



How can we use the concept of sound as an index of change methodologically for the documentation and preservation of local acoustic histories and transformations?

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Abstract

This research aims to substantiate four main things, the first, advocating for the richness of the kinds of knowledge that can be produced and tapped into by studying acoustic structures as epistemological networks, the second being the need for an elaboration upon methodological practises demonstrating through fieldwork the kinds of uncoveries that creative and multisensory methods open us up to. The third, though closely linked to the second, is the need for documenting the multimodalities of life, as many aspects of our existential and experiential realm are intangible and embodied, continuing a purely verbal textual practise seems reductive. The fourth is to use everything previously mentioned through a case study of the village of Petřčane as a way of showing its efficacy and in turn salvaging and documenting the cultural and ecological narratives within this small Dalmatian community and landscape that is undergoing major economic, cultural, and ecological transformations.

This thesis will approach sound as an epistemological force that can be utilised to form narrative indexes, informing of, transformations, temporality, catalysts, and processes of change within culture and landscape. Elaborating upon Steven Feld's concept of the acoustemology sound will be used as the structure from which knowledge can be extracted, contributing to the diversification of documenting culture and landscape by focusing on intangible elements. Creative and multisensory methods like conscious walking, storytelling, active listening, and experimental ethnographies will be utilised to make apparent the richness of data that can be collected while using embodied and serendipitous methods, and demonstrate the

plethora of knowledge that can be accessed and produced by examining the multisensorial elements of people, place, and space.

This thesis is built around three primary areas of focus: the economic, social, and ecological. It will demonstrate how acoustic networks offer elaborate insights into societal change, ecological decline, and the rise and effect of economic shifts. The outcome of this research shows how rural coastal areas have undergone numerous and severe transformations, narrated through sound. The praxis within the mass tourism industry has contributed to rapid cultural change and ecological impacts, with short term unsustainable development drastically altering traditional acoustemologies in exchange for a culture of 'fast-fashion' economic success at the risk of cultural and ecological systems. This will be shown through ethnographic explorations focused on storytelling and oral histories, audio recordings, examining traditional social sound structures, and silence

Prologue: The sounds of the sheep of Petrčane

Before the 1960's, the small coastal village of Petrčane, in the Zadar County, was once a typical representation of a Dalmatian village, with agrarian and sea fairing practises as key elements within the cultural landscape, and as key economic sources of revenue. The voices of women and children were dominant in the landscape as most husbands, brothers, and sons were out to sea, working on boats as sailors and fisherman. Many houses, if not most, had livestock – mainly sheep - as a source of income or for personal use. Sheep could be heard in the morning and the evening as they journeyed through the village to and from the wild pastureland of the peninsula of Punta Skala (an area that now houses a large luxury resort).

With the arrival of tourism in the 1960's and 1970's came the silencing of agricultural livestock. The former government of Yugoslavia issued a domestic animal ban in the area as the visceral elements that accompanied them were deemed undesirable for a touristic experience. The sounds of animals gradually were exchanged for the leisure sounds of holiday makers enjoying the pristine coastal area during the summer months : sounds of restaurants, night clubs, clamorous beachgoers, numerous new languages and dialects resonating through the village, as well as the sounds of the building of rental properties and resorts. Male voices slowly returned to the village, as there was now employment within their own area rather than on the sea or in ports far away.

In the early 1990's, the sounds of socialite summers faded into the devastating cacophony of explosions, fighter jets, and all-out war thundering in the distance. The men would leave again, this time for other reasons. These sounds would stay for a

long time. Hotels and resorts were no longer full of tourists, but rather were housing refugees from other areas. It is now when the sound of sheep returns to the village after decades. Parking lots were used to house the livestock of refugee shepherds who had descended from the mountains into the village for safety. As the years passed so did the conflict, and so did the sounds of sheep. As people settled into a newly independent nation, Croatia, and settled into a silence of peace, tourism came again, and the sheep left once more.

Today the village is again dominated by the sounds of tourism and the sounds of construction, as the area attempts to keep up with the demand for touristic accommodation. The only acoustic features of domestic animals are the sounds of barking dogs, and two lone token donkeys who live in an olive grove near the church.

Introduction

Rural cultural decline is a global phenomenon that has impacted the entire globe, in a world that is striving for a utopian view of development that values increasingly standardised forms of culture, conservation, and western centric value systems and forms of lifestyle, much has been left to be forgotten, or debased to tchotchke like folkloric relics of culture, particularly in ‘developing’ non-western nations. In many cases the result is a sense of needing to “catch up” with the west, resulting in unsustainable and uneven development, the exasperation of resources, and compromises to cultural and ecological integrities.

South-eastern Europe has not been spared from the phenomenon of rural cultural and ecological decline; in fact one might say that due to its geo-cultural location the transformations have been occurring more rapidly than anywhere else in Europe.

Croatia occupies a unique position, being the East of the West and the West of the East: culturally, historically, and geographically.¹ With a terrain that is ripe with the tensions of Orientalism versus Occidentalism, and East Block v West Block.²

However, like most countries today, especially ones who are distancing themselves from an ‘Eastern Block’ Socialist past, Croatia is rapidly ‘westernising’, and in doing so leaving behind many rich cultural traits and traditions under the pretence, or rather journey, of modernisation and development. Conditioned to believe that modernisation means the ‘new’ is the better, and Europeanisation is self-actualisation, the race towards modernity and national development have led to

¹ (Gugić, Minja , and Sven Marčelić. ‘14. FESTIVAL TOLERANCIJE Marčelić: Hrvatska je Zapad Istoka i Istok Zapada’. Zadarski list, 15 June 2020. <https://www.zadarskilist.hr/clanci/15062020/14-festival-tolerancije-marcelic-hrvatska-je-zapad-istoka-i-istok-zapa>)

² (Saïd, Edward. Orientalism. Partheon Books, 1978)

traditions and ways of life declining, or rather being exchanged for promises of urban utopianism and a European stability. While there is still a sense of nostalgia, it is intertwined with a sense of obsolescence surrounding the loss of certain customs, traditions, and ecologies through the shroud of progress and development, both within the geographic and cultural landscape.

The story of the sheep of Petrčane is a story about these developments. It presents a complex narrative of socio-political, economic, and cultural transformations within the village, and in a wider context the nation. Painting a sonic landscape over time, recounting the appearance and disappearance of sounds of people, animals and machines, it tells of the traditional agrarian rural life within the village, of a communist government, the birth of the tourism industry, conflict and war, the displacement of people, the birth of a nation, and then the rise of tourism again. The story is an amalgamation of information – anecdotes, memories, stories – that I acquired through fieldwork in the summer of 2022. It has been put together based on the oral accounts of several villagers that I interviewed. It demonstrates how larger cultural, ecological and economic transformations can be documented, narrated and understood through situated acoustic fieldwork. The sounds in this story can be understood as indexes of change, of what came and what went, what remained and what got inevitably lost.

I am interested in how we can use the study of sound to grasp the affective and ephemeral dimensions of cultural transformations? This methodological question lies at the heart of this thesis.

The village of Petřčane will serve as a case study, an example of a coastal Croatian village that has experienced significant alteration. This research wants to add to “conventional” qualitative methodologies in the social sciences that often value verbal-textual methods and that are negligent of ephemeral cultures that are rapidly declining.³ It is the position of this thesis that mono-sensorial accounts of research, and in a broader sense the world, rob us of the layered minutia and histories that form the known and experiential. To create such limited forms of experienceable narratives is almost a perverse censorship of the way in which we encounter our realities and document their existences, whether this is deliberate, or a symptom of “traditionalist” research. This research aims to expand more traditional methodologies with experimental multisensory and creative methods. Over the last decades there has been an increase in creative approaches across the social sciences, and beyond, that have been pioneering artistic processes to diversify the way in which culture is studied, with the aim to unearth broader views of culture and offer more in-depth serendipital accounts and overall more diverse narratives.⁴⁵⁶ This thesis will aim to be a part of that ‘movement’ of the diversification of narratives and the marriage of experimental practise with ‘conventional’ forms of the study of culture and landscape. The thesis will make suggestions to methodological structures and practises of cultural documentation, and in doing so hopefully contribute to the preservation of the ephemeral acoustic cultures and zones of the village of Petřčane.

³ (Gallagher, Michael, and Jonathan Prior. ‘Sonic Geographies: Exploring Phonographic Methods’. *Progress in Human Geography* 38, no. 2 (April 2014):1)

⁴ (Williams, Nina. ‘Creative Processes: From Interventions in Art to Intervallic Experiments through Bergson’. *Environment and Planning A: Economy and Space* 48, no. 8 (August 2016): 1549–64)

⁵ Gallagher, Michael, and Jonathan Prior. ‘Sonic Geographies: Exploring Phonographic Methods’. *Progress in Human Geography* 38, no. 2 (April 2014): 2

⁶ Rivoal, Isabelle, and Noel B. Salazar. ‘Contemporary Ethnographic Practice and the Value of Serendipity: Ethnographic Practice and Serendipity’. *Social Anthropology* 21, no. 2 (May 2013): 178–85. <https://doi.org/10.1111/1469-8676.12026>.

The research explores rural decline and development through acoustic territorial change, homing in on the effects of rural transformations in coastal Croatia. Acoustic features of culture and landscape will be used to explore sound as an index of change to document and narrate how village acoustics around the Croatian Adriatic coast have developed, and are indicative of ecological, social, and economic aggregates such as urbanism, cultural shifts, and tourism. The stance of this thesis is not to overly criticize the development of urban and economic changes, but rather attempt to salvage histories and experiences through acoustics from the places and inhabitants who have witnessed these transformations first-hand

Questions addressed:

- ***How can we use the concept of sound as an index of change methodologically for the documentation and preservation of local acoustic histories and transformations?***
- *What kind of knowledge can be uncovered and produced by using creative and sensory methodologies?*
- *How can these methods and the knowledge produced inform policies and sustainable cultural futures?*

Theoretical Framework

This research brings together three theoretical approaches: acoustemology, salvage ethnography, and archaeoacoustics. The first is Steven Feld's contemporary social theory that views sound as meaning, an epistemological network, which forms the

key driving ethos within this research. The second, salvage ethnography, pertains to the need for documentation and conservation of cultural and ecological narratives, which if not studied and recorded would be at risk of being forgotten. And the third, archaeoacoustics, with a focus on both culture and ecomusicology, relates to the temporal aspects of acoustic changes within the area of study with particular emphasis on both the social and biological aspects of sonic change, attempting to trace acoustic structures that have already been severely impacted, or have already vanished from their endemic landscapes.

Acoustemology

The concept of acoustemology presents sound as a crucial epistemological force within the physical and cognitive landscape, informing of sense of space, place, memory, temporality, and transformations. It explores sound as part of a multisensorial and psychological ecosystem that is not a phenomenon, but rather an orgiastic force that is culturally and locality specific. Feld states, “place is sensed, senses are placed; as places make sense, senses make place.”⁷ It offers a more comprehensive approach to relating to sense, space, meaning, and memory rather than solely focusing on the saturated principles of vision as the primary vessel of meaning making within the landscape, which reduces acoustic spheres to a benign happenstance. Conceptually, this thesis will advance Feld’s concept, using the acoustic network of Petrčane as an indicator of histories and transformations within the social and cultural terrain through the concept of sound as an index of change.

⁷ Feld, Steven. *Sound and Sentiment: Birds, Weeping, Poetics, and Song in Kaluli Expression*. 3rd ed.; Thirtieth anniversary ed. with a new introduction. Durham [N.C.]: Duke University Press, 2012. (n.d.).

Acoustemology conjoins acoustics and its active participatory modes: sounding, hearing, and listening, with epistemology, using sound and the audible world as a way of knowing, and learning.⁸ It is an immaterial network that exists layered over and within our material and natural environment, and offers epistemological and pedagogic structures that provide insight, and active structures of information. Since acoustic networks are epistemological structures, as informed by Feld's theory, the research within this thesis will focus on the kind of knowledge that can be retrieved and obtained through studying social and ecological networks of sounds within specific localities, in the case of this research the village of Petrčane.

Archaeoacoustics is a branch of archaeology which pertains to the study of the sonic qualities of both man-made and naturally formed structures to gain insight into the historic acoustic cultural and designed elements of anthropic dwellings. The field of *archaeoacoustics* primarily focuses on the recovery and examination of material structures using computer modelling and digital technologies to create audible immaterial representations and speculations of the past.⁹ The majority of studies still have a traditional approach that focus on a specific architectural structure, such as caves, or churches, material and tangible spaces, and is empirically aligned with archaeology and architecture. Within this thesis *archaeoacoustics* will be more closely aligned with sonic and cultural geographies to map and recover acoustic cultures and elements that are extinct or in decline within the biological and social landscape of the village of Petrčane. The emphasis in regard to this research is a social scientific approach, rather than a geological or tangible structure. While in

⁸ Ibid

⁹ Suárez, Rafael, Alicia Alonso, and Juan J. Sendra. 'Archaeoacoustics of Intangible Cultural Heritage: The Sound of the Maior Ecclesia of Cluny'. *Journal of Cultural Heritage* 19 (2016): 567–72.

conventional archaeology there is a physical excavation of material that piece together the stories of the past, ephemeral cultures such as sound leave no physical trace, and therefore must be excavated differently. Extinct acoustic elements exist through narrative, memories, affect, and storytelling. Thus, the site of study no longer simply pertains to a material structure, but rather includes the recollections of the inhabitants as key witnesses, and the information must be excavated through means of the mind.

The study of the village and inhabitants through the *archaeoacoustics* lens focuses on the transformations of two separate sound site approaches, the first cultural and the second the ecological architectures within the landscape. To explore these two *archaeoacoustics* spheres of ecological and cultural architectural systems and transformations ethnographic theory and methods have been included to assess the socio-cultural structures, and ecomusicology to assess the ecological transitions.

Ecomusicology is a vast multidisciplinary field, made from the merger of anthropology, musicology, and ecology. Though this multifaceted area has many definitions, the one that is seemingly most agreed upon within the field is by Aron S. Alen, who states that ecomusicology is simply “the study of music, culture, and nature in all the complexities of those terms. Ecomusicology considers musical and sonic issues, both textual and performative, related to ecology and the natural environment.”¹⁰ Though it is somewhat loosely defined, the ambiguity of this artistic, social scientific, and biological science allows for creative and holistic approaches

¹⁰ (Allen, Aaron S. ‘Ecomusicology: Ecocriticism and Musicology’. *Journal of the American Musicological Society* 64, no. 2 (August 2011): 391–94. <https://doi.org/10.1525/jams.2011.64.2.391>.)

that deviate from the binaries of traditionalism and allow for the exploration and collaboration of disciplines. For the sake of this research, it will be aligned with *archaeoacoustics* to view how the natural ‘architecture’ of the acoustic landscape has transformed over time.

Salvage ethnography

Salvage ethnography is a branch of the wider anthropological methodologies, with its aim being to preserve cultures that are at risk. Its name and its origins stem from most of the historic development of anthropology, steeped in colonial fetishism, and frankly white saviour complexes. Though closely aligned with Franz Boas the term was first coined by 19th century anthropologist Jacob W. Gruber while studying the cultural decline and impact of colonisation on the First Nations Peoples of the Americas, “salvaging” the remanence of their histories that were decimated by tyrannical destruction. On a personal level I advocate for the decolonisation of the term, as to “salvage” can hold deeply problematic connotations, as do the origins of the study of anthropology overall. Therefore I propose the renaming of salvage ethnography to conservation ethnography, or something along those lines.

The premise of salvage ethnography overall is rather simple, to study transformations within cultures that are vulnerable, ensuring there is a documentation of the people or phenomenon in question for the historical record, elaborate on the reasons that lead to decline, and if possible, to use this knowledge to revive or nurture the continuation of its existence. This ethos aligns closely with the research of this thesis, and my own personal motivations and wishes to document the culture of Petřčane before the traditional histories have faded into the

shadow of history, leaving little to no record. When one studies a culture, or actively documents it, it offers certain validity and valuation of what is being studied, suggesting it is worthy of a written record (which all culture is). Villages like Petrčane have not been afforded much study, leaving their narrative and histories at risk, this was a driving feature in the selection of conservation ethnography, to ensure and show that active study should be distributed to even the smallest of places in adequate forms. Where this approach differs from many salvage ethnographic explorations is that it is also autoethnographic, as I the researcher am part of the culture of study, with the motivation is to ensure heritage survival and conservation for the benefit of my community. This differs from the outside-in perspective of study, where while the researcher might have the best of intentions can hold colonial salvific dynamics like the “gaze” of ogling the natives.¹¹

Combined, these theories help to study the village of Petrčane as a meaningful acoustic network (acoustemology), in which absent sounds and sounds of the past are as meaningful as present sounds (*archaeoacoustics*), and whose documentation is aimed at helping to acoustically preserve a culture in decline (salvage ethnography).

Methodological Framework

How can we document the acoustic networks of Petrčane, how can we document change and transformation in these networks via sound, and how can we grasp the

¹¹ Foucault, Michel. *The Birth of the Clinic: An Archaeology of Medical Perception*. New York: Vintage Books, 1994.

affective and intangible dimensions of these transformations? As the research is both temporally and locality specific the most logical bedrock for the methodology was ethnographic in nature since answering the research questions required being in the place of study on a corporal level. Therefore, ethnographic fieldwork was conducted in the village of Petrčane from the beginning of March to late April, equating to over a month and a half of active on-site fieldwork.

More specifically the methodology employed for this research were forms of experimental ethnography as it creatively combined investigations into bodily praxis, material culture and the affective dimensions of human and non-human existence, as well as creative audio-visual expressions.¹² The methods used during the fieldwork were: conscious walking, active listening to both the landscape and the people, soundscape recording, participant observation, semi-structured recorded interviews, and self-reflections.¹³

Embodiment is a key element of any fieldwork praxis, whether this is conscious or unconscious, “being there” is in a way a methodology within itself.¹⁴ The dynamisms of atmosphere, navigation, sensory elements, all influence the way in which the researcher interacts with the subject and interacts with the space, “being there” influences cognitive and corporal understandings of people, place, and practice. The methods used within this research to consciously tap into “being there” were rather simple yet informed so much of what was discovered. Walking, and listening drove many parts of the fieldwork and were key practices that lead to serendipital

¹² Madison, D. Soyini. *Critical Ethnography: Method, Ethics, and Performance*. 2nd ed. Thousand Oaks, Calif: SAGE, 2012.

¹³ Williams N, 2019, 'Listening', *Transactions of the Institute of British Geographers*, vol. 44, pp. 647 - 649,

¹⁴ Watson, C. W. *Being There: Fieldwork in Anthropology*. London: Pluto Press, 1999.

discoveries within the field, specifically informing the themes of noise, ecological decline, silence, and socio-cultural change. Listening as a method is “not entirely volitional because there is always unintended interruption”, it is both a conscious and unconscious facilitator of surveying atmosphere and engaging with epistemological networks.¹⁵ And when approached as a methodological and pedagogic tool makes the researcher aware of intangible elements of the site of study, decentralises the visual dominance of research, and situates oneself within the context of local geographical and cognitive landscapes.¹⁶

Similarly embodied walking was a crucial method of “being there”, the emphasis of conscious or embodied walking was less about “where am I going”, and more about “where is it taking me”, “how did I get there”, and “what did I experience and discover along the way”. The purpose is to be conscious and engaged with the surroundings as a kind of passive interview of context and circumstance, to inquisitively engage with the process and experience of walking and the world around you which can lead to unintended discoveries or overlooked moments of meaning.¹⁷ The level of insight that is extracted from the daily act of walking (or similar movements depending on one’s able-bodiedness) and the “human reality of embodiment” are often overlooked but are pedagogic and relational ontological practices.¹⁸ The acknowledgment of one’s body and the level of unconscious or taken for granted perceptivity of corporal experiences is often neglected within methodological explanations.¹⁹ Conscious

¹⁵ Williams N, 2019, 'Listening', *Transactions of the Institute of British Geographers*, vol. 44, pp. 647 - 649,

¹⁶ *ibid*

¹⁷ Teff-Seker, Yael, Terhi Rasilo, Jan Dick, David Goldsborough, and Daniel E. Orenstein. 'What Does Nature Feel like? Using Embodied Walking Interviews to Discover Cultural Ecosystem Services'. *Ecosystem Services* 55 (June 2022)

¹⁸ Snepvangers, Kim, and Susan Davis, eds. *Embodied and Walking Pedagogies: Engaging the Visual Domain: Research Creation and Practice*. *Transformative Pedagogies in the Visual Domain*: 4

¹⁹ *ibid*

walking conducted during fieldwork was durative and constant, vehicles were not used, and headphones were deliberately only used while recording soundscapes, this was to ensure that active and conscious walking and listening was uninterrupted. The emphasis on these two humble methods resulted in an extremely reflective, serendipital, and playful experience of fieldwork that brought to light narratives and details of transformations within the landscape. It excavated long forgotten personal memories and moments of affect and emotions, while also creating and unearthing new ones. Taking inspiration from Phillips, multisensory and playful child-like curiosities, and intrigue, lead to some of the most valuable aspects of fieldwork, such as “collecting sounds, urban climbing, finding “accidental art” and getting lost”.²⁰ Overall, active listening, embodied or conscious walking, and playfulness were crucial methods within this “Guerrilla Geograph[ical]” methodological approach.²¹ Recorded self-memos and a field journal was used to document these feelings, discoveries, and experiences.

Another modest yet crucial element within this methodological matrix was talking; recorded semi-structured interviews, conversation, oral histories, and recounts, were key methods within the research process. Around 30 participants were engaged with and interviewed both formally and informally, planned and unplanned, recorded and unrecorded. The locations of the interviews were very diverse, catching people in transit like in the pub or café, or sitting for interviews where they felt most comfortable, such as in their living room over a cup of coffee, in the grocery store, or on the beach. A basic set of questions were asked as the starting point within interviews and conversations to establish a comfortability between myself and the

²⁰ Phillips, Richard. ‘Playful and Multi-Sensory Fieldwork: Seeing, Hearing and Touching New York’. *Journal of Geography in Higher Education* 39, no. 4 (2 October 2015): 617–29

²¹ *ibid*

participant and get them accustomed to thinking reflexively out loud. The starting questions related to general thought and context within the village before turning to thinking acoustically. The questions are listed below:

- Do you consent to being recorded?
- What is your name and age? You can be anonymous or given a pseudonym.
- What is your relation to the village?
- How has the village changed during your lifetime? (Example: Culturally, Geographically/Physically, The People, The Traditions, The Population)
- What are the sounds of your childhood?
- What are the sounds that you hear these days?
- What are sounds that bother you?
- What sounds have disappeared from the village? (Sounds you miss or don't miss)
- What do you think the future of the village is? (And future of its culture)
- Do you consent to have this used for research purposes? You can retract that decision at any time, and this will not be used, and deleted.

These basic questions formed a semi-structure through which to navigate the interviews, however often participants would recount stories or touch on themes they were deeply passionate about which changed the types of questions asked to be more relevant to their topic (some interviews were as long as 2 hours). While often it was a dialogue, a conscious effort was made to just be a listener and to not lead or suggest answers or directions

The combination of these methods in practice lead to the uncovering of the three narratives of transformation that will form the structure of this thesis, which emerged from notated histories, reflections and nostalgia, and affective inquisitions by both myself and participants, as well as the visible effects within the landscape. These themes are: ecological decline, industry and economic shifts, and socio-cultural change.

It must be noted that although all participants gave recorded verbal consent to use both their names and recorded interviews for the purpose of this thesis and further research, I have decided to use pseudonyms and in some cases no name at all to ensure a level of anonymity. I have also made the decision to exclude data and not to use the recorded interviews to further ensure anonymity as many of the interviewees mention other inhabitants and entities by name, due to the small nature of this community and the potential repercussions that might follow I believe it is my ethical duty to ensure that my research does not lead to any undesirable consequences. Despite the recordings being left out of this work, the content from these interviews will still inform this thesis and will be relevant throughout.

Finally, a few remarks on my position as researcher. My own personal connection to the village was a driving feature for the overall project, and for the decision to use autoethnography. In a way I am a local within the village, having spent a minimum of 3 months there every summer since the age of 6 months, and due to my transient upbringing of moving every few years in my mind it is the definition of home. Though I have no familial connection to the place, I can with pride say that I am a member of the local community, and while conducting this project to preserve elements of the

villages cultural heritage that bond was solidified even more, with many of the inhabitants feeling a sense of respect and kinship with someone who was committed to salvaging what is being lost. This deep knowledge of the village, and having witnessed year after year its numerous transformations and changes has allowed me to add in my own accounts of change, bringing in an element of critical reflexivity, which invites self-reflective evaluations of emotions, memories, and experiences so long as they inform of cultural context.²² As well as the first-hand accounts of change, my position within the village also allowed for easier access to inhabitants to interview, as I was in some form already involved in the social structure and not an inquisitive outsider 'studying the natives', a problematic cliché far too present in anthropology and within its origins.

While there was an element of heightened accessibility of interviewees, I must situate my own standing in the village and the limitations and risks around them. Croatia is still developing in terms of LGBTQIA+ 'tolerance', a true yet unfortunate fact, and as the only openly queer person within the village there are certain elements of hostility that blockaded access to particular participants, and at the beginning of fieldwork a large portion of time was spent gradually ingratiating myself with certain individuals to allow me to occupy the space and maximise community engagement for the purpose of my own safety and research. This is perhaps one of the reasons why most of the people interviewed were female, and though it might be a crude stereotype to state that women and queer men get along well, within the wider Croatian context heteronormative men tend to be more reserved and hostile

²² (Madison, D. Soyini. *Critical Ethnography: Method, Ethics, and Performance*. 2nd ed. Thousand Oaks, Calif: SAGE, 2012: 292)

towards queer people than women are. Though it must be said that the inhabitants of Petřčane were overwhelmingly open minded, and I did not face any overt undesirable interactions.

Petrčane Context

Petrčane (pronounced Petr-cha-ne) is a village on the central Dalmatian coast located around 10 kilometres from the city of Zadar and is around 950 years old, having first been mentioned in written records in the year 1070.²³ The village is a typical representation of coastal settlements that are peripheral to Zadar, surviving off tourism as its main industry and source of economic income. While this village might be viewed as a town or suburb due to its size and large number of buildings and developments that sprawl along its coast, the village is only home to around 500 registered inhabitants, though the population consistently living there all year round is considered to be half that.

The establishment and name of the village is speculated to have been a result of the building of a Church in a remote uninhabited landscape. The legend goes that the two serfs who were placed as the ground's keepers, brothers Petar and Zane, were awarded a house on the rim of the religious structure in return for the upkeep of the land and building. It is speculated that the name Petrčane is a portmanteau of the two names.²⁴

²³ (Gržan, Zvonimir. Petrčki Baul. Otok Krešovani Rijeka. 1999)9

²⁴ Ibid

The traditional industries within the village were once agriculture, seafaring, fishing, and more recently tourism, with the latter currently being the primary industry.²⁵

Though this work is not exclusively about the village of Petřčane, but rather the settlement is threaded through the project and exploration. From my knowledge and research this thesis is but one of three written academic accounts of the village, with the first being Zvonimir Gržan's "Petrčki Baul" (1999), and the second being Mihaela Bogeljić's thesis "An Empirical investigation of the Theoretic Approaches to Code switching: Petřčane as a Case Study" (2010).

In this thesis I also propose the coining of an English language demonym for Petřčane, which I suggest to be Petrchanian. Though this differs from the Croatian demonym Petrčki (Pe-tr-ch-ki), through deliberation with certain individuals within the village Petrchanian was deemed to be the most logical and easiest to pronounce for English speakers among the drafted variants. Petrchanian will be used throughout this thesis.

²⁵Ibid

The Bushland Strip: urbanisation and tourism the impacts on wildlife

Wildlife sounds comprise a major part of any acoustic landscape and territory, as anthrophonic cultures and biological landscape are inextricably linked. Living organisms play a significant role in shaping these acoustic territories and contribute to the overall acoustemology of an area. With urban area spreading at a greater rate than ever before natural sounds have begun to hush, and anthrophony has become dominant. Though it is evident, or rather audible, that the sounds of urban landscapes and the noisy humans that inhabit them have colonised the acoustic realms, how does the nuance in the absence of the sounds of nature and non-human co citizens inform of the rate and severity of ecological decline? And how can we measure the impact of their absence and dwindle in an acoustic manner? Can sound be used as an index of a healthy or unhealthy ecosystem?

Measuring sound as an indicator of biological change and the state of biodiversity within a landscape is not proprietary or all that novel, though its approaches should be further developed and appropriated, disseminated into other fields.²⁶ Acoustic ecology, or the monitoring of a biological landscape through sound can add great insight into the number of species in a landscape and is one of the many multisensory methods that have gradually breached the barrier of traditional methodologies within the ecological sciences. One can use sound to measure the impact of changes within the biophonic system, for example surveying an area before, during, and after processes of landscape alterations such as construction or

²⁶ Schafer, R. Murray and World Soundscape Project, eds. *The Vancouver Soundscape. Music of the Environment Series*, no. 2. Burnaby, B.C: World Soundscape Project, Sonic Research Studio, Dept. of Communication, Simon Fraser University, 1978.

the creation of dams to see the impacts on the ecophonic systems.²⁷ Contrary to conventional durative surveying of species which often requires disruptive traipsing through landscapes and counting the number of individuals of a specific species by hand, one can use audio recordings to create an acoustic data bank of the audible species present, these are namely vocalising species such as frogs, birds, insects, and other sounding creatures. This audio can then be reviewed by experts or automated systems, and a data base of biophonic, anthroponic, and geophonic presences and influences can be deduced from the recordings, forming a recorded account of bioacoustic networks.²⁸

Acoustic ecological practices inspired this subsection of this thesis due to its direct use of sound as an index of change, and while surveying the village through the method of active listening I noticed an area that was particularly enriched with birdsong, an area of greater acoustic biological diversity than other areas in the lower part of the village and more specifically on the peninsula of Punta Radman, I call this area the last strip of bushland. Like most Croatian coastal areas shaped by agricultural practices that have then rapidly transitioned into developing tourism, the natural landscape has been significantly domesticated. In terms of the acoustic ecological network of the village, audibly the most impacted species are birds and cicadas. During ethnographic fieldwork without any prompt almost every single interviewee mentioned the notable decline of birdsong within the village, with some

²⁷ (Krause, B. *Wild Soundscapes: Discovering the voice of the natural world*. Yale University Press: 2012)

²⁸ (Duan, S., Towsey, M., Zhang, J., Truskinger, A., Wimmer, J., & Roe, P. Acoustic component detection for automatic species recognition in environmental monitoring. In 2011 Seventh International Conference on Intelligent Sensors, Sensor Networks and Informa)

participants specifically mentioning a total acoustic extinction of the lark, and common nightingale, the official national bird of Croatia.²⁹

From the recollections of my participants, and my own, the peninsula of Punta Radman was once a lush area of dense forest, comprised of pine trees, brambles, evergreen oaks, strawberry trees, and other various native Mediterranean bushland/scrub vegetation. In the past few decades, and more specifically in the last decade, this rambling and wild bushland habitat has almost all but vanished from the peninsula, and more broadly the village in general. With the building of holiday homes, condominiums, and the concreting of essentially every and any surface possible including the natural stone beaches (*betonizacija*), the impact of urbanisation and suburbanisation has all but depleted the natural landscape, and this is very evident through the increasing levels of biological and geophonic silence.³⁰ Urban developments, increased tourism, the development of coastal and wetland areas, changes to agrarian practices, and general habitat destruction have particularly impacted many native Croatian flora and fauna, particularly aviary and other coastal dwelling species.³¹

It is well documented that in most urban and suburban areas the remaining habitat for those species that have managed to survive and adapt to the anthropocentric alteration of landscapes are urban gardens.³² Urban gardens today across the world

²⁹ (Information obtained from fieldwork participant)

³⁰ (Mikulić, J. Istraživanje utjecaja neplanske gradnje na razvoj održivog turizma Makarske rivijere. *Acta Turistica*, 18, 2006). : 76-98)

³¹ (Đapić, Domagoj. 'Ugrožene i Zaštićene Ptice Hrvatske: Uzroci Ugroženosti i Mjere Zaštite'. University of Zagreb, Faculty of Science / Sveučilište u Zagrebu, Prirodoslovno-matematički fakultet, 2015: 5)

³² (Van Helden, Bronte E., Paul G. Close, and Rochelle Steven. 'Mammal Conservation in a Changing World: Can Urban Gardens Play a Role?' *Urban Ecosystems* 23, no. 3 (June 2020): 555–67)

are highly valuable to local wildlife and in certain settings make up most of the remaining fauna habitat and flora biodiversity, comprising much of the canopy of urban and suburban landscapes.³³ It became evident through the observations and experiences conducting fieldwork, that new developments favour low maintenance green spaces as accenting features rather than a focal point, with designs championing mixtures of stone and concrete materials surrounding swimming pools and shaded carports. In the Petrchanian context and across Croatia the current saturated minimalist design style of horticulture and architecture emerging in new builds and gardens tend to be almost monocultural, featuring pavers and gravel, a few cacti, the odd succulent, and of course the essential palm tree. These do not offer much room in terms of hosting habitats and thus one might suggest contributing to the loss of acoustic biophonic features within coastal acoustic networks.

During my time in the field the main audible acoustic features were construction, church bells, birdsongs, and silence. As fieldwork was conducted in early Springtime (April), a time when there are essentially no tourists, and developers and locals race to construct new rental properties and upgrade existing amenities before the summer, between the sounds of drilling and the yelling of labourers, the acoustic territory is ripe with moments of silence, and embellished by birdsong. Springtime acoustics inhabit an entirely different realm to that of summer when roaring tourists, cars, and the piercing sound of cicadas occupy the soundscape. It was perhaps this springtime tranquillity that allowed me to hone in the this last strip of bushland and its

³³ (Harris, Richard. 'The Routledge Handbook of Urban Ecology. Ian Douglas, David Goode, Michael C. Houck, and Rusong Wang, Editors'. *Urban Geography, Urban gardens and biodiversity*, Kevin J. Gaston, Sian Gaston , 33, no. 2, 2012): 450-452)

orchestra of aviary sounds, in the moments that faint sounds of construction were not dominating my ears.

If I had to hazard a guess this bushland strip is about 500 meters in length and 20 meters wide, located at the beginning of the Punta Radman peninsula, sandwiched between a large hotel complex and a quiet residential street. Its existence is due to the result of an interfamilial land dispute, a common occurrence within Croatia as many land deeds were never divided and due to mass migrations throughout the decades and centuries descendance across the entire globe lay claim to quilted patchworks of land. The results are years of stagnantly sitting in court, lengthy disputes, and often the alienation of people within their local kinships, a very familiar narrative within the village. The Petrchanians informed me that this is the case of the bushland strip, one might call it a misfortune for its numerous disputed owners, but a small triumph for nature. Its existence provided a marvellous comparative acoustic example of what the peninsula used to sound like from my own memory and the memories of participants, and the current sounds of its biodiversity.

During my month in the field, I passed this strip of bushland every day due to its proximity to my house. After several weeks of listening to the sheer volume of its aviary inhabitants, the creaking branches of centuries old pine trees in the wind, and the rustling of lizards in the ground covering dry leaves, I knew that this small Edenic patch needed to be preserved in some way, explored, eternalised acoustically, and a part of my thesis. Perhaps it was driven by a sense of kinship with the creatures and paysage that once covered this coastline, like a Harawayan call from the

chthulucene.³⁴ In some way I am certain it is, but it was most definitely driven by senses of nostalgia and anxiety of watching a landscape I feel a part of slip away into disappearance. The entire essence of this patch of wildness embodied what I came to the village to do, salvage a moment of what is here now but potentially gone tomorrow, and show how this acoustic moment could contribute to demonstrating how sound or silence can tell the stories of transformations.

While the area was constantly being listened to, two dedicated days were spent actively sound scaping the bushland strip at various times of the day, numerous species can be heard on the recordings, as well as the faint sounds of distant construction sites, the odd voice in passage, and the sound of myself ruffling the microphone into various positions. On the very same two days of recording, soundscapes were recorded around 150 meters away from the bushland site at approximately the same time and geographic longitude as the previous recordings were made, however this time on a residential street. Despite the residential site being in extremely close proximity to the bushland strip recording site the acoustic territorial distances are abruptly different. The suburban street features older houses, packed together, with the only habitat being yards and gardens. It is audible through the comparative recordings that there are far less biophonic sounds, except for the sound of a passing bumble bee, and the faint sound of a small bird, both fighting through the dissonance of a cacophony of construction and a passing plane.

(Reference the acoustic archive for the Bushland tracks A and B)

Bushland A

³⁴ (Haraway, Donna Jeanne. *Staying with the Trouble: Making Kin in the Chthulucene*. Experimental Futures: Technological Lives, Scientific Arts, Anthropological Voices. Durham: Duke University Press, 2016)

https://soundcloud.com/chrisxtian44/bushland-a?si=28bc1879e3ae45fab47e2040c4a5b080&utm_source=clipboard&utm_medium=text&utm_campaign=social_sharing

Bushland B

https://soundcloud.com/chrisxtian44/bushland-b?si=a7863c47e32947a993edbf95178c72af&utm_source=clipboard&utm_medium=text&utm_campaign=social_sharing

In this case sound can be used as an index of change, showing the difference that small patches of wilded area can have on the structure and health of our urban/residential ecosystem. The difference of around 100 meters shows a significant change in the acoustic territory of the Punta Radman peninsula, and though this is a very basic example it none the less can be used as a way of illuminating the need for sonic methodological cultural and ecological conservation practices.

Though this bushland chapter arose from my own processes of thought, listening, silence, and comparative nostalgia, through my research and in this thesis, it has become an ode to Rachel Carson's "*Silent Spring*", which is credited as being one of the pillar origins of acoustic ecology as a concept and as a field, though one must not neglect R. Murray Schafer of course, the father of the acoustic ecological and

social sciences.³⁵³⁶ Carson studied the impact of pesticides and other toxic chemicals on the landscape, correlating the decline of insects and general lower tier food chain creatures with the decrease of aviary life, resulting in their acoustic absence, or rather, a silent spring. Her book "*Silent Spring*" clearly outlined the demonstrable use of sound to measure the effect of changes within an ecosystem through acoustics, elaborating on its use as an index of change and a method of monitoring on a clear multi sensorial level. Much like Carson, during my time in the village I too experienced, a sense of silencing, and while surveying the lane ways just meters away from the bushland strip it was evident that the aviary sounds had become localised and critically endangered within the overall acoustic network of Petrčane. Much like the way toxic agricultural practises depleted the American terrain Carson was studying, my Petrchanian study site has been increasingly changing due to extremely poor urban planning, ecological neglect, and mass tourism.

In terms of the acoustic network of Petrčane, why is anthroponic, biophonon, and geophonon monitoring, documentation, and preservation relevant? Augé states that "a place can be defined as relational, historical and concerned with identity".³⁷ To approach this through situationist theory, the sounds of the native flora and fauna are intangible cultural and biological elements of the place of Petrčane, and therefor with the decline and perhaps extinction of said sounds from the overall acoustemology, the sense of place changes. The traditional relational ontology and epistemological acoustic structure of the village becomes lesser, depleting the traditional

³⁵ (Carson, Rachel. *Silent Spring*. 40th anniversary ed., 1st Mariner Books ed. Boston: Houghton Mifflin, 2002.)

³⁶ (Schafer, Murray R. *The Soundscape: Our Sonic Environment and the Tuning of the World*. Destiny Books, 1977.)

³⁷ (Augé, Marc. *Non-Places: Introduction to an Anthropology of Supermodernity*. 2nd English language ed. London ; New York: Verso, 2008.)

multisensory landscape and edging closer and closer to the sterility of many acoustic landscapes already emerging within the Anthropocene. With the loss of sounds of place, one might speculate that there is the degradative process of becoming a space, then a non-place is on the biophonic and wider acoustic cultural horizon. It is important to monitor, or at the very least capture and archive these dwindling sounds, so that in case of their absence we have a multisensory account of the culture and biological that once existed.

Necrosonic Systems: The Death Bell and Funeral Practices, Cycles of Sonic Culture

It is of no surprise that in Petrčane, like many other Croatian cities, towns, and villages, that the church is the primary community hub across almost all age groups. Of course, it must be stressed that within the Petrchanian context the primary demographic frequenting this cultural space are elderly and middle-aged women, followed by elderly men, with an influx in younger adults and youth on Sunday, significant holidays, and celebrations such as first communions and confirmations. Although these are fewer and fewer due to the dwindling birth rate and the overall declining population, a phenomenon impacting the state on a national level. Croatia is overwhelmingly Roman Catholic, practising and non-practising, this is a prominent feature of the national identity, with 2011 reports finding 91.06% being Christians and 86.28% being specifically Roman Catholic.³⁸ Whether one is of faith, any faith, or not religious at all, a relationship with the church exists through the wider acoustemology of the village. The church is a primary aggregate for the spread of information, whether that be the bell ringing every hour and half hour to communicate the time, or sporadically ringing to indicate messages of urgency or celebration, such as fires or weddings, or generally calling people to mass.

(Reference acoustic archive track April Mass)

The church within most Croatian acoustic landscapes, and especially Petrčane, operates as a clear epistemological acoustic tool. The church bells inform of: the religion of the village and religious processes (Christianity and calls to mass, the beginning of a funeral), temporality (informing of the time of day- an acoustic

³⁸ (Census of Population, Households and Dwellings 2011. Croatian Bureau of Statistics.)

analogue to clocks), and as an exclamative notification (conveying fire, flood, death, danger). The church occupies one of the highest levels of significance within the entire acoustemological network of Petřane, and this extends to most Croatian settlements. In larger cities almost every neighbourhood will have one or two churches, towns might have only a single church, even islands or practically uninhabited villages will still have a practising church or chapel. Larger urban areas ring ferociously in unison when the clock strikes the hour or half hour, and in some cases quarter to and past the hour, and the sounds of numerous church bells can be heard reverberating throughout the entire landscape. Though across many places around the world church bells have been regulated on a local level due to noise regulations, within Croatia It is viewed as an intangible element of the cultural heritage and part of everyday life.³⁹

The church bell is still actively used as an epistemological tool within Croatia, especially for canonical hours and liturgical stages of a mass, time telling, and commemorations and commiserations. Unfortunately, as of late the more grievous tones of the bell are the most audible, otherwise known as the Mrtvačko Zvono (The Death Bell). During my fieldwork the death bell rang 3 to 4 times within the space of a month, meaning that within that time 3-4 members of this small village community had passed away. The death bell is not only a sonic feature within the village, but also the catalyst of an entire cultural system and praxis, informing of protocol, the loss of a community member, and all the steps that are to follow within the socio-cultural and acoustic landscape. Therefore, I propose a new concept for the study and exploration of the acoustics of death. More specifically in this context, the cycle

³⁹ (Haddon v Lynch [1911] VLR 231 State of Victoria Supreme Court)

of cultural practice catalysed by the death bell and wider sonic practises that pertain to surrounding acoustic rites around death, for this I propose the term necrosonics. Necrosonics is the conjunction of two words, necro stemming from the Greek word “necros” meaning dead, and sonic pertaining to sound. The concept of necrosonics extends and is applicable to all acoustic features of death, both cultural and biological, though in the context of this thesis necrosonics will be used to elaborate on the acoustic and cultural systems that pertain to Petrchanian funeral customs and other accompanying acoustic elements surrounding the death bell and protocols of grief. (Reference acoustic archive track Death Bell https://soundcloud.com/chrisxtian44/the-death-bell?si=1425f3b76ccb46afb8888cadea3cc674&utm_source=clipboard&utm_medium=text&utm_campaign=social_sharing)

Croatia has an uneven demographic, with the population being either very old or very young, and the population in between experiencing a mass exodus into more economically sound EU countries.⁴⁰ The aging demographic paired with the covid-19 pandemic has meant that there has been a significant increase in mortality, and the death bell has been more common in the past few years than it has been since the war in the 1990's. I began to identify the necrosonic system in the village on the very first day of my fieldwork, when the death bell rang and all conversation halted and turned to panic, gossip, and intrigue, followed by a crescendo of ringing phones as the news spread throughout the village, and the specifics are shared. Deciphering whether it is the death bell is an active process, as the bell rings continuously

⁴⁰ (Center for Economic Research and Graduate Education - Economics Institute, Prague, Czech Republic, Ivana Drazenovic, Croatian National Bank, Zagreb, Croatia, Marina Kunovac, Croatian National Bank, Zagreb, Croatia, and Dominik Pripuzic. 'Dynamics and Dete)

throughout the day on the hour and half hour, each time it rings one must check their watch or phone to see whether it is at the prescribed time. If it is at a non-time telling hour, then it is apparent that it is the death bell. The duration of the death bell also informs of social standing within the village hierarchy, if it rings for longer, it usually means the person is well known within the community. If it rings for a shorter length of time this usually means that the deceased lives abroad, a common situation due to mass migration over the centuries and decades due to the turbulent history of the nation. Through my ethnographic fieldwork I had been told that there were more people from the village living in the neighbourhood of Astoria, New York (around 500+) than in the village (around 520 registered), however all year round the village continuously houses around 250 inhabitants I'm told.

In the case of the village of Petrčane the church is the most significant place for social gathering, worship, and one of the most important and longest surviving sources of the transference of information, and this is all catalysed and spread through acoustic information. Prior to the connectivity that the internet or modern mobile devices offer, accessing information networks revolved around "intercorporeity", a direct connection between the physical body, actively accessing multisensory epistemological networks and engaging with the data of ambience.⁴¹ Intercorporeity can be defined as though we are all "connected to each other by invisible, but powerful threads [allowing] individuals to adopt shared rhythms and behaviour patterns which may vary depending on circumstances and place."⁴² It is this psycho-physical connection to these acoustic networks that offer us these

⁴¹ (Thibaud, Jean-Paul. 'The Sensory Fabric of Urban Ambiances'. *The Senses and Society* 6, no. 2 (July 2011): 203–15.)

⁴² (Thiabaud, Jean-Paul, LaBelle, Brandon, and Cláudia Martinho. *Site of Sound: Of Architecture and the Ear*. Chapter: The Three Dynamics of Urban Ambiances. Berlin: Errant bodies press, 2011: 47)

immaterial webbings of knowledge, acoustemological networks, traditional technologies that have been developed through our physiological and cultural evolution, and are now at risk.

Of course, questions due arise around notions of technological development, the valuing of culture. At what point does a technology become obsolete with the development of a new one, can telephonic technologies, the internet, and other networks that are digital or seemingly immaterial replace these traditional knowledge systems like the necrosonic system. Though it must be said that these multisensory systems are somewhat of a marvel when one takes into consideration that one knows simply by the time, type, and duration of a church bell an entire information set: someone died- where- when, and all the subsequent protocols that follow. The documentation of these culturally and locality specific systems deserve expansive research and protective policies, not only the Petrchanian necrosonic system, but other multisensorial networks and processes.

The current necrosonic system of Petrčane has changed significantly in the past few years with the building of a new cemetery that houses a chapel specifically for funerals. The long-standing tradition of funeral processions through the village has now almost completely been eliminated with the development and urbanisation of the area, causing numerous sonic extinctions within the acoustic network of the village. Though through my interviews with locals while in the field many have stated the building of the chapel has simplified funeral processes, as processions are durative. Whereas now the funeral can simply take place at the cemetery chapel, as an ethnographic researcher it seems like a devastating loss of cultural tradition,

acoustic tradition, and the time honoured practices of funeral procession rites that date back hundreds of years within this small coastal community (reference visual archive). The introduction of a new chapel does of course aid in the simplification of a process that would be long and a test a physical endurance, as the entire procession would mean those involved in the funeral rites would have to cover vast distances on foot, a minimum of 2 or 3 kilometres depending on where the deceased lived within the village. None the less these traditions are unique and complex, and even if they are not continued their importance and the longstanding tradition of their existence should be documented and known. The illustrated figure below shows the traditional processes of the Petrchanian necrosonic system.

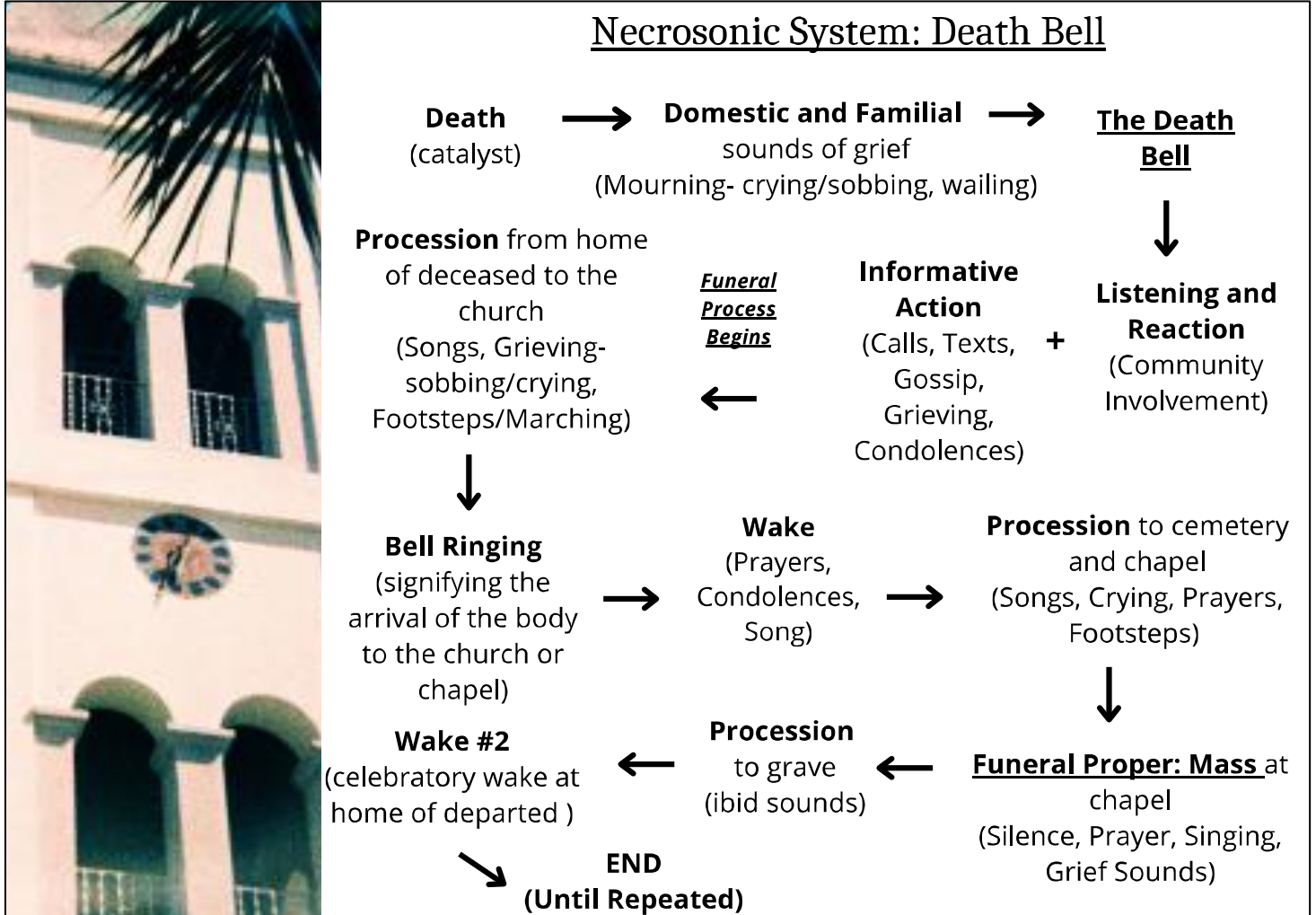
One element that has become crucial and almost anecdotal in the necrosonic system of the village is the telephone, which is the primary method of informing other people who has died or simply to inquire whether the bell ringing is truly the death bell or a bell for an alternative occasion. Once the death bell is sounded the village erupts with the sounds of ringing mobile phones, the buzzing of messages, and the vibrant sounds of gossip and commiserations. I too found myself actively participating in this element of the necrosonic system, frantically calling neighbours when the bells sounded. It is an extremely performative practice; it is both exciting and upsetting at the very same time. One participant recounts that whenever the death bell would ring pre mobile phones she would have to run to the church and ask the bell ringer who had died. As she lived in one of the houses nearest the church, she would then have to run home and sit by the land line that would ring incessantly and utter the name of the deceased, then hang up to answer the next call-in waiting. She states that this started from as early as 6 years old, and one of the main

challenges was remembering the name of the deceased on the journey back home from the church to ensure she could tell people the correct person that had passed. She told me that it was a daunting process, as within the village many people share the same name, therefore nicknames or paternal maternal compound names are common. These compound nicknames will either have the person's first name followed by the name of their father or mother, in some cases the nicknames stem from an experience or anecdote which can be very confusing if one is not plugged in to the village social kinship system.

To conclude, the necrosonic system within Petrčane is an intangible element of the place's heritage and processes of cultural practice. The performativity that inhabits this cyclical system is in a way social cultural folkloric performance that encompasses the percussive instrument of the bell, active listening to multisensory information that triggers protocols within the kinship structures guided by religious narrativity. Correlations between multisensory systems and the study of the social sciences and field beyond deserve and need to have deeper level of study afforded to them to ensure that systems such as this one do not end up being forgotten.

Within this tiny coastal village sound is used to kick start an entire process of collective mourning and funeral rites, and through these acoustic networks of information the inhabitants are connected on an intercorporeal level, binding them in a 'more than' experiential network.

Figure 1. Petrchanian Necrosonic System



Tourism and Urbanisation: Noise, Silence, Unsustainability

In 2019 tourism made up 16.8% of the overall Croatian GDP and contributes over 20% to the annual national spending budget.⁴³ Almost all coastal areas and specifically rural areas, survive off the tourist season which spans from around June to September, though in recent years the season has been expanding beyond this timeline. Croatia is one of the fastest growing tourist destinations in the world, and in 2019 pre the global covid 19 pandemic the nation hosted over 21 million tourists, a significant number for a nation with a population of only 3.89 million people according to the 2021 census.⁴⁴⁴⁵ The village of Petčane is no exception, with tourism being the primary source of income, and a longstanding history of tourism starting comparatively earlier than neighbouring villages.⁴⁶ Previously Petrčane was a typical rural Dalmatian village revolving around small scale agriculture. However, the community was primarily dependant on the maritime industry as its main economic resource. Prior to the 1970's and the development of tourism, almost all men would work out at sea, both on small- and large-scale vessels, as navy officers, fishermen, or other forms of seafaring occupations (reference visual archive). Today this proud and laborious maritime history continues with numerous men still following in the footsteps of their paternal ancestors, working on ships around the world, though the percentage is significantly less.

⁴³ (Kranjčević, Jasenka, and Sanja Hajdinjak. 'Tourism Urbanization in Croatia. The Cases of Poreč in Istria and Makarska in Dalmatia'. *Südosteuropa* 67, no. 3 (30 November 2019): 393–420. <https://doi.org/10.1515/soeu-2019-0028>.) (Croatian Ministry of Tourism and Sport <https://mint.gov.hr/news-11455/21-million-tourists-visit-croatia-in-2019-a-5-increase/20800#:~:text=In%202019%20Croatia%20was%20visited%20by%20close%20to,close%20to%2095%20million%20overnight%20stays%20%281.7%25%20>)

⁴⁵ (Croatian Bureau of Statistics, 2021 census)

⁴⁶Information obtained from fieldwork participant

The Petrchanian tourism industry started in the 1960's and early 1970's with the building of the Hotel Pinija and numerous holiday homes along the Punta Radman peninsula. These holiday homes and the Pinija hotel were built by the state government at the time (SFR Yugoslavia) as a vacationing spot for its socialist elite and their families, more specifically for employees of the Militia of the SFR Yugoslavia (SSUP), a branch of the Federal Secretariat of Internal Affairs.⁴⁷ Though this exclusivity was short lived as Yugoslavia turned towards an international tourism industry, and the Hotel Pinija became open to all those who could afford it. The holiday homes for the socialist high rankers preceded the building of the Hotel, initially there were only around 24 houses or so in total, and around five residential laneways on the entire Punta Radman peninsula (Put I, Put II, Put III, Put IV, Put V), while the rest of the area was untouched dense bushland and wild stone beaches.⁴⁸ An interviewee whose family received one of these holiday homes recounts that the lanes and houses were already developed and defined to a certain extent by 1964, however there was no running water or electricity until the 1970's.⁴⁹

From the accounts of my participants in the field, and specifically locals of the village, it seems as though the reception of this newly built resort was primarily positive as it offered new avenues of employment, thus eliminating the need to go out to sea. This newly developing tourism industry in the 1970's established the foundation for the infrastructure and vast economic touristic resources from which the village, and the country overall still benefit from today.

⁴⁷ Information obtained from fieldwork participant

⁴⁸ Information obtained from fieldwork participant

⁴⁹ Information obtained from fieldwork participant

On a historic level, Croatia has a long-standing history of tourism dating back to the time of Austro-Hungary and beyond, however this was primarily localised to the North, and larger settlements, meaning that villages such as Petrčane did not reap the benefits of this industry until the 1970's and beyond. Though there are oral and anecdotal accounts that prior to the current Hotel Pinija the same location housed an Austro-Hungarian medical spa for patients with respiratory illnesses, citing that as being the reason why the peninsula has Pinea Pine trees on it which many state were not native to the area but were planted and spread, subsequently giving the current hotel its name- Pinija (Pinea pine). Though there are many disputed accounts of tourism pre the 1970's and what previously stood where the current hotel is, and most are believed to be village folklore. One can see that the area has a deep-rooted history of alteration because of tourism.

My eldest participant Baba Marija, an 80-year-old woman who has spent most of her life in the village, had high praise for the Hotel Pinija and the introduction of tourism, stating:

“Well listen, when I was small here there was no water, no telephones, no electricity, there was nothing. All that stuff, well electricity the locals brought in ourselves. All the posts and lines we put in. And then when the Hotel Pinija was being made, in two rounds, because first they started building it and then they stopped for a couple of years. Then when Savka came into power (**I assume politician Savka Dabčević-Kučar dating this around 1967**) then they started building it again, and the hotel was finished in the year 1970. It was either 1970 I believe, or 1971. Then it started hosting guests, and then we got water, we got telephones, and that Hotel Pinija

really really helped us to achieve what we have now. Tourism started, and so from the tourism we were employed, none of the kids were unemployed, not like today where the kids are unemployed, everyone was employed and everyone had something to do. And so that is how we began, from tourism. Before tourism all our people were sailors. “ -Baba Marija

The construction of the Hotel Pinija was a catalyst for the development of the village's infrastructure, created employment opportunities and local economic growth, bringing in resources such as telephones, water, and other amenities that we now consider basic and essential accessible features of any dwelling. However, one might also home in on the narrative that existed at this time within many socialist countries. These facilities and amenities were built to house the socialist government elite, and while there is much praise for the enrichments that came along with the hotel, the benefits of the locals might be viewed as simply a byproduct of catering to a specific privileged tier and class of people. None the less the hotel became the backbone of the economy within this community and was the starting point of a mono commercial system of income within the area. As Baba Marija states, Petřane “out of all the other villages was the most advanced, these other places hadn't even started dreaming of having a phone or water or anything, we already had all of that thanks to the Hotel Pinija, and the hotel hired our children, and adults.”⁵⁰ Of course the hotel did not stay an exclusive venue for the socialist elite, and from my own recollection the Hotel Pinija and other village accommodations were always full with a manageable number of mainly central European guests up until the two-thousand-

⁵⁰ Information obtained from fieldwork participant Baba Marija

and-teens when the demographic started to shift and Croatia started growing in popularity.

Despite the economic successes of the developing of the industry as a result of the Hotel Piniija, accompanied by tourism was a shift to a more singular economic avenue of income for the inhabitants, which can be heard within the overall acoustemology of the village. Prior to tourism as previously mentioned, the village practiced traditional forms of agriculture that have almost all but dissipated from within the landscape. Livestock was part of this economic and agricultural tradition, namely sheep, goats, donkeys, cows, and poultry. Baba Marija had stated that every neighbouring house within what is now the village centre had a herd of between 10-20 sheep up until around the mid to late 1960's. I had been told on several occasions through my fieldwork that when tourism was introduced to the village of Petrčane a state ordered ban came into place for livestock, as farm animals and the visceral elements that accompany them, such as sounds and smells, were deemed unsightly for a touristic experience.⁵¹ I have not been able to find any record of this law throughout my research, though this is no surprise as many if not most documents from Yugoslavia are not online or digitalised, and this habit for the valuing of physical forms of documents has spilled over into the current practises of the Republic of Croatia. Quite anecdotally, for those who have spent time in the country and region, it is known that the avenues of acquiring even everyday documents such as doctor's notes or legal letters need a physical piece of paper with an official stamp or seal of authentication, and the pace of switching to the digital is rather leisurely. In some areas even in the present day there have been attempts to

⁵¹ information obtained from fieldwork participant

limit domestic animals from touristic areas such as in the town of Komiža on the island of Vis, though there has been strong opposition to this proposal, and it is unclear whether this ban has been passed or been maintained.⁵² If so, it would compromise the livelihood of citizens who do not exclusively live off of tourism and would contribute to the continuing unsustainable practice of only pioneering a single industry, that being tourism. Today within Petřčane the acoustic network lacks almost all traces of its agrarian past, the only domestic animals that can be heard within the village are the barking of dogs, and a pair of donkeys that can occasionally be heard braying from the olive groves near the church, a sound that harks back to an acoustic history that is has slowly been silenced from existence.

⁵² (Dnevnik.hr. 'Kamo s kokořima, ovcama i kozama iz Komiže? Građani se pobunili protiv odluke općine, potpisuje se i peticija'. Accessed 14 July 2022. <https://dnevnik.hr/vijesti/hrvatska/apsurdna-zabrana-u-komizi--647408.html>.)

Pre-conclusion

The insights and conclusions within this chapter were arrived at or elaborated upon through the research and post research process. It will address the core issues and limitations that impact the acoustic networks and the associated ecological and social transformations, with unsustainability being the core issue and limitation that impact ecologies and cultures. Suggestion will be made as to how we can move towards using sound as a tool for sustainability, a complimentary element of conservation, and overall, an index of change.

In a wider Croatian context, multisensory methods, specifically acoustic conservation efforts seem to be rather lacklustre, and despite the countries continued development there is room for improvement across all areas of biological and cultural preservation. The most significant efforts and successes are made by international and external bodies, though I must state that my personal feelings are that the overall mission of the nation is more driven by short term economic success than progress in cultural and ecological sustainability. Like many countries, attitudes towards sustainability and ecological decline are shifting, but in the wider mentality of the nation and on a state level it seems to be a disposable and disregardable phenomenon, with most action being small scale or symbolic.

Joining the European union has opened countless opportunities, vast amounts of funding, and stricter guidelines in terms of preservation. However, regarding acoustic ecological and cultural preservation the European Union falls short, with most policies approaching sound through noise, the invasive entity that is seldom easy to define. On an EU institutional level there are several vague blanket statements with

various degrees of specificity, that have not changed since 2002 with the directive 2002/49/EC.⁵³⁵⁴ The directive revolves around three major stages, and like most institutional 'strategies' regarding the audible it focuses on noise as the defining feature, homing in on control and eradication as opposed to sounds cultural and biological value. These stages are: "1) forming noise maps, 2) ensuring public access to information on environmental noise and its effects and 3) based on collected material to adopt action plans with a view to prevent and reduce environmental noise where necessary".⁵⁵ Despite member states committing to this directive, it seems that many, if not most have done little to map noise or acoustic environments, and in my research I was not able to find anything about noise mapping in Croatia. Though through this directive other questions arise, how does one value acoustic features within a landscape and deem them to be noise? Are these value systems culturally specific and take into account endemic ecophonic systems and acoustemologies? Why are these not being actively pursued? I would invite member states to take a more active role in acoustic management, preservation, and overall policy production, rather than creating directives that feel symbolic rather than sustainable.

An exemplary case of using sound in a holistic qualitative way through research can be seen in the sound mapping of Copenhagen. Jacob Kreutzfeldt and Brandon LaBelle set out to create sonic maps of Copenhagen, using community engagement as the primary method of surveying and data collection to gather sounds from within

⁵³ (LaBelle, Brandon, Martinho, Cláudia, Kreutzfeldt, ed. *Site of Sound #2: Of Architecture and the Ear*. 1. 3. print. Los Angeles, Calif: Errant Bodies Press, 2011: 68)

⁵⁴ (Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise. Accessed 30 May 2022. <http://data.europa.eu/eli/dir/2002/49/2021-07-29/eng>.)

⁵⁵ (LaBelle, Brandon, Martinho, Cláudia, Kreutzfeldt, ed. *Site of Sound #2: Of Architecture and the Ear*. 1. 3. print. Los Angeles, Calif: Errant Bodies Press, 2011: 70)

the urban landscape and create a cartographic format by distributing postcards across the city. These postcards contained a questionnaire format, asking inhabitants about the sounds of their neighbourhood, sounds of home, irritating city sounds, and so on.⁵⁶ The end result was a sonic map based on experience rather than just noise. With community engagement being the very nucleus of the project. One way in which we can use sound as an index is by asking the participants who engage with it every day, asking them to actively listen and identify the sounds that are important to their localities, cultures, ecologies. A marriage between expert acoustic monitoring, and community participation and recording could offer easily applicable ways of data collection. It was evident through my fieldwork that participants were aware of changes within their own sonic systems, and one might speculate that with the introduction of a new praxis of creative and embodied pedagogies such as active listening, recording and collection, these emerging invasive and critically endangered sounds can be captured, preserved, and identified.

One of the global institutions that has significantly aided the country in its preservation efforts across the board is UNESCO. Croatia currently has 10 properties inscribed on the UNESCO world heritage list, and 18 protected elements on the list of intangible cultural heritages.⁵⁷ Commendably some are related to acoustic cultural practises like klapa singing, or the two-part Istrian singing scale, however elements of acoustic landscapes and wider acoustic networks have not. These sonic cultures must be contextualised within their acoustemology to ensure

⁵⁶Ibid

⁵⁷ UNESCO World Heritage. 'Croatia - UNESCO World Heritage Convention'. UNESCO World Heritage Centre. <https://whc.unesco.org/en/statesparties/hr>.

they do not become unconnected cultural relics of the past, to do so the protection of intangible heritage must be extended beyond isolated features.

Another area that the organisation champions on an international scale is in the ecological realm. The UNESCO Biosphere Reserves are a global project that serve as essentially undisturbed natural areas and ranges through which we can study species in their wild habitat, the impacts of a changing climate, and in a way serve as “interdisciplinary learning laboratories for sustainability”.⁵⁸ There are currently 669 biospheres across 120 countries, this diversity of biomes, geographical, and cultural landscapes “present an incredible opportunity to connect and engage communities in innovative approaches to the conservation of biological and cultural diversity.”⁵⁹ There are so far only two UNESCO biospheres within the territory of Croatia, the Velebit Mountain Biosphere Reserve and the Mura-Drava-Danube Transboundary Biosphere Reserve.

The UNESCO Biosphere Reserves project has identified the benefits of acoustic ecological methods:

“In the context of UNESCO biosphere reserves, the opportunities for these emerging disciplines is increased with new advances in reliable, accessible and affordable audio recorders that can be distributed throughout the community. These audio recordings provide critical data for biodiversity analysis and the process of collecting these recordings facilitates opportunities for community engagement and citizen science. Disseminating the resulting recordings on accessible virtual platforms could

⁵⁸ (Acoustic Ecology in UNESCO Biosphere Reserves – Barclay & Gifford’. Accessed 27 May 2022. [https://wayback.archive-it.org/9537/20171010181201/http://biospherejournal.org/vol1-1/second-article/.](https://wayback.archive-it.org/9537/20171010181201/http://biospherejournal.org/vol1-1/second-article/))

⁵⁹ LaBelle, Brandon, Martinho, Cláudia, Kreutzfeldt, ed. *Site of Sound #2: Of Architecture and the Ear*. 1. 3. print. Los Angeles, Calif: Errant Bodies Press, 2011: 69

become critical to understanding the rapid ecological changes taking place across the globe.”⁶⁰

It is unclear whether these methods are currently being practised within the Croatian biospheres, though one remains optimistic. I believe that it would be of great benefit to both global and local culture, history, and ecologies, if such community engagement and data collection was to be incorporated into mainstream urban and rural monitoring, on local regional levels, and state levels. If such practises were more established and included into the vernacular of conservation, there might be no need for a thesis like the one you are reading, and perhaps areas of the nation such as the bushland strip would be less uncommon, better protected, and our acoustic biological and cultural networks would be more dynamic and well documented.

The two main assurances of acoustic preservation are arguably artistic/creative explorations, and policy making. The creative explorations of sound allow for the uncovering of experimental methods that show the benefit of using methods from the arts as a kind of laboratory to pioneer practices, being daring enough to think in unconventional ways to prove that these intangible networks can be accessed and how. Sonic artistry and exploration can offer insight into how these sounds work together, and can help expand on questions like; what are acoustic networks? how do they look? how do they sound? What is the most efficacious way to capture and protect it? Creative and embodied thinking regarding the documentation and conservation of these new sensory frontiers can be complimentary data both

⁶⁰ (Acoustic Ecology in UNESCO Biosphere Reserves – Barclay & Gifford'. Accessed 27 May 2022. [https://wayback.archive-it.org/9537/20171010181201/http://biospherejournal.org/vol1-1/second-article/.](https://wayback.archive-it.org/9537/20171010181201/http://biospherejournal.org/vol1-1/second-article/))

empirically and methodologically to existing structures. This is more achievable now than ever before due to the growing emergence of creativity as an accepted tool within the sciences, but most of all when working in coalition with contemporary technologies. Contemporary technologies offer both qualitative and quantitative explorations and documentations of sound, a force that previously only existed for its durations and then dissipated from existence. With modern technologies and creative approaches archival and conservation practices can be completely reinvigorated, as in a way intangible culture can/is made tangible.

The need for a shift in the pedagogies and praxis within approaches to cultural and ecological preservation need to happen not just through reformed and expanded fieldwork methods, but on an institutional level as well. The most effective way to ensure these networks of landscape and heritage are conserved and protected can be significantly impacted through policy making. Policies that are not just focused on noise eradication, and policies that are actively engaged and utilised. It is already evident that certain intangible cultural elements have successfully had policies made around them, such as various UNESCO implementations. While it is understandable that not every acoustic network can remain as it is and was, it can have certain protections to ensure it is documented and not too overtly impacted to the point of extinction. Policy makers would not have to overtly change their approaches too much, the benefit of many ecological and cultural policy protection centred around sustainability can already aid in the preservation of these networks, sound simply must be factored in to the same or a similar extend to the other sensory modes like the ocular.

To conclude, this chapter is a sombre and hopeful invitation to individuals, communities, and larger state bodies, to take actions to preserve what we can while we have it, to engage multisensorially with the ecological and cultural preservation of our sensory networks, implement active policy, and to appropriate practises that might aid in stopping the noise or silence of a world where the sounds of birds, memories, and the basic elements of the acoustic environment only exist in stories of the past, in your mind, or on the written page.

Conclusion:

Sound as an index of change can offer a deepening of observance and insight into larger transformations, much like how the introductory story of the sounds of sheep does. Through simply focusing on the rise and fall of agrarian acoustic contributions through a single species within the sonic systems of Petrčane we are informed of economic, socio-cultural, and biological transformations. If the applications of sound as an index were to be scaled beyond a single source and into network observations

the knowledge that could be acquiesced from sound could be significant in monitoring, preserving, and documenting ecologies and cultures in any and every context.

The concept of acoustemology allowed for a theoretical framework upon which to explore new methods and critically engage with continuous epistemological structures of ephemerality. Viewing sound as an epistemological network gave a three dimensionality to the way in which I viewed and approached the fieldwork and place. By critically reflecting and engaging on meaning, sense, and memory, it expanded the ways and types of ethnographic explorations that could be approached. Many participants felt as though they had been able to engage with memories of the past and present more viscerally through active listening, embodiment with their current surrounding, and these unearthed and triggered reflections that were new to them.

In the conception of this paper the primary methods were planned as being ethnographic with the addition of sound scaping, and the aim was to create acoustic maps rather than to map meaning. However, through the fieldwork process it became evident that there are so many narratives and acoustic histories and futures of transformation and affect within this cognitive and geographical landscape. And the autoethnographic elements of this research beamed me back into a feeling of inquisitive curiosity and wonder that I had not experienced since I was a child traipsing along the very same land that I was now researching,

This shift and the methods of playfulness, active listening, and embodied walking were not previously planned, but rather emerged from being there and actively and passively engaging with the atmosphere and environment. Using sound as both a methodology and theoretical framework the research became more ad hoc, and sound and the sensing of sound lead to wonderful serendipital discoveries. It was this playfulness and curiosity that lead to moments of experimentation, moments like singing songs in the pub with its patrons, finding the death bell, listening to the sea, stumbling across the bushland strip, and asking locals to teach me almost extinct dialects. It is in the casting of this very wide net centred around acoustics from which I could streamline the best examples of sound as a storyteller of transformation and historical force.

The use of ethnography was truly the backbone of this project, using a human centred research design integrated me into the community and helped produce so much content and such rich accounts of the local histories, transformations, and struggles that the village has been a part of and is still experiencing. It allowed for the documentation of a village that has experienced very little conservation and documentation and allowing for its culture and ecologies to be broadened within the historical record.

Many byproducts of this conservation and ethnographic research were produced, and it is truly a shame that I was not able to use vast parts of them in this project. One of these byproducts was the visual archive, and while interviewing inhabitants it became very common for old photo albums and home videos to be shown.

Remarkably in one case I came across documents from the 1700's while dredging through someone's cellar, these have since been scanned and converted to digital

formats. I have included some of these photographs in this thesis as an additional aspect of archival conserving, and it is evident that this project will need to be continued and broadened to more comprehensively document the Petrchanian heritages.

It must be noted that while in many aspects the research was very successful, more can be done to ensure that future research is more comprehensive. The biggest limitation in the methodology is admittedly its timeline and duration. Since most of the severe acoustic transformations occur during the summertime the research should be conducted in all seasons to create a more accurate depiction of how drastic the changes to the acoustemologies are. Another aspect within the matrix of this research that can be improved is by conducting more in-depth recordings of numerous acoustic territories within the village and surrounding areas. The recordings in this thesis are more symbolic and demonstrative of what can be done, rather than being massively contributive to the documented landscapes and culture. More researchers need to be added to the project, a single researcher might be deemed as lacking. However, to ensure that the affective and autoethnographic elements are maintained within the research they would need to have been witnesses to the changes within the village and in some way local.

Through focusing on people and place through acoustic narratives and elements the three main areas of focus arose: economic, socio-cultural, and ecological transformations. At The rate at which Croatia is developing and how it is changing is simply not sustainable in terms of the traditions, cultures and ecologies of the people and landscape. While there is a traditional romanticisation of the ways of landscape

and life, the race towards urbanisation, Europeanisation, and a distancing from the visage of a “developing” country is occurring at such an unsustainable pace one might suggest that it clashes with the intended objective.

It is understandable that the nation is striving to boost the economy and create larger channels of income and carve out a persona for itself on the world stage as a modern, European, tourist destination, but in many ways the cost might outweigh the benefits. Petrčane is an example of the detriment of mass and inattentive development, with the traditional ways of life slipping into the abyss and endemic ecologies vanishing beneath the mono industrial orientation that has covered the landscape in concrete, quick build rental properties, and acultural resorts. While the area has seen much benefit through the furthering of the industry, by creating a single industry that essentially is the only avenue of income for the inhabitants this route is catalysed to the point that the dissolution of traditional ways of life are viewed as an acceptable cost for stable financial standing. The acoustemological network and multisensory cultures and knowledge systems within Petrčane and numerous others will most likely vanish without any substantial documentation or study. It seems that while developing industry to keep these communities alive and stable, they are simultaneously losing what is intended to be sustained.

Multisensory thinking and methods offer new explorations of an area of study and inquisitions of sense of self, opinion, feelings, and convey aspects of narratives and discourses that might be overlooked when approached through “conventionalist” research methods that juggle the stricter notion of the objective and the subjective. Through my fieldwork and the writing of this paper I found myself in deep reflection,

juggling the artistic, the affect, and the frustration of an unfamiliar future for my people and region. Through this combination of approaches, I hope to have expressed, or conveyed the need for moving towards tentacular thinking so that one might understand that multi-media, and multi-sensory methods can offer insight into those “more-than-human” geographies where ambience pervades, informs, and influences experiences.⁶¹⁶²⁶³

Mono-sensory methods alone do not hold the depth and breadth that constitute the “human experience”, therefore we need to develop the ways in which we document and preserve cultures, as well as expand our societal beliefs of how and which aspects of those elements should be saved. Archival practises need further expansion and must continue to diversify their practises, moving away from just the evocative objects of tangible culture and into the realm of intangible systems, experiences, and cultures. While there are several sound archive institutions in the world, there are simply not enough.

The collection of acoustic materials needs to be expanded and be integrated into conservation practice for the benefit of current and future society and study. Knowing how the past sounded could help inform on and preserve; Large- and small-scale acoustic ecologies, regulate noise, pollution, monitor the changing of language, and much more. By knowing how the world used to sound and being able to compare that to the way it sounds now, we can use sound as an index of change. Frequent

⁶¹ Haraway, Donna Jeanne. *Staying with the Trouble: Making Kin in the Chthulucene*. Experimental Futures: Technological Lives, Scientific Arts, Anthropological Voices. Durham: Duke University Press, 2016.

⁶² (Panelli, Ruth. ‘More-than-Human Social Geographies: Posthuman and Other Possibilities’. *Progress in Human Geography* 34, no. 1 (February 2010): 79–87. <https://doi.org/10.1177/0309132509105007>.)

⁶³ Thibaud, Jean-Paul. ‘The Sensory Fabric of Urban Ambiances’. *The Senses and Society* 6, no. 2 (July 2011): 203–15. (n.d.).

and extensive monitoring is needed to achieve new serendipital structures of knowing and aid in the emergence of new knowledge systems, that could help move towards a more holistic and eventually self-actualised way of knowing, preserving, and sensing.

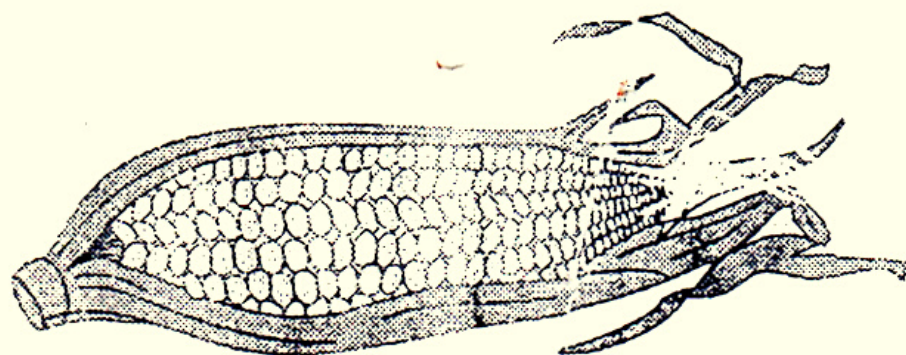
Acoustic archive

This archive is available by clicking the link below. It has numerous tracks collected from around the village during my fieldwork (conducted March/April) that offer insight into the ambiance and acoustic structure everyday life during.

<https://soundcloud.com/chrisxtian44/tracks>

VISUAL
ARCHIVE

KUKURUZI TULUM



ROCK

D.J. PRLJA

(LET 3 - RIJEKA)

D.J. BRANKO

(ROCK NIGHT RADIO 057)

D.J. ADO

logorska vatra
pečenje kukuruza

(uz pozivnicu besplatni kukuruz)

hamburgeri
pivo

GRUNGE

FESTA DO JUTRA

PETROĆANE

SUBOTA, 29.07. 1995.

Sailors of
Petrčane





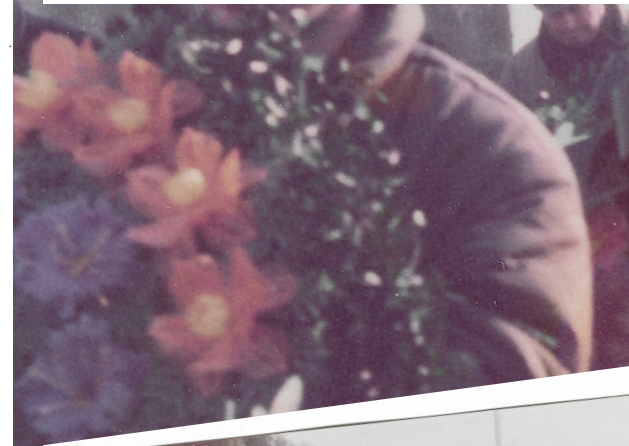
Faces of the
Matriarchy



Miscellaneous
Moments of
Petrchanian Life



Funeral Procession
(unknown dates)



Funeral & Procession (Date Unknown)





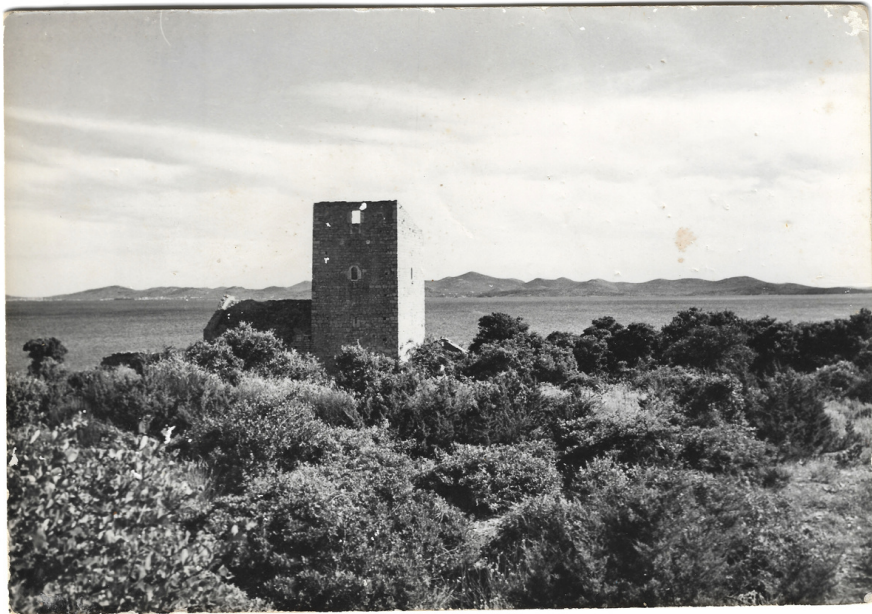
Procession (unknown date)



The Village as it once was:

Postcards

(unknown date)



Leisure Life late 1980's

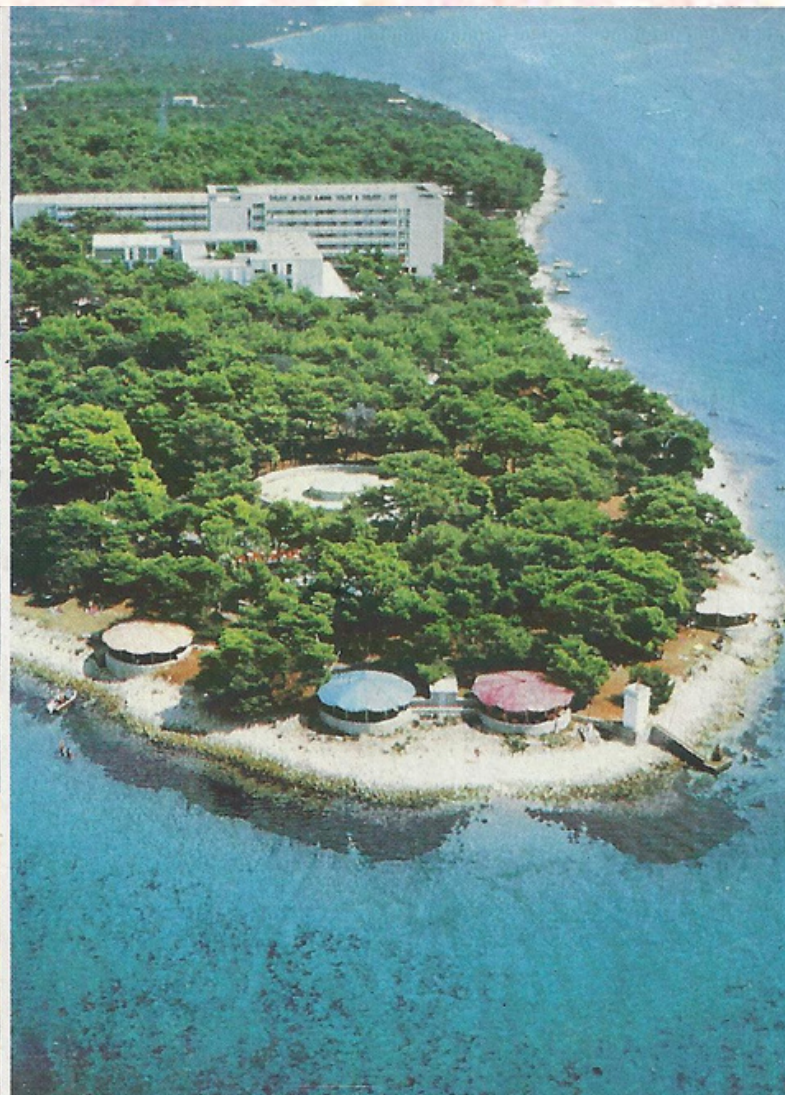


TURISTHOTEL »MAXI BAR«



№ 70288

Hotel Pinija late 1980's



300

Dne

h. y. 19

Moments of Fieldwork



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