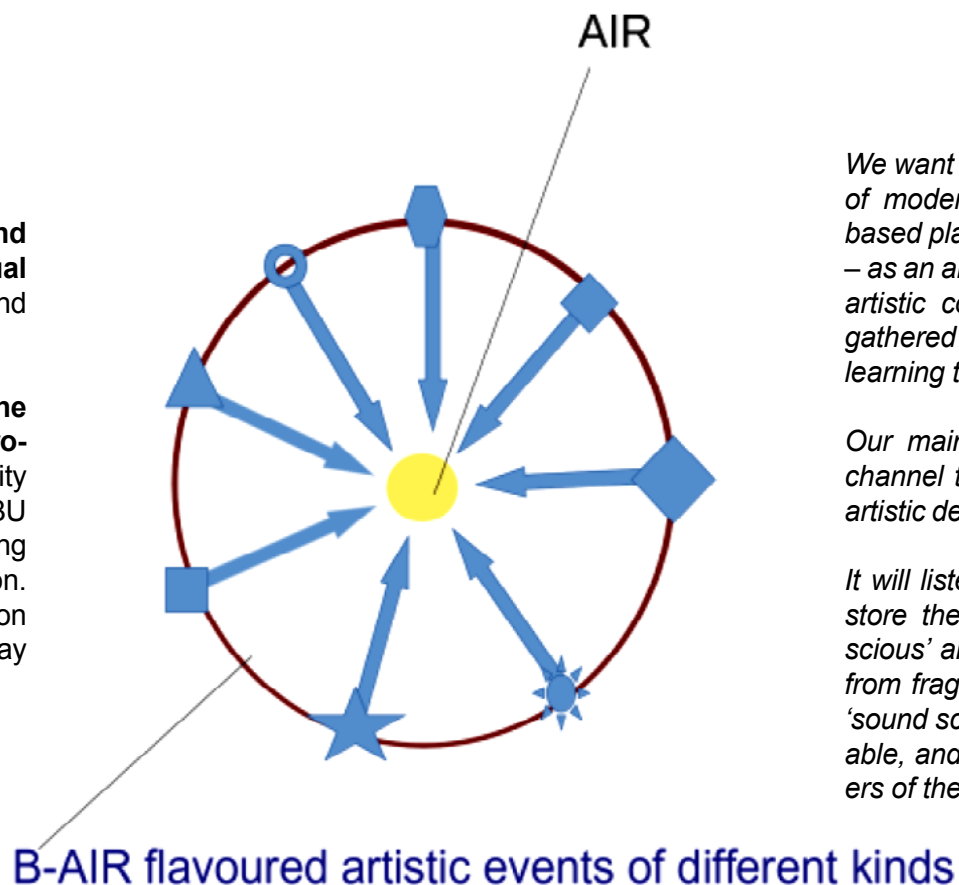
[joh.dokler@gmail.com](mailto:joh.dokler@gmail.com)

[miha@valencic.si](mailto:miha@valencic.si)

[Gregor.Pirs@rtvslo.si](mailto:Gregor.Pirs@rtvslo.si)

## AIR Concept

- **B-AIR – a blend of the AIR tech and specific aesthetic & conceptual idea:** radio art for babies, toddlers and vulnerable groups
- **AIR – Abstract Infinity Radio => the (initial) tech part of the B-AIR project.** The idea for the Abstract Infinity Radio platform was born at the EBU Ars Acustica Group Plenary Meeting in Ljubljana Brainstorming Session. Could be seen as further elaboration of the EBU Ars Acustica Art's Birthday Party concept.



*We want to go further in developing the “paradigm of modern radio”, so we’ve envisioned a web-based platform called AIR – Abstract Infinity Radio – as an artistic channel, designed to enable online artistic collaborations and further processing of gathered sound material with the help of machine learning technology.*

*Our main intention is to initiate a lasting radio channel that will be a work of art in itself, a joint artistic declaration of the dispersed “sonic tribe(s)”.*

*It will listen to the world [of artistic events], it will store the sound perceived in its ‘radio subconscious’ and will keep creating ever new contexts from fragments of its own memory. The resulting ‘sound sculpture’ will be ever-changing, unpredictable, and will be granted ‘eternal life’ on the servers of the Jožef Stefan Institute.*

**AIR manifesto**





## WHY AIR?

Following the brainstorming session of the European Broadcasting Union (EBU) Ars Acustica Group plenary meeting in Ljubljana (May 2018), an idea has surfaced to conceive a radio station as a work of art in itself. The idea is roughly based on the [EBU AA Art's Birthday](#) radiophonic experience.

Within the B-AIR project we tackled the task to build the basic infrastructure for such a radio station, which means providing technical capabilities and developing software ideas that support the fundamental processes of this infrastructure and indicate possible development or technological upgrade in the future.

The technological framework of the AIR platform has been designed in two stages. This document describes them both in a concise, general way. More detailed technical specifications can be found within the manuals linked at the end of each chapter.



AIR Platform at the Global SpecifiCity event in Ljubljana, June 2023, sound installation at the Museum of Contemporary Arts Metelkova (+MSUM). Photo by Katja Kodba

## PHASE 1

# HARDWARE CAPABILITIES AND BASIC ARTISTIC COLLABORATION SOFTWARE

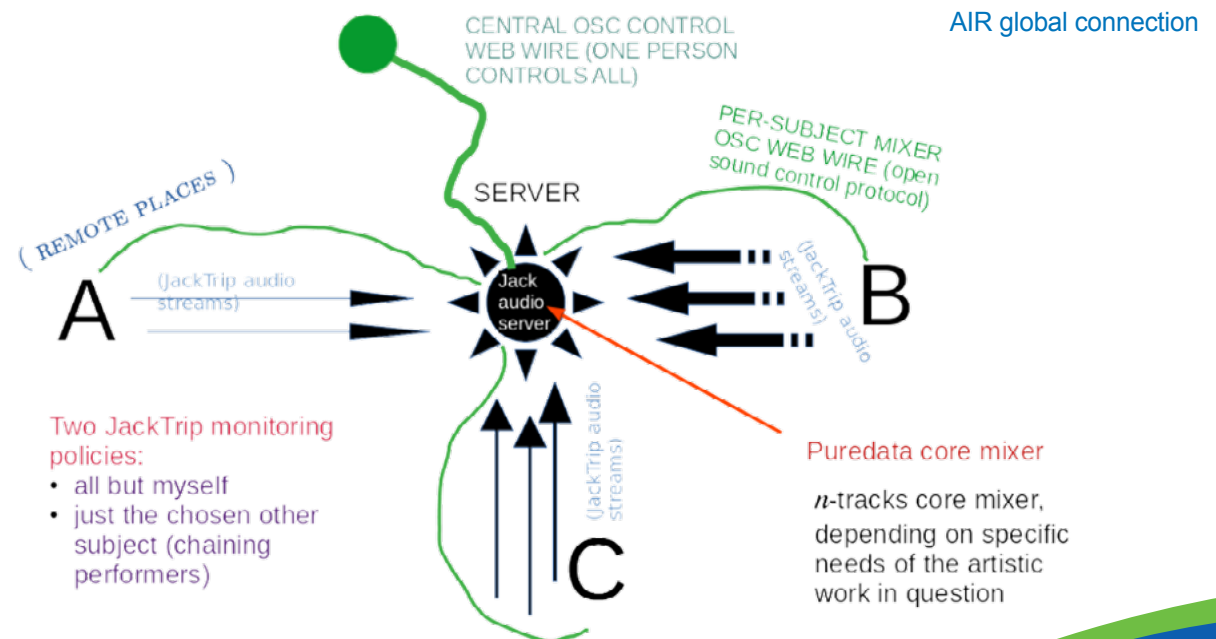
Phase 1 covers the functionality to support live collaborative artistic events.

In order to support the generation, capture, exploration and reworking of audio streams, we have established a support system with several physical and virtual servers at the Network Infrastructure Centre of the Jožef Stefan Institute (JSI) in Ljubljana. We arranged for the initial testing systems to be provided with comfortable storage capacities and direct connectivity to the institute backbone and through it the [Academic Research Network \(Arnes\) national and GÉANT networks](#). This set-up allows us to provide additional connectivity, including low-latency connections (i.e. based on our experience with LOLA, the Low Latency audio visual streaming system, like LoLa on Arnes, and LoLa at <https://lola.conts.it/>). Later in the project, when specific requirements were well known, we upgraded the systems with dedicated B-AIR servers equipped with in-place hot backup systems, providing for a hope that our platform will be available to serve the artists for a long time to come.

But any digital platform and its hardware remain just as fragile and limited in time as the research and artistic projects and partners do. Our strategy of open source development and releasing our tools to the public and within the curation of the EBU is the real long-term strategy. Believing that our work and its results will only strengthen the 'I' (Infinity) in the AIR platform name, through the interest and involvement of artists in the future, we have set up the system as an open platform and arranged for its results to be provided with long-time curation by the EBU.

Jožef Stefan Institute provided the expert team including also external collaborators and developers (Joh Dokler, Miha Valenčič, Jan Jona Javoršek) that assembled the framework from various open-source software modules, notably the *Jack Connection Kit* (by Paul Davis) and *Jacktrip* (Juan-Pablo Caceres, Chris Chafe CCRMA, Stanford University et al.) in order to provide live low-latency over the internet connectivity to musicians. The team of artists and producers, joined by the RTV Slovenia coordination team (Gregor Pirš, Primož Trdan, Marko Šetinc) performed extensive testing. The framework proved

to have excellent functionality, but, as it turned out later, some problems arose with end-user connection solutions for different software packages / operating systems. Within the framework of the B-AIR project, we managed to address the problems to the extent that allowed us basic interoperability and enabled us to work together, sometimes relying on additional hardware mixing equipment or adapters to complement digital audio workstation software packages' interfaces where the direct software connection was not possible.





Once at this stage, we could expand our platform with the next phase - the creation of an online mixing desk implemented in the flexible and open *Puredata* system (Miller Puckette).

## gpp-air-coremix

The **AIR Coremixer** was designed by Gregor Pirš (RTV Slovenia) with flexibility in mind. The core server-side software is designed in such a way that it can be connected to the existing *Jack/Jacktrip* infrastructure and through it to a multitude of different sound sources that are created in real time by users of the World Wide Web. It can be managed using a graphical user interface (GUI) or using an OSC connection implementing the *airmix* protocol which enables complex hardware or user (intuitive) control

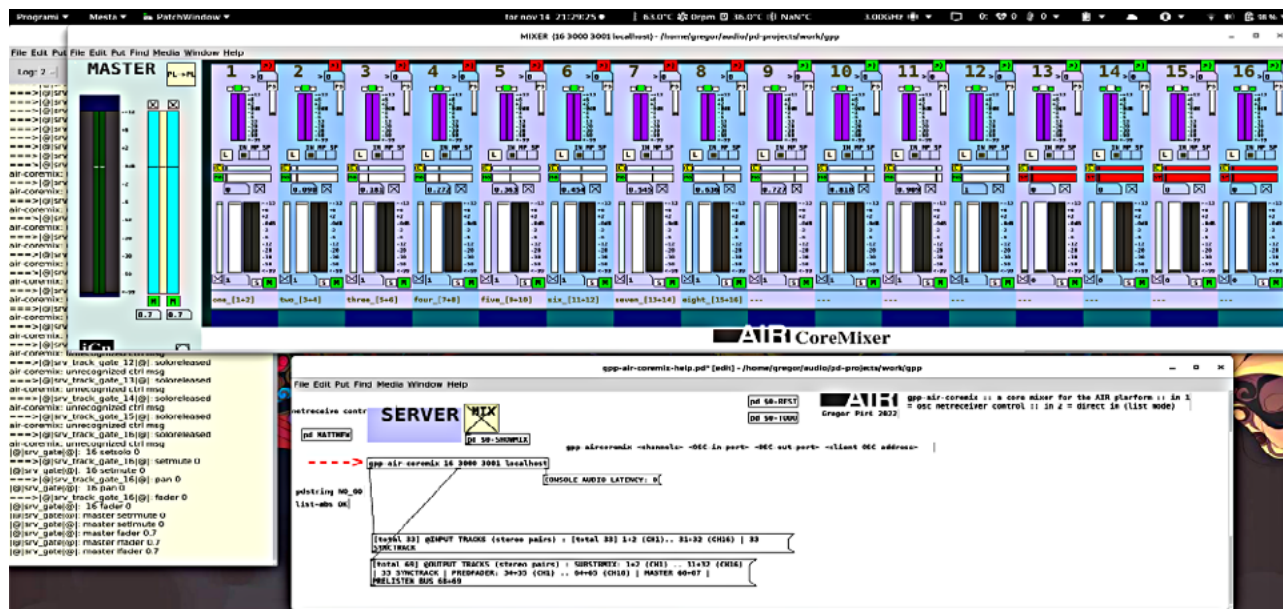
over the mixing process of any number of channels, and can be used interactively or programmatically.

There's no technical limitation to the number of channels: the mixer can be configured differently so that it can support specific requirements of each individual art project. With the help of the reverse OSC connection, the system allows the user to monitor the live state of a wide variety of parameters, which opens up the possibilities of various technological ways of displaying the state, web-based or other, i.e. using the *Puredata* capabilities. Indeed, in addition to the native GUI offered by the *Puredata* system itself, we have developed a remote graphical *Puredata* console (**AIR iConsole**) offering a GUI identical to the one running on the server, but operating by using remote state

tracking. Similarly we implemented a user shell (*airsh*, written in [Perl](#)) that can be used for sending commands directly from the terminal, as well as a terminal monitor (*airmon*) intended for monitoring the *airmon* protocol data. Three different tactics available for transferring data from the server allow for the adjusting to the capacity of the network connection.

Another aspect of the coremixer is that it can be easily extended or adapted for any particular sound-project's needs and requirements, by applying *Puredata* handlers at any specific point of the processing chain. Modularity and flexibility of this solution allows for endless extensibility, provided the user can use the *Puredata* graphical programming environment. Currently, each separate track of the **AIR Coremixer** provides:

- ➔ Control over volume (faders)
- ➔ Panning control (left/right)
- ➔ Capacity to play audio-files and arbitrary clips cut out of them, with all necessary audio-cosmetics such as microfading at the beginning/end
- ➔ Capacity to loop audio-files with all necessary audio-cosmetics such as microfading at the beginning/end
- ➔ Capacity to record the audio, received by each separate channel to an audio-file



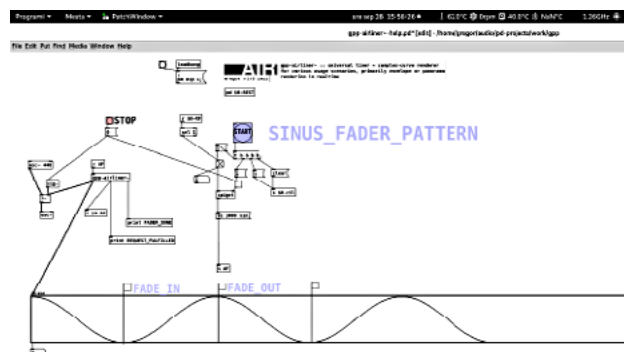
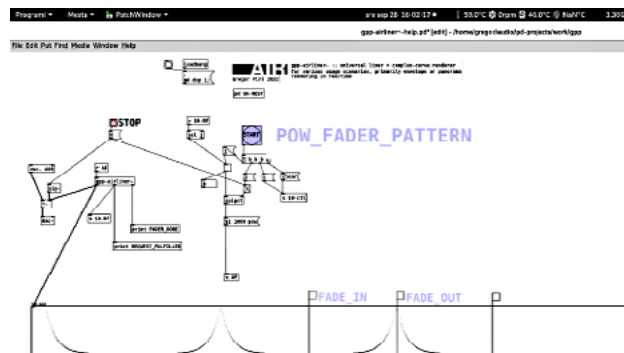
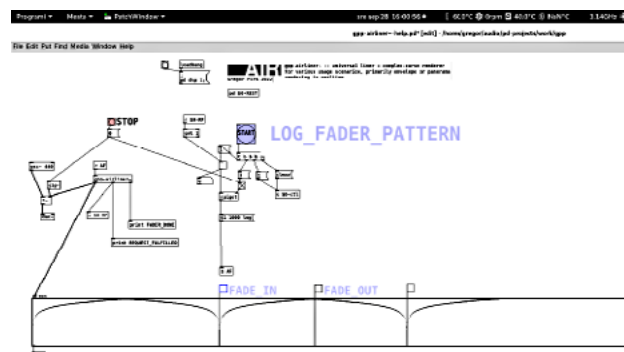
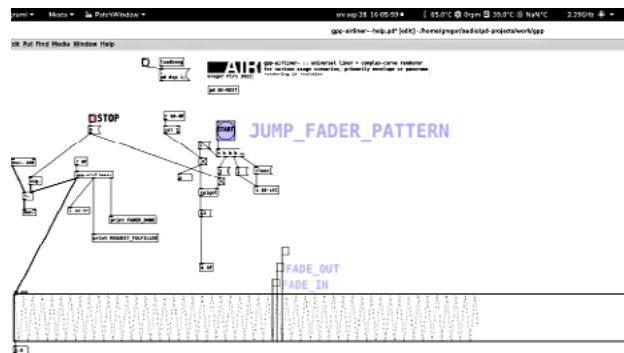
AIR mixer

```

AIRmix|>all fader 1 3000 log
AIRmix|>all fader .5 2300 lin 2000
AIRmix|>globcpan
AIRmix|>all stop
AIRmix|>odd stop
AIRmix|>1 play bach.wav 0:02:13.032
AIRmix|>2 play beethoven.wav 0:00:22.100 0:00:23.000
AIRmix|>3 loop musorgsky 0:00:13 0:00:19
AIRmix|>all pan 1 7000 log
AIRmix|>centerpan
AIRmix|>even fader .8 4200 pow 4500
AIRmix|>6 loop doors.wav
AIRmix|>7 loop
AIRmix|>7 loop floyd.wav 0:00:12.253 0:00:16.315 +0:00:4.000
AIRmix|>1 fader .3
AIRmix|>2 fader .4
AIRmix|>3 5 fader .5
AIRmix|>7,10,11,13 fader .6 1000
AIRmix|>15-17 fader .9 7000 hsin
AIRmix|>19,21 fader 1 9030 log 3240
AIRmix|>

```

## AIR shell

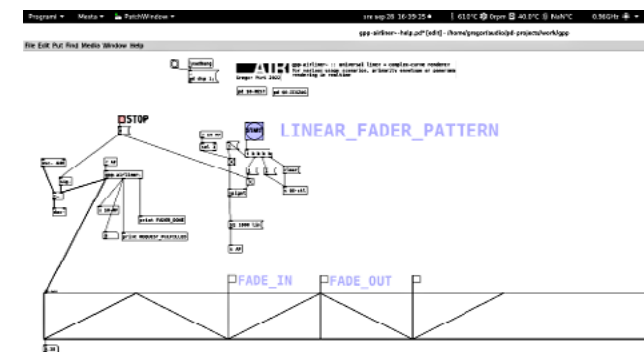
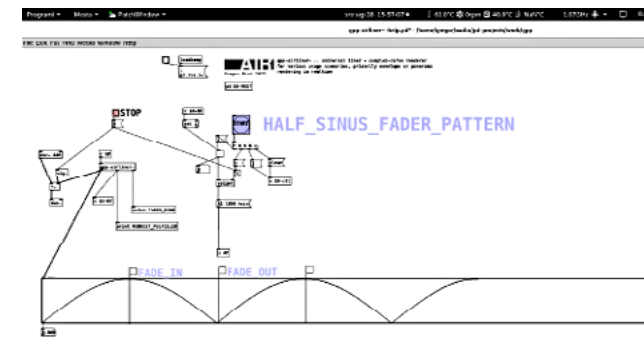


## Complex on-the-fly ramps

Each continuous controller ramp (volume fader, panning) can be assigned several types of progression curves, such as:

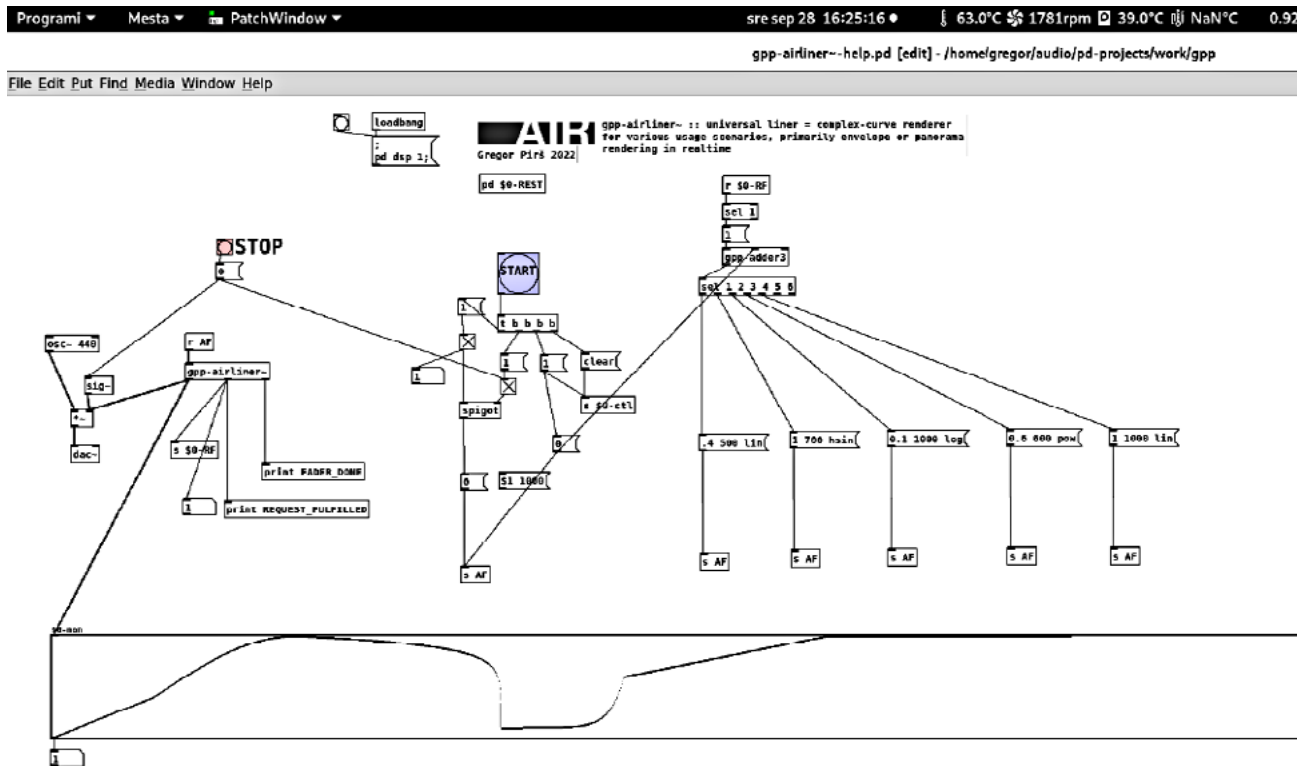
- ➔ Linear
- ➔ Sinusoidal
- ➔ Half-sinusoidal
- ➔ Logarithmic
- ➔ Exponential
- ➔ Jump

They can appear one after another, connecting with each other in real-time, with the curves adapting to the required y-span. Also, they can be assigned a delay after which each of them should trigger.



Airliner jump, pow, halfsinus, log, sinus, linear





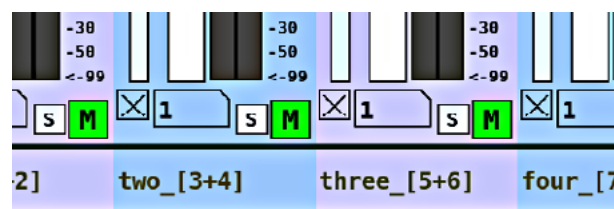
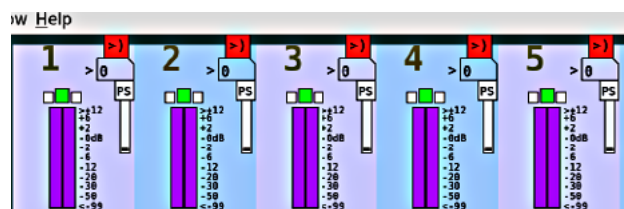
Airliner mixed

Standard audio-mixer functionality:  
complex input/output channels setup,  
stereo/mono mode, pre-listen bus, mute and  
solo mechanism

The AIR Coremixer will provide the required amount of input and output channels and will automatically connect to the channels provided by the *Jack Connection Kit*. It should be noted that the AIR Coremixer is not limited to the use of the

*Jack-Jacktrip* subsystem and can be used independently. Our solution relies on *Jack* and *Jacktrip* as the best tools for the job of providing the required flexibility and network connectivity.

The AIR Coremixer works with an (arbitrary) number of tracks. Each track is configured with two input wires and can be bound to stereo or mono modes at the explicit request of the user. Output channels are of two kinds: each track will provide their pre-fader and a *mix-minus* (all-tracks-minus-themselves) output for supporting different scenarios of monitoring by the participant musicians. To keep up with the 'reality' of more complex configurations, the Coremixer will report exact input/output-channel configuration through its *Puredata* outlets.





Airliner track

In addition, the system provides two sets of stereo master outputs: the 'master' output and the 'pre-listen' output.

The 'pre-listen' output bus involvement of each track is controlled via separate mute and level controllers. There's also a standard mute/solo mechanism which works in the traditional way.

The complete set of controls presents a familiar, but flexible and programmable interface that can be put into the centre of a programmable *Pure-data* network-connected environment.

### Automatic and convenience features: action-accomplishment mechanism, complex track addressing, cosmetic micro-fading

In order to keep the AIR Coremixer as intuitive as possible, we implemented several additional features that cannot be found in traditional mixers. The system provides an action-accomplishment mechanism, with double representation of main continuous controllers (such as fader and panning). Both GUI and the *airmix/airmon* protocol are aware of the possible difference between the user's action and its realisation in terms of possible network lag (the 'realisation' strip is shown in cyan colour in the AIR Coremixer track GUI).

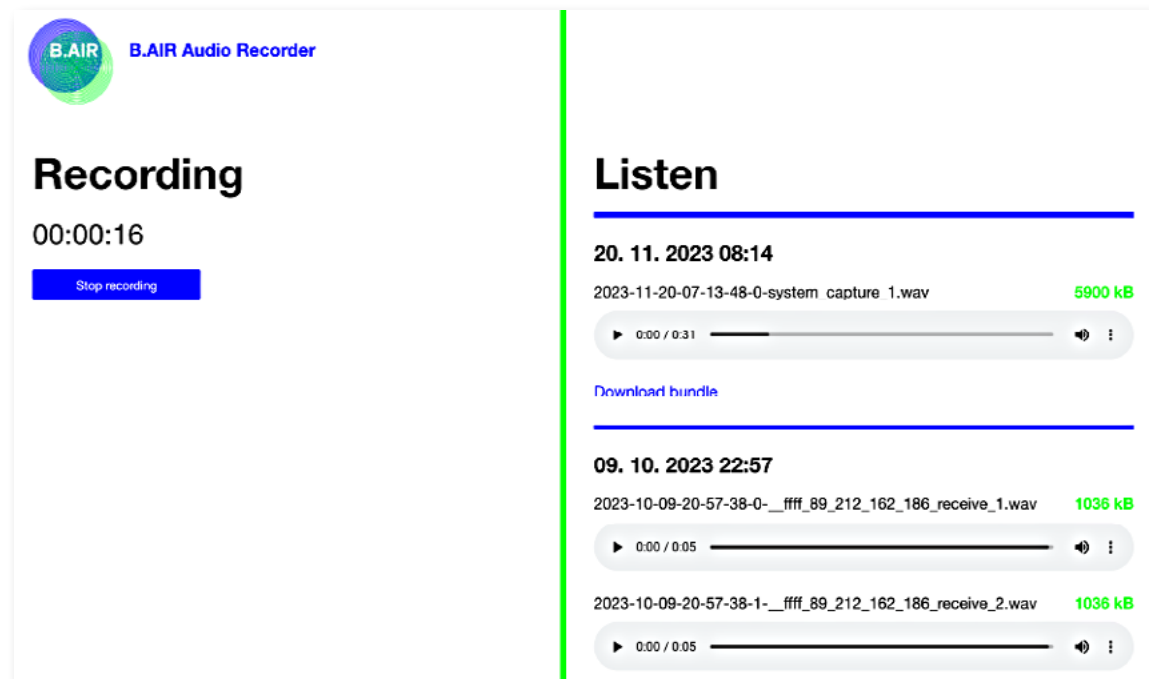
The second convenience-feature is the possibility to address tracks not only by their numbers, but also by

using complex number selection spans or ranges (this feature is available only in the terminal and processing interfaces). The native *airmix* protocol will understand and handle requests such as:

"1,3,5-7,13 fader 0.8"

and will apply the fader command to tracks numbered 1, 3, 5 to 7 and 13 simultaneously. Such convenience features make using the *airmix* protocol practical and very effective.

There's also automatic micro-fading of all PLAY-ed or LOOP-ed material, which makes it possible to use the AIR Coremixer also as an audio editing engine that can receive and properly handle broadcasting and clipping requests from the core management system.



AIR recorder



## AIR Recorder

**Miha Valenčič's AIR recorder** is built from two components: the AIR recorder web interface and the *Jack* recorder server.

The AIR recorder web interface allows an authenticated user to select the available channels for recording, and start recording.

After the recording has been made, each track becomes available for listening and/or downloading.

The *Jack* recorder server is responsible for communicating with the *Jack* daemon, connecting selected *Jack* audio outputs to *Jack* Recorder inputs and recording each selected *Jack* audio output separately.

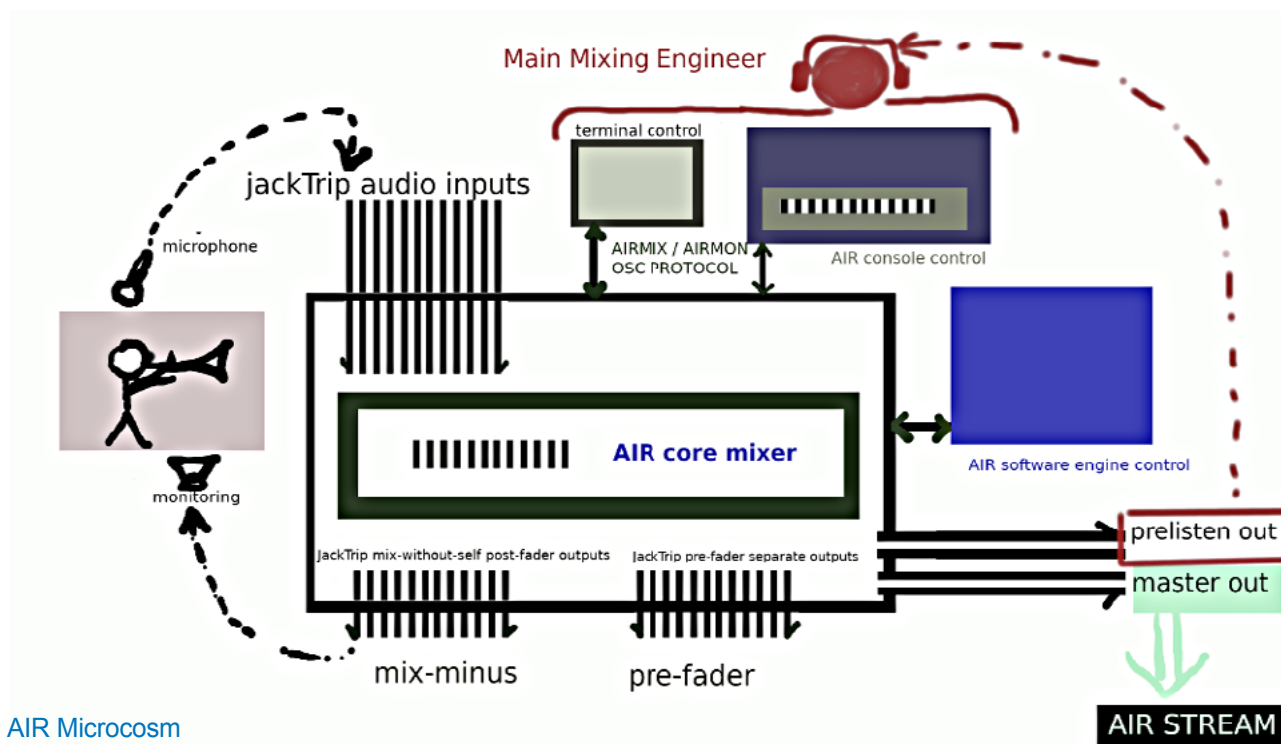
## AIR Coremixer and Recorder Firetest

After successful testing, the B-AIR project announced that our platform was available to support a slot within the EBU Ars Acustica Group's [Arts Birthday 2023](#) programme, with the AIR Coremixer technology. The background artistic idea was given by Marcus Gammel, the former EBU Ars Acustica Chairman, who invited renowned radio artist [Matthew Herbert](#) into the collaboration. A project named [The Kitchen](#) was born, covering 1 hour of the Art's Birthday Party programme for the common EBU event that took place on January 17th, 2023. The project was technologically supervised by Gregor Pirš, Miha Valenčič and Jan Jona Javoršek from the JSI Network Infrastructure Center building in Ljubljana. Matthew Herbert supervised the

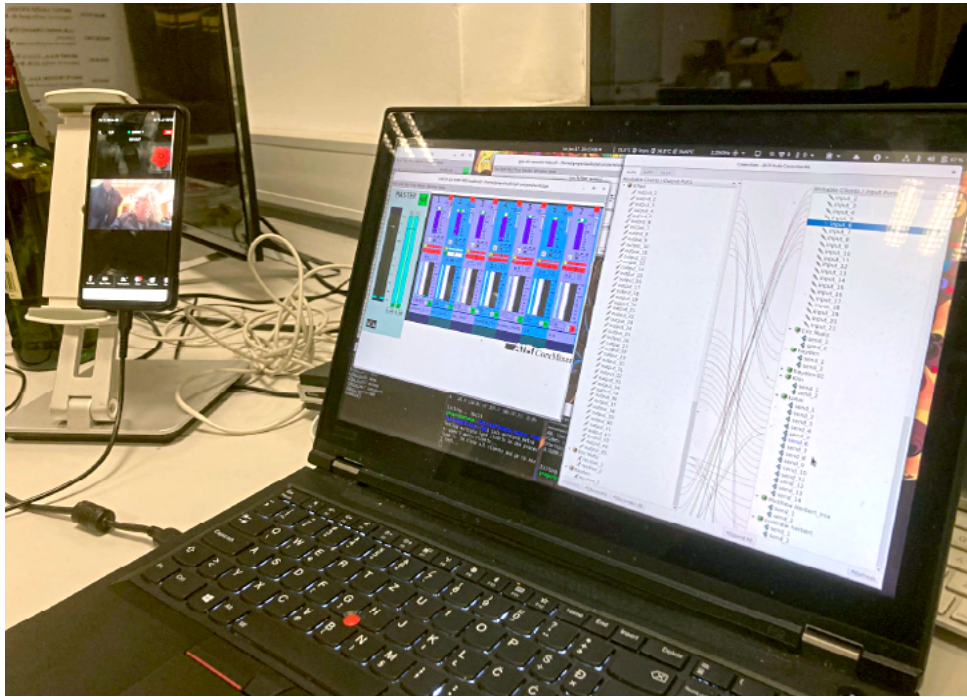
artistic implementation from a location in Great Britain. Various members of the EBU group Ars Acustica and other artists (Martin Breindl, Norbert Math, Andrea Sodomka, Eric Maltz, Kim Wichera, Samantha Simmons, Hayden Dean) participated in the collaborative performance from different parts of the world. Herbert's sound engineer Hugh Jones took control of the whole thing from his mixing desk in the UK studio. The slot was broadcasted and (re)arranged on-the-fly by many European radio stations, starting from [Radio Slovenia](#) and [SWR/Deutschlandfunk Kultur](#). Audio was recorded on a per-track basis by Miha Valenčič's AIR Recorder and stored into the AIR Platform sound library. An article and interview with the AIR Phase I technology developers was published by the Multimedia centre of the RTV Slovenia under the title "[This Is About the Artistic Conception of Software Creation](#)". Later it was published in English by the [OMG Bulletin](#).

## Additional AIR Coremixer resources

A comprehensive manual featuring the description of the Coremixer functionality and context can be found on the B-AIR project web site in the [AIR Platform documentation section](#).









# AUDIO ANALYSIS TOOLS – FROM AIROSCOPE TO AIRBLENDER

## gpp-airoscope

A 'swiss-knife' among the AIR tools, **Airoscope** designed by Gregor Pirš is a single *Puredata* patch containing various modules that can be switched on or off depending on which parts of the analysis we want to use. The patch is intended to be used as a background process that takes care of performing various types of audio analysis or the musical tissue.

It works by performing multiple simultaneous real-time analysis on a mono music stream and writes the results of these analyses to files (one per analysis) in *yaml* format, suitable for fast reading and conversion into data structures in a wide variety of programming languages.

There are five tools in the current release, three of which belong to the basic set, and two are intended for experimental use:

- ➔ Temper - tempo analysis
- ➔ Dynoz - loudness analysis
- ➔ Pitcher - pitch analysis
- ➔ Beater - experimental tempo analysis I
- ➔ Bonker - experimental tempo analysis II

**Temper** records universal tempo analysis based on the publicly available [aubio tool](#). It looks for areas of stable and unstable tempo, marks where they start in time, records individual rhythmic accents within them and adds additional analysis of average values for the entire recording or

individual regions. The two variants of this tool, **Beater** and **Bonker**, work on exactly the same principle, except that they use different core tempo analysis methods and are suitable for either extremely percussive sound environments (**Beater**) or specific sound environments (**Bonker**) where the **Temper** tool's general approach is not sufficient.

**Dynoz** records volume change analysis. It records volume changes, dividing the entire range into ten basic values, from absolute silence (*tacet*) to maximum possible volume (*ffff* - *fortissimo possibile*). It records the time of individual dynamic changes, the RMS value of the envelope, the associated musical symbols and various types of averaging.

The output dynamic range is divided into 10 bands which can be described numerically (degree) or symbolically (symbol). These are absolute dynamic, not 'psychological' values.

0 = *tacet* (absolute silence)  
 1 = *pppp*  
 2 = *ppp*  
 3 = *pp*  
 4 = *p*  
 5 = *mp*  
 6 = *mf*  
 7 = *f*  
 8 = *ff*  
 9 = *fff*  
 10 = *ffff*

**Pitcher** records the analysis of the pitch base change. From a musical point of view, this is usually the pitch that occurs in the treble (highest voice) and therefore specifically characterises the current sound situation. At each pitch change, it records the time, frequency, standard musical note, its name and octave, as well as the maximums and averages of the events or time content of the pitches.

**Beater and Bonker** have properties and structure similar to **Temper**, just the tempo-analysis method differs as mentioned.

## Why Airoscope?

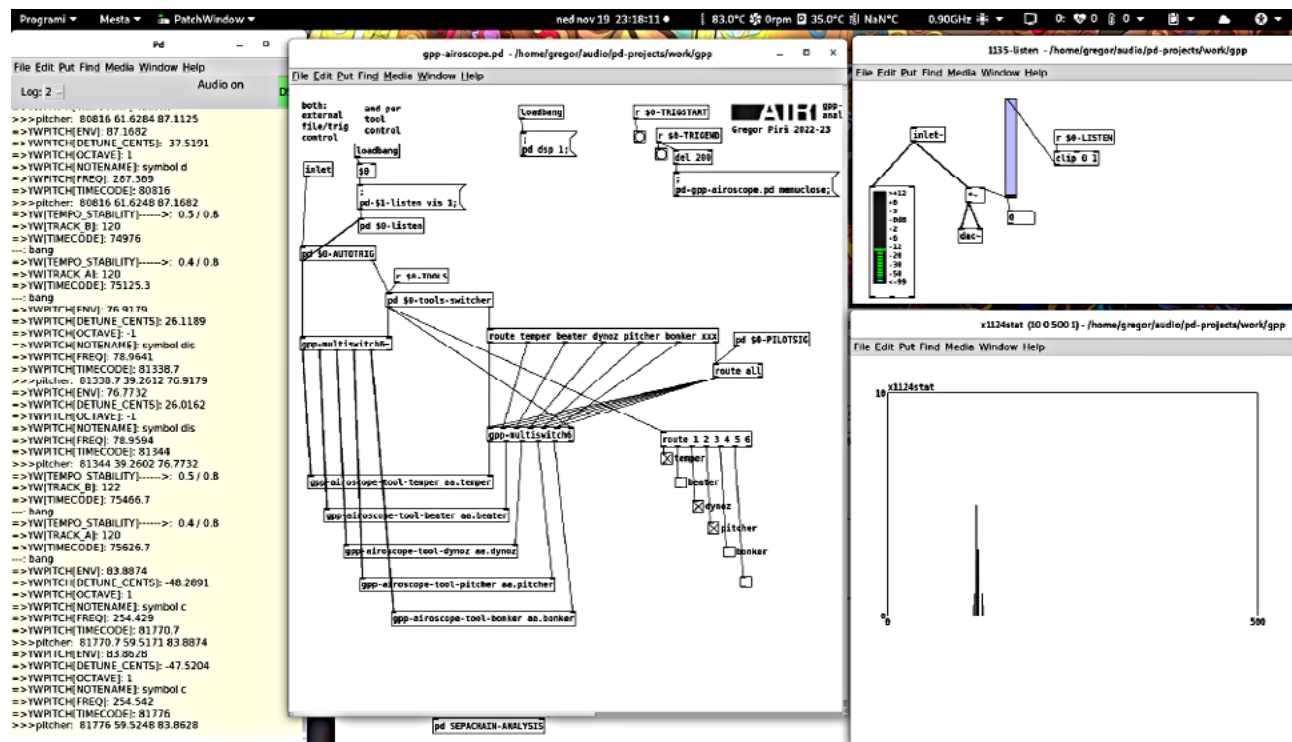
Within the framework of the AIR Platform, **Airoscope** is intended to provide data on individual 'regions' - sections of sound files in which a certain sound parameter dominates, or for which it is clear that the dominant parameter cannot be determined. This data serves Joh Dokler's **Airblender** as the basis for making decisions. The methods described here are a basic set of analytical tools. In the future, we plan to supplement them, at the same time keeping in mind that the interpretation of sound in the context of musical understanding is a very demanding business for a machine environment. It is not possible to musically define every sound situation, and the methods of this kind of definition (for example, the analysis of tempo and metre, as well as the interpretation of the actual loudness

in relation to the psychological one) are still the subject of scientific study and academic debates. Airoscope uses widely available methods, but at the same time it frames them in a solid and clear analytical framework, thereby providing sufficient analytical diversity and data volume for the operation of the AIR platform.

## Additional Airoscope resources

The tech behind the Airoscope is described on the B-AIR project web site in the [AIR Platform Documentation Section](#).

## Airoscope



## Airblender

**Joh Dokler's Airblender** is the core decision-making centre of the AIR. Airblender consumes the metadata generated by the AIR audio analysis tools about the available audio recordings and uses this information and machine learning methods to direct and control the Airmixer to play the recombined audio on the AIR radio stream.

Airblender uses a (growing) set of algorithms that, based on the audio metadata, selects and combines what audio files and file parts to play. To achieve this it uses 1) a set of heuristics developed through human interaction with the system and 2) introduction of stochastics that provides elements of unpredictability and eliminates possible repetition.

A number of algorithms have been developed to select what is played at any particular time. These algorithms range from simple ones like “play a part of the audio track on channel x” and become progressively more complex both in what the algorithms do and how they are orchestrated across different channels.

A more complex single-track algorithm may play a sliding window with varying window size based on the Fibonacci sequence. Or, based on the temper analysis, play a progression of parts that follow a predefined or generated sequence of pitches.

While single track algorithms that follow predefined heuristics already produce quite interesting results, multi-track algorithms that orchestrate multiple channels in unison provide means for even more auditory possibilities. For example, the ‘chord’ algorithm can use a pitcher analysis to play a chord or a progression of chords on a subset of channels using sounds that conform to the requested pitches but may be completely different in nature or structure.

The described functionality is clearly asynchronous in nature, as different channels must be controlled independently of each other.

The Airblender is implemented on top of the [.NET](#) framework using the [F# functional programming language](#). At the core of the application is the message-processing agent called the [MailboxProcessor](#) which executes asynchronous computations. Based on the provided user configuration, the system runs a requested number of audio channel agents. The agents then run in an infinite loop and based on the currently selected algorithm, either



independently drive an assigned audio channel or collaborate with other channel agents to produce more complex audio playback.

The resulting system already approximates a number of strategies that could be implemented by a sound-art composer when exploring the materials for an artistic project. Its modular nature and extensibility, however, enable us to not use the system as a model or an approximation, but to use it as a set of tools that can facilitate and extend our artistic abilities and give us additional degrees of freedom in experimentation. Its open nature allows us to combine it with other tools and resources, including additional analysis, generation and machine learning facilities, while still maintaining the status of the resulting AIR Platform's outside beacon: an independently generated artistic radio stream.

### AIR Platform public presentations

At various stages of development, the AIR platform was introduced to the members of the EBU Ars Acustica group at the EBU Ars Acustica Plenary Meetings:

- 2020 B-AIR Project Announcement (Saška Rakef, Gregor Pirš)
- 2021 Short B-AIR Project Presentation (Gregor Pirš, Saška Rakef, Helmi Järviluoma-Mäkelä, Jan Jona Javoršek)
- 2022 B-AIR and AIR Platform presentation and discussion (Saška Rakef, Gregor Pirš)

The development of the AIR Platform was presented in the form of a webinar lecture delivered by Gregor Pirš during the CRESSON Workshop in Cuneo, in October 2022.

Finally, the AIR Platform was publicly presented in the urban environment at the Global SpecifiCity event in Ljubljana, June 16-18 2023, in the form of a sound installation at the Museum of Contemporary Arts Metelkova (+MSUM) platform. We are planning a final presentation as an AIR Round Table at the Jožef Stefan Institute, Ljubljana.

### AIR Platform materials included so far:

- **“So Quiet” (Tako tiho)** by **Larisa Vrhunc** performed by the RTV Slovenia Symphony Orchestra, conductor: Catherine Larsen-Maguire [21.01.2023, 99 tracks]
- **“The Kitchen” / EBU Ars Acustica ABP 2023** by **Matthew Herbert et al.** performed by the Alien Productions (Martin Breindl, Norbert Math and Andrea Sodomka), Eric Maltz, Kim Wichera, Samantha Simmons, Hayden Dean, mix: Hugh Jones, produced using the AIR Platform Core-mixer [17.01.2023, 8 tracks]
- **“Defiance of the Glorious Children”** by **Svetlana Maraš** performed by RTV Slovenia Symphony Orchestra, conductor: Steven Loy [15.06.2023, 87 tracks]
- **“Perpetuum Mobile II”** by **Matej Bonin** performed by RTV Slovenia Symphony Orchestra, conductor: Steven Loy [15.06.2023, 75 tracks]
- **“Sense-S”** by **Petra Strahovnik** performed by the RTV Slovenia Symphony Orchestra, conductor: Steven Loy [07.10.2023, 140 tracks]
- **“From Womb to World to World of Wonders”** by **Duo Merzouga (Eva Poepplein, Janko Hanushevsky)** performed by Duo Merzouga (Eva Poepplein, Janko Hanushevsky) [17.06.2023, 1 track]

- **“What Dogs Hear”** by **Aernoudt Jacobs** performed by Ina Puntar, Tea Vidmar, Žiga Jenko and Tisa Neža Herlec – voice, Aernoudt Jacobs, electronics, installation [16.06.2023, 6 tracks]
- **“Cradling the World” (Zazibam svet)** by **Tomaž Rauch** performed by Tomaž Rauch, sound projection [17.06.2023, 1 track]
- **“Welcome of the World – WOW” (Dobrodošlica sveta)** by Irena Popović Dragović – BAZAART Belgrade, performed by Nikola Dragović, Ana Milošević, Ivana Živković, Nemanja Savić, Pavle Popović, Aleksandar Petrović, Irena Popović, Ivan Mirković, Jovan Krstić, Vladimir Gurbaj, Đorđe Antić, Danilo Tirnanić, Dren Dragović, Kala Dragović [15.03.2022, 1 track]
- **“United Sounds from the European Evening of Sounds - Sound Memories and Practices of Sonic Remembering”** by University of Eastern Finland, FIYLE, RSRTS, SIRTVS – Heikki Uimonen, Helmi Järviluoma-Mäkelä, Jukka Mikkola, Pertti Ylikojola, Nikoleta Dojčinović, Anamarija Štukelj Cusma, Saška Rakef [29.05.2023, 1 track]

### AIR Platform perspectives

The development of the AIR platform was one of the more challenging segments of the B-AIR project. Although some segments (endpoint connectivity, machine learning) turned out to be more difficult to implement than was initially planned, and presented interesting additional challenges, the work allowed us to set up a balanced hardware-software infrastructure in which we achieved and in certain areas (usability of the central application: the air-mixer) also exceeded our initial expectations.

We launched the AIR radio stream for a public trial in May 2023. With some minor technical corrections and improvements, we achieved a stable permanent audio stream until the main presentation in June 2023 (in Global SpecifiCity), which can be supplemented both in terms of content and technology without any problems, since the software is written in an open style, licenced as free software/open source, and well documented.

In one of the next, more technologically oriented projects, we want to improve machine selection and machine learning methods, explore the ability to use analytic module results to complement the existing machine learning techniques, solve some of the remaining challenges with endpoint connectivity and, as a result, create an interface that will facilitate the preparation of collaborative live art events.

Further cooperation with the group of sound artists EBU Ars Acustica will also be in the foreground, because after the end of the project, as promised, we are opening the field for creative upgrading of the technological side of the platform, especially for new and different artistic initiatives, which will definitely enrich what we have already, at the very beginning, called **AIR - Abstract Infinity Radio**.



AIR Platform at the Global SpecifiCity event, +MSUM, Ljubljana, Slovenia, June 2023  
Photo by Katja Kodba





AIR Platform at the Global SpecifiCity event, +MSUM, Ljubljana, Slovenia, June 2023. Photo by Katja Kodba







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