

Coal and Petrochemical Soundscapes in North Bohemia: Some Personal Thoughts

Peter Cusack

For the last 100 years the part of Bohemia around Most in the Czech Republic has been one of the country's main energy hubs. Beginning with brown coal mining early in the 20th century, the petrochemical industry was introduced during the second World War. Oil, brought thousands of kilometers by pipeline, is refined here, too. The effect on the landscape has been dramatic. It is a beautiful area of wooded hills and much remains so today. But around the industries huge changes have taken place. Vast open cast pits are excavated to expose and extract the coal, valleys are filled with the soil removed to create hills that did not exist before, many villages and whole towns are demolished or buried to make way for the expanding mines, churches have been picked up and placed elsewhere, brand new lakes are created in the chasms after the coal has been used up. The whole area is being sculpted around the needs of the energy industry – a process that continues unabated today. However much of the rich history also remains, stunning ancient monasteries and castles stand on the edge of the brown coal pits, and paths of pilgrimage are re-routed to avoid the encroaching mines. Old villages and the people who live there have no choice but to adapt to the 24/7 drone of machinery. Children grow up with these sights and sounds as their personal legacy. For an outside visitor like myself, it can be fascinating, horrific, beautiful and depressing in quick succession.

As a sound artist and sound recordist with a long interest in environmental issues, I have travelled to this area twice to record, explore and to experience, as far as is possible in a few days, the sounds of the landscape, which is undergoing a slow, but relentless, transformation to satisfy the energy and petrochemical demands of economic policies made in distant capitals and populations far from the region itself. It is possible to think of our sound environment as a connected series of 'sonic places'. A sonic place is characterized by everything we can hear within range of our ears at any moment, the details of which are constantly changing. It is a relationship between sounds, ourselves, the physical and ecological landscape, and events, big and small, that occur in the place. One of the fascinations of North Bohemia is the amazing variety of its sonic places. They range from those in towns and villages through those of the countryside to those dominated by the region's industries. Here are a few of the sonic places discovered and recorded during my short visits. They, and more, can be heard at <http://favouritesounds.org/?projectId=48>.

The demolished village of Libkovice (Sept. 12, 2015)

a) Underwater sounds in the derelict fountain of Libkovice

The village of Libkovice was cleared and demolished in the 1990s to make way for the

expanding Bílina mine. Only traces remain, like earthworks, outlines of houses and an orchard still bearing fruit. The village fountain still exists but is now smothered in trees and water plants. Dragonflies patrol up and down a shady patch of water. I use a hydrophone (underwater microphone) to listen below the surface. There are tiny bubbly and scraping sounds. I have no idea what makes them.



Libkovice, photo: Peter Cusack

b) Sounds of opencast mining, Libkovice

I sit recording amongst the rubble of one village building. Except for the machines in the mine near by and a small red plane that drones overhead, it is very quiet. Small birds and insects are occasionally audible. Every now and again the atmosphere is interrupted by empty trucks passing by, bumping and shuddering on the uneven dirt road, their engines grinding up a small hill en route to the mine. It is not really threatening, but I find this sound disturbing and can only relax again after it disappears into the distance. I wonder if the people living here, who must hear this everyday, are able to ignore the sound.



Bílina mine, photo: Peter Cusack

**On the edge of Bílina mine
(Sept. 12, 2015)**

The Bílina open cast mine is huge. Standing on the edge one can only be impressed by the size of the area carved from the ground. Yellow earth is exposed into the distance and at its deepest, the dark brown coal seams are visible. There is always low-key activity. It is a 24/7 operation. The perpetual drone of conveyor belts carrying earth and rock from the digging machines for kilometers across the mine is a constant presence not only at the mine edge, but in the surrounding villages, too. A siren regularly sounds as machines stop and start. Distant trucks rumble. But there is wildlife, too. A kestrel hovers and small birds call. Two deer leap through crackly bushes. Whilst recording at dusk a magnificent wild boar makes its way from down below, up the cliff and away across the dry landscape. As night falls, twinkling white lights outline some of the machinery.



Záluží industrial park, foto Peter Cusack

Beside Unipetrol Záluží u Litvínova (Sept. 13, 2015)

This place is just outside the Unipetrol petrochemical factory at Litvínov-Záluží. The landscape is crossed by lines of metal pipes, some rusty and broken, others still in use. At one point near the village of Kopisty a whole series of pipes end abruptly and gobs of hot (50°C), evil smelling, black water blast from them into an open concrete channel that runs down the hill for 100 meters before disappearing into another building of unknown purpose. This building creates deep drones and slight ripples. The polluted water is under pressure and the sound is powerful enough to make normal conversation difficult. Steam rises from the hot pipe and the smell is choking and sulphurous. This must be illegal.

We listened to the flow of the liquid inside the pipes using contact microphones. You hear the water jetting along, the sound resonant to the dimensions of the interior. It is scarily musical and I entitled the recording “Evil Liquid, Evil Sound”.

The Sound Barrier outside the village of Mariánské Radčice (Sept. 12, 2015)

The historic village of Mariánské Radčice lies approximately a kilometer and a half from the current edge of the Bílina mine. Normal life continues even though it is potentially under threat if the mine boundaries are expanded. The beautiful baroque Cistercian monastery there has been renovated in recent years and we were very hospitably allowed to stay in its rooms for the days of our visit. The monastery is guarded by a number of dogs; one in particular took his job very seriously and barked loudly and often. He was pretty intimidating and his deep sound reverberated around the monastery corridors on every occasion.

Even though it is some distance, the constant drone of machinery from the mine is ever present in the village. With particular wind directions it can be quite loud. The mining company has attempted to protect the town from the noise by building a sound barrier just outside the village boundary. It is a bizarre construction; a giant piece of green painted scaffolding about 100 meters long and 20 meters high. The idea was that plants would grow thickly all over this frame and that the



Mariánské Radčice, Sound Barrier, photo: Peter Cusack



Radovesické údolí s elektrárnou Ledvice, foto Peter Cusack
Radovesice valley with Ledvice power station,
photo: Peter Cusack

vegetation would reduce the sound from the mine. In any event, the unusually hot summer meant that nothing grew and no sound was blocked. As a sound shield it is a spectacular failure but it takes its place as a curious addition to the already surreal landscape of the region.

Radovesické údolí (Sept. 11, 2015)

In a photograph this place looks like a normal, natural grassy hillside overlooking the town of Bílina. But it is not. The whole area has been completely reconstructed and landscaped anew. Once it was a steep valley, now it is the opposite, a hill created from 40 years of soil and earth dug from the Bílina mine. Somewhere underneath is a buried village Radovesice with houses, a church, streets and a square. No visible trace remains. One now sees fields, a stony track lined by poplar trees, conifer plantations and a small fishing lake with reeds around the edge. From the top, the different coloured apartment blocks of Bílina appear and further in the distance, columns

of steam merge with clouds above the huge cooling towers of the power station Ledvice associated with Bílina mine.

The soundscape is quiet. Leaves flutter in the light wind and small birds call occasionally. Distant machines still creating this landscape can be heard, as can the voices of my friends as they climb the hill. My breathing and pounding heart become audible when I do the same. The atmosphere is strange and somewhat melancholic. I think about the buried village and its people forced to make lives elsewhere. Perhaps I am standing directly above it. One of my favourite pieces of music is *La Cathédral Engloutie* ('The Submerged Cathedral') by Claude Debussy. It depicts the mysterious underwater life of the sunken cathedral with its great bell that still tolls in stormy weather. It is impossible to imagine such ghostly events ever happening here with the church crushed under tons of soggy dirt and rubble.

petercusack.org

Authors

Vít Bohal is a member of the Diffractions collective, focused on Accelerationism, Posthumanism, Prometheanism, and strands of Critical Theory. He publishes and translates texts on various topics, most usually those of culture and philosophy. His articles have appeared in VLAK, VICE, Creator's Project, A2, and Word Addict. He studied music at Charles University and majored in Critical and Cultural Theory.

Dustin Breitling born in USA, he is an M.A. Student at Charles University studying geopolitics. He organizes the Diffractions lecture series and the upcoming Reinviting Horizons symposium hosted in Prague.

Václav Čílek is a Czech geologist, climatologist, writer, philosopher, and popularizer of science. He graduated from the Mining Institute and Faculty of Natural Science of Charles University, and became involved in the study of hydrothermal deposits. Later, he studied samples brought from the Moon by Russian satellites. Thirty years ago, he began to focus on climate change and environmental issues. He combines a knowledge of the humanities with the natural sciences. He is the author of around 400 scientific articles and several books, including the award-winning *Inscapes and Landscapes* and *Makom Book of Places*.

Peter Cusack is a British field recordist and musician with a special interest in environmental sound and acoustic ecology. His projects have included community arts, research into sound and our sense of place, and documentary recordings in areas of special sonic interest (Lake Bajkal, Aral Sea, the Chernobyl exclusion zone, the Caspian oil fields, or UK nuclear sites). The project *Sounds From Dangerous Places* explores soundscapes at the sites of major environmental damage. Cusack initiated the *Favourite Sounds* project in London with the aim of discovering what people find positive about their everyday sound environment. The project has since been established in Beijing, Berlin, Brussels, Chicago, Prague and Birmingham. He lectures in Sound Arts and Design at the London College of Communication and was recently a DAAD artist in residence in Berlin.

Julia Martin is an artist and landscape architect from Berlin, living in Seyðisfjörður, Iceland. She holds a Ph.D. in Art from Goldsmiths, University of London, an MFA from Edinburgh College of Art, and a Master in Landscape Architecture from Technical University Berlin. Her performative actions, drawings, photocollages, installations, and writings investigate relationships between objects and agents in space and time, and have recently focused on developing her concept of hyperextended ecological objects.

Ivo Přikryl is a Czech hydrobiologist working at ENKI o.p.s. Třeboň. His research focuses on zooplankton in lakes, dams and ponds mostly in Central Europe. He is currently studying the possibilities for the protection of wetlands, marshes, the management of dams and the recultivation of the landscape after periods of open cast mining, especially in the Ore Mountains.

Radoslava Schmelzová is a Czech art historian and curator graduated from the University of Ostrava with a degree in Art History and from the Academy of Arts, Architecture, and Design in Prague with a degree in the Theory and History of Design and New Media. She has worked in the National Gallery in Prague and in the National Heritage Institute. Presently, she is teaching in the Department of Alternative and Puppet Theatre of the Academy of Performing Arts in Prague, the Faculty of Theatre. She also collaborates with the Archive of Fine Art.

Ivar Smedstad is a Norwegian artist and curator. He studied fine arts at the San Francisco Art Institute and received his degree in performance/video in 1988. Smedstad has been working with video art and electronic media since the early 1980s and has participated in numerous international and national video art exhibitions, screenings and festivals. He was the Technical Director at Electronic Arts Intermix in New York and has held various teaching positions, including a fellowship from The Academy of Media Arts in Cologne and department chair at Trondheim Academy of Fine Arts. Smedstad is currently the Artistic Director of Atelier Nord.

Dagmar Šubrtová is a Czech sculptor and curator born in Duchcov. She lives and works in Kladno, where she is continually confronted with the environment of an industrial landscape. She graduated from the Sculpture studio Academy of Arts, Architecture and Design in Prague. Her relationship to industrial environments was given a new impetus after she moved to Kladno, where she worked until 2010 as a curator of the Mining Museum in Mayrau Vinařice. Besides being an artist, she often acts as a curator (exhibition project of the Macromolecular Institute of the Academy of Science CR in Prague, the Biennial Industrial Vestiges). Her artistic work focuses on the changes in the landscape as a result of industrialisation. *dagmarsubrtova.cz*

Miloš Vojtěchovský is a Czech curator, art historian, and artist living in Prague. He worked as a curator (The Hermit Foundation and Center for Metamedia, The Collection of Modern and Contemporary Art at the National Gallery in Prague, MediaLAB at the Center for Contemporary Art in Prague, Radio Jelení, Lemurie TAZ, etc). He has lectured on media, contemporary art, media theory and history at the Faculty of Fine Arts at the Technical University Brno. Since 2004 he has taught media art history and theory at the Center for Audiovisual Studies at Film and Television Faculty at the Academy of Performing Arts in Prague. He curated the program at the Gallery Školská 28 and was one of the initiators of Institute of Intermedia for reasearch in contemporary arts, science and technology at the Czech Technical University.

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