# A SLIGHTLY CURVING PLACE
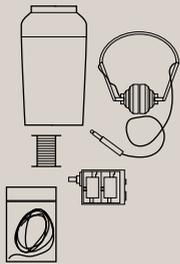
The life and work of Umashankar Manthravadi is a history of sound and technology through the second half of the 20th century. As a self-taught acoustic archaeologist, he has been building ambisonic microphones since the 1990s to measure the acoustic properties of premodern performance spaces. This exhibition responds to his practice and proposes possibilities for listening to the past and its absence which remains. Centred around an audio play and a video installation, *A Slightly Curving Place* brings together writers, choreographers, composers, actors, dancers, musicians, field recordists, and sound, light, and graphic designers who engage and transform each other's work. Elements from Umashankar's biography serve as a compass amid the material in vitrines, as a dancing body positions the endlessness of time in relation to a series of ruptures that is history. Under a dome of speakers an assembly of listeners gathers to sense a past they cannot hear. The sound that arrives is only a record of sound as it might have been.

The exhibition draws its title from Jain cosmology. Isipabbharabhumi is a Prakrit phrase referring to a special place above the heavens shaped like a parasol. It is where the disembodied souls of the perfected ones go to live in eternal isolation. There, sealed off from the rest of the cosmos, they are unable to interact with other souls, unable to hear them or be heard.

# TUNING

The notion of tuning essentially assumes the presence of another. Even when a musician tunes herself to her inner ear, she is aware of something at once outside and larger. Tuning then is a way of being in relation, to a note, a person, a place, or an absence—such as a distant past that seems forgotten.

### T1 ◆                    GALENA CRYSTAL RADIO

If memory serves, Umashankar built his first radio at the age of seven. Or maybe eleven. What is certain is that it was a galena crystal radio. Invented at the turn of the 20th century and commercially obsolete by the 1920s, the non-electric crystal set remained in use through World War II and reemerged as a craze among hobbyists and children in the 1950s, which is around when Umashankar came to it. As the antenna picked up radio waves from the ether, he used a cat's whisker—a fine metal wire shaped like an S—to find a point of contact on the surface of the crystal from which a current could flow. That is to say, he tuned in to a mineral by hand in order to listen. Broadcast from various distances, the sound was only ever as loud as its signal and relied on the labour of listening to be heard. Audible to him alone, the faint waves from All India Radio were all it took for a young boy to get hooked to an old technology. Soon he could distinguish stations not through content but audio properties. When Radio Moscow tried to sound like the BBC, he could make that out too. From his family's noisy living room, Umashankar had begun his practice of tuning into the spaces of nearly imperceptible far-away places.

selected parts: galena crystal, variable tuning capacitor, copper wire, Horlicks bottle, wooden board, aerial wire, Air Force headphones

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## *ALTAR OF FIRE*                                T2

The hymns of the *Rig Veda* were orally composed and mnemonically transmitted by communities of Brahmins over millennia in an archaic form of Sanskrit that, unlike the later classical idiom, was distinguished by three tones: "raised," "unraised," and "sounded." It is thought that the slightest error in pronouncing these phonemes during a ritual may produce disastrous effects, hence the importance assigned to the preservation of perfect sound in Vedic pedagogy. To aid the body in memorization, an instructor manoeuvres the head of a pupil learning the tonal system: raised, lowered, and lifted then bent to the right. A skilled reciter may feel these phantom movements, but not exhibit them.                    AK

excerpt from film by Robert Gardner and J.F. Staal, 1976

### TWO GANDHARVAS SHARING A DRUM            🤸 T3

Sometimes I think about those two little figures and their shared drum, and think of myself as sharing one too—with not just y'all but who knows who.                    AK

artist unknown, fragment of rock carving from Nagarjunakonda, date unknown

# RECORDING

The act of recording requires a surface onto which a mark can be made. While a mark might have a referent, it is ultimately a record of its own making. A surface can be conceived of in a number of ways: a song can be recorded onto tape, and the memory of a summer onto a song as well.

R1

book of poetry
self-published
with lulu in 2007

### *FROM A PREVIOUS CENTURY* BY UMASHANKAR

Umashankar began composing poems at the end of his teens. Three decades later, around the turn of the millenium, he found himself wondering how he had gone from being a newspaper journalist to a sound recordist for film. What set off this thinking was a conversation with a cameraperson, who as an image-maker could trace a lineage all the way from cave paintings. In that moment Umashankar felt short of a past. He could only reach back a century to the invention of the phonograph. But what was the pre-history of modern sound reproduction technology? Sound had always been recorded in text as well—ever since speech and song were engraved in stone, for instance. Letters are but signs for sounds and words are intrinsically sonorous. A poem is a means of drawing out a voice even today. And how did this relate to a needle etching a groove on a wax cylinder? As he started to consider that writing was the first sound recording device, he saw a line that made sense of a life.

### *MEGHADUTA* BY KALIDASA ◉ R2

A cave gives shelter to a lovesick exile. Sent thousands of miles from wife and home as punishment, he is driven to near madness and begs a passing thundercloud to bear a message to his beloved high in the distant Himalaya. Addressing the cloud in slow song, he describes the long route it must take to reach her, a hypnogogic itinerary that becomes an erotic play of atmosphere and landmass. Over many verses, the words within this fifth-century Sanskrit poem by Kalidasa layer themselves in repetition, concatenated, to create a sound texture reminiscent of a rolling soft thunder on a slow approach.     AK

edited by E. Hultzsch,
published by London
Royal Asiatic Society
in 1911

### *GITA GOVINDA* BY JAYADEVA ⚐ R3

If infinity stood up it would look like eight. Two big nothings—one form, the other content, one space, the other time, one text and the other drawing. Gita Govinda is an epic poem from the 12th-century poet Jayadeva. It is about the inexhaustibility of an illicit springtime love affair. Using all kinds of metric resources, it brings ordinary language as close to musicality as possible. Its a-modern mathematical organization of eight-line compositions in 24 sections invites infinite mimesis. A percussionist picks up the eight-beat rhythm and a dancer draws meaning from the text, until at some point they synthesize in a pattern of three. Through the dramatic vernacularization that occurred across South Asia and Europe in the early centuries of the second millennium, the text migrated to many Indian languages, before English, French, and German translations in the 18th century retroactively established a source text in Sanskrit, attempting to override the legitimacy of those mutations. The mimesis of song and dance from culture to culture is only one of the many paths *Gita Govinda* has taken.     VA

various editions
and translations

## DANCER CARVED INTO ROCK AND PATTACHITRA

In popular discourse, the classical Odissi dance traces its representational origins to the ancient archaeological site of Ranigumpha (circa first century BCE), where its early antecedent called Odra-Magadhi was allegedly cultivated and performed. The footsteps resonating at Ranigumpha later migrated to cloth and palm-leaf scrolls through the labour of skilled pattachitra artists, who promulgated their visual style over a thousand years ago and transmitted it on a hereditary basis, ensuring its continuity into the current day and age. This distinctive art tradition often features elegant ekphrastic renditions of the dance, limning its lyrical postures and gestures. Besides existing on their own as miniature dance portraits, pattachitra choreographic illustrations also frequently ornamented poetic and aesthetic manuscripts. As Odissi dance was once suppressed by British colonialism, pattachitra served as significant archival sources for its reconstruction and re-vivification in the 20th century. Odissi is part of the canons of Indian performance, so these exuberant images conjure a dance foundational to the mythography of classicism in India. They summon up the aura of the dance's antique past and link that aura to its vibrant present.                         AB

artist unknown, rock carving at Ranigumpha, c. 1st century BCE

lamp-black drawing on palm leaf by Nirmal Shanti, Charinangal, Odisha, c. 2020

## *HARAMONI* BY MAHAMMED MANSOORUDDIN

The Bengali folk-song collector Mahammed Mansooruddin came from a small village in Pabna, now in Bangladesh. Around 1920, as a schoolboy, he came across a selection of songs by the mystic poet Lalon Fokir that he found in an old issue of the literary journal *Probashi*, collected by poet Rabindranath Tagore. These were songs sung in villages all around him, and it struck Mansooruddin that what

book of collected song texts published by the University of Calcutta in 1942

was commonplace for them could be very special to others, especially in urban literary circles. He wrote down the words of some Lalon Fokir songs as given by a wandering minstrel, Premdas Bairagi, and sent them to the same journal. He was over the moon with joy the day they were published. A decade later he released his first volume of *Haramoni* (Lost Jewels); in another decade the second volume came out. Mansooruddin could see himself in league with folk-song collectors of the past; he knew that what he was doing was no less than Percy's *Reliques* or Child's *Ballads*. But would the world ever know? In the painter Abanindranath Tagore's cal-ligraphy for the title, the Bengali alphabet meets the Persian and the mind journeys through history, bringing Bengal's Mughal past into a cosmopolitan future. Mansooruddin, the real haramoni, hidden treasure of Bengal, remains forever small-town and local.                         MB

## WAX CYLINDER                         ⊗ R6

The phonograph, invented in the late 19th century, worked much like the human body. It listened, then sang back. Its membrane vibrated to movements in air caused by the sound emitted into its horn; a needle attached to this membrane vibrated in turn, cutting grooves on the wax cylinder rotating below. On the return path, the needle read back that inscrip-tion on the rotating wax, like running a finger along writings on old cave walls, stirring the air again, making sound from signs. The phonograph was used to record sonic patterns of human expression of a time and place, for the future. Yet as an object of sound the wax cylinder was incredibly fragile. For permanence, its grooves had to be transferred to a metal cast in a process that destroyed the wax master. Is preservation contingent on destruction? Is sound necessarily ephemeral? Recorded or unrecorded, sound gets inscribed on the surface of time; some we can hear and some we can't.                         MB
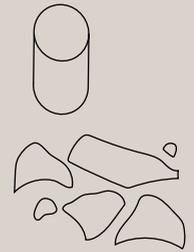
remains and galvanic metal mold

artist unknown, line carving on stone slab from Nagarjunakonda, c. 3rd-4th century CE

## SKETCH OF SALABHANJIKA

The salabhanjika is an ancient sculptural convention of portraying a woman standing against a tree with one arm aloft. According to legend King Bhoja, who ruled over central India in the 11th century, was also an amateur archeologist: one excavation into an unusual mound he'd spotted yielded a magical throne, made by Indra and buried by the primeval King Vikrama. Its pedestal was adorned with 32 salabhanjika statuettes, such that together they seemed to hold the throne up. In awe, he placed it at the centre of a bejeweled palace, and just as he prepared to mount it with great ceremony, one of the salabhanjika cried out: "Stop!" She began to tell the first within a cycle of 32 stories, each offering a prohibition and delay to the king's ascent. We learn that the salabhanjika were once celestial maidens and that they had angered a goddess, who'd cursed them to support Vikrama's throne and speak these stories.

What tale does this salabhanjika tell? One of 61 limestone slabs discovered amid ruins of a sculptors' workshop at Nagarjunakonda, during hasty excavations before inundation by water, it begs questions but provides few answers: an emergent form suspended in eternal delay, muted at the edge of speech. The hands and tools that made it, with their taps and scrapes, left these marks as a trace of their movement and a sketch for something yet to come; it stands between them like a hinge in time. Did the sculptor's ear pick up some ill-boding anomaly in the stone, and stop? The ancient unfinished is uncanny, a reminder that nothing is ever really done, not as long as its material endures.  AK

## DIGGING

Digging is a mode of capitalist modernity. To accumulate the past as an object of knowledge, the archaeologist digs into the earth. Sound too is buried under layers of time. Can it be excavated? What tools would be needed? And what senses activated? When listening becomes a way of digging, there might be nothing to accumulate. Sometimes someone hears something, even though the sound itself is lost or faded.

## UZMA'S SHADOW                                      D1

While working at a a third-millennium-BCE site on the east bank of the Euphrates in Syria, I often stood on the Tell to see wall alignments in the trenches. On one such day, I caught sight of my shadow cast on the side. The form of a loosely clothed individual leaning on a shovel caught me off guard. It reminded me of Albert Memmi, who described how we often picture the colonizer proudly leaning on a shovel, laboring selflessly for mankind, striking a pose of a noble adventurer. On that day, my elation that I might have appropriated a colonial image, that there might have been some reclamation of power, was overshadowed by the outline of my own form in the sand becoming a metaphor for the colonial structures maintained in a neocolonial framework. An active acknowledgment of identity allows for an investigation of politics and power, based on models of interaction, social systems, and codes of conduct, rather than a reliance on imperial and colonial models of interaction based on histories of oppression.          UR

based on Uzma Z. Rizvi, "Decolonizing Methodologies as Strategies of Practice" published in: Uzma Z. Rizvi, Matthew Liebmann (ed.), *Archaeology and the Postcolonial Critique.* Lanham, MD: AltaMira Press, 2008
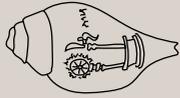
3D reproduction of Astabhujasvamin's conch shell

## D2 ● CONCH

Upon attaining enlightenment the Buddha hesitates, uncertain whether to teach others, until a delegation of gods persuades him to set the wheel of Dharma in motion, marking the occasion with the gift of a conch that embodies the clarion-clear quality of his message. A conch makes a bolt of sound like a natural fact, a reverberation you can feel moving through your skin. Shell trumpets have a long history in South Asia, where they are typically fashioned from the species *Turbinella pyrum*, or sacred chank, renowned for its durability and bright, loud sound. By the common era, they were found in temples from Kanyakumari to Tibet. Astabhujasvamin's conch was the largest from the dozens excavated by the Archaeological Survey of India in 1958 at Nagarjunakonda, a site soon to be submerged by a dam. Lifted from the seabed; killed, carved, and polished; blown as a blessed aerophone; lost; dug from ruins in the nick of time—silent and glassed. AK
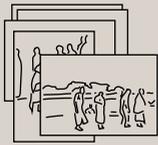


constellation of photographs taken in Naogaon, 1932, as well as nearby, 2015

## D3 ◡ LISTENING TO IMAGES

Photography "can be sensitive to sound as it is to light," writes Geoff Dyer. "Good photographs are there to be listened to as well as looked at; the better the photograph, the more there is to hear." And these are photographs about music and musicians, and journeys made in search of them. In February 1932, the Dutch scholar Arnold Bake made a field trip to Naogaon, now in Bangladesh, to record songs by men working at a ganja plantation and fakirs who gathered there. We have some clear black-and-white photographs from that trip, some hazy wax-cylinder recordings, and some letters Bake wrote to his mother and the Berlin Phonogramm-Archiv, which had lent him phonographs to use. More than eight decades later, those are the leads that we started to follow as The Travelling Archive, on our own search for Bake's singers and their songs. Since 2015, a map has been unfurling, marked by railroads and estuaries, devotion and madness. Song is written over song, image listens to image. It is now hard to tell what is old and what was new. These pictures extend several decades, even centuries, to include what was and what will be. MB

## UMASHANKAR AT ARCE ✿ D4

In 1982, Umashankar became the first employee of the Archive and Research Center for Ethnomusicology in Delhi. By the time he retired in 2015, the archive had moved to Gurgaon, and he had listened to approximately 15,000 hours of oral and performance traditions from across the country. Firsthand, and not through theory, he came to recognize what was common and resilient across these practices—such as the non-metrical introduction in much Indian music. The labour of such listening brings the interiority of the body and its duration into focus. What he heard is all mixed up with everything else he knows. Over the 30-odd years that he helped maintain the archive, Umashankar announced metadata ahead of every recording he catalogued. Is ARCE a record of Umashankar's voice over time? And is Umashankar a living archive of listening?



video by Daniel M. Neumann, 1982

## SOUND AS SURFACE

When a sound reflects in a space, it is fundamentally transformed by the physical qualities of every surface it engages. When a sound refracts, some of it gets absorbed on the way. Materially speaking, sound and surface cannot be separated.

S1                                                          WAX

Sound waves were first etched into lampblack that had been smoked onto tinfoil tubes. Thomas Edison claimed that these cylinders which could record and play back sound would "bottle up for posterity the mere utterance of man." Ten years later, in 1887, the Volta Laboratory pioneered wax cylinders. Here wax referred more to texture; the waxy material itself was made of several compounds. Eventually cylinders were made from celluloid, an early plastic. Calling audio recordings "records" and LPs "wax" goes back to these days, to making a record of a sound by tracing a groove in a soft material. To wax is also to grow full (like the moon).                    RM
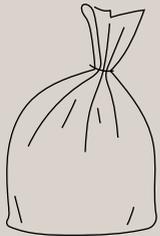
S2 ◉                                                  SHELLAC

Shellac comes from a resin secreted by the tiny lac insect, native to Northern India and Southeast Asia. Mentioned in the *Atharvaveda*—the Veda of magic formulas—and the *Mahabharata*, lac had myriad traditional and medicinal uses. By the 18th century, its role in industry became paramount and its trade was controlled by the British East India Company. Shellac was used by Emile Berliner when he developed the flat round record in around 1890 from Edison's tubular cylinders. The cylinder was first, but the shellac disc came to define how we listened. This is metamorphosis: of insect into sound, of vibration into voice, of the intangible into the solid.        RM

VINYL                                                        S3

World War II can be seen as the dividing line between a world dependent on renewable resources—such as the insect-derived shellac—and one dependent on petrochemicals. Vinyl—or poly vinyl chloride—had been discovered in 1872 by a German chemist named Eugen Baumann, five years before Edison recorded sound; vinyl records would be introduced only in 1948. During the war, shipping routes and the traditional processing of shellac were interrupted. A more stable and controllable system was needed. Petroleum products—oil, PVC, and more—were already feeding the booming growth of the West and interlocking with new global power dynamics. Shellac was soon left behind, just as wax had been.                                        RM
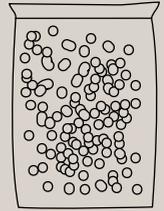
COAL                                                         S4

The last few centuries can be said to have been centuries of furious digging. Many an archaeological find in the 19th century was first documented by mineral-hunting geologists under orders from the British Raj to survey remote places for potential extraction. Archaeology and mining seem then to be bound to each other as colonial practices whose violence spans material and epistemic dimensions. As well as specific forms of rupture and loss, the mining of minerals has generated noises and silences. Over time extraction led to the clatter of machines and the beeps of electronics, the music that constitutes the modern urban soundscape.                              VA
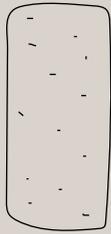
SANDSTONE

The western edge of the Chota Nagpur Plateau is studded with forested, basalt-capped mesas that rise thousands of feet and, in places, expose cliffs whose buff sandstone is riddled with caves, several of them artificially enlarged, inscribed with letters nearly as old as any in India. One's interior seems smoothed by tools, as though tuned. Inside, voices amplify. It was the stone's softness that attracted humans there some two millennia ago, providing not just sanctuary but a medium for architecture, and with it, the preservation of a sound: whoever made Sita Benga shaped it to reverberate a certain way. You can still hear it, though differently: an impossibly long decay … fading in slow, petrified waves.                    AK

S6                                                     MUDBRICK

"Listen to the mudbrick. It will tell you where it begins and where it ends," the excavator Chacha Nawaz told me. "Be wary of falling into the trap of the wash. The wash sounds like mudbrick but it is not a wall. It is only the wash of a wall. You must learn how to recognize the walls." From the moment I held a trowel in my hand, I was taught how to feel. There is something lovely about the sloping nature of mudbrick that slowly accumulates at the foot of walls. It is promiscuous and unfixed, rendering invisible systems of control that walls impose.                    UR

based on Uzma
Z. Rizvi, "Theorizing
Deposition:
Transitional
Stratigraphy,
disruptive Layers,
and the Future,"
*e-flux journal*
56th Venice
Biennale, 2015

WOOD                                                        S7

The night before cutting down a tree for lumber, a carpenter makes an offering to appease the spirits haunting it, requesting that they leave their abode for another. Wood is a material that is easily repurposed, but also quick to decay. Despite leaving  physical evidence of its presence, it is commonly agreed that the earliest architecture in South Asia was made of wood, a theory supported by the visible influence woodwork had over the material traditions that followed, as craftspeople imitated the texture and grain, the timbre of timber in stone.

COPPER                                                      S8

"You know when you pick up the piece of ore, it tells you what it can become," said metalsmiths outside of Tiskola village. "You just have to listen to it. You have to take the time to listen to it. This is what our children do not have the time to hear." Crafting copper is a communication between humans and nonhumans; an engagement, a pragmatic exchange, an entanglement, an acknowledgement of each other. The copper labours—changing states from solid to liquid and back to solid—in the process of its crafting. Both copper and the human body are engaged in this communicative action, which crafts copper, senses of belonging, and resonance through repetitive practices.     UR
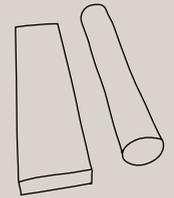
based on Uzma
Z. Rizvi, "Crafting
resonance: Empathy
and belonging in
ancient Rajasthan,"
*Journal of Social
Archaeology* 15/2, 2015

## A SLIGHTLY CURVING PLACE – A STUDY

Padmini Chettur
2020, 11' 16"

This is a study towards a film for six dancers. It is composed of footage from a research visit to a transplanted archaeological site in Anupu. Shot tentatively early one morning and the next evening, it is a discovering of light: its directions, its qualities, what it does to the textures and shadows of the space. It is a study of volume and proportion: a single body lost in scale to the vast landscape or filling the frame to propose itself. It is also a thinking about perspective: the image of a dancer's body moving in a space and the movement of a dancer's body making an image, in conversation. It is a study of how to frame space, how to bring different temporalities—ancient and contemporary—onto the same plane, how to evoke history without narrating it. The images are heard through a score that asks us to listen to the textures of a potentially unravelling time and timelessness—a slightly curving place.  PC

## AN ARCHAEOLOGY OF SOUND

It was in the mid-1990s that Umashankar Manthravadi began his research in acoustic archaeology by mapping and measuring the physical dimensions and acoustic properties of Ranigumpha—a double-storied structure of rock-cut caves dating back to circa third century BCE, generally believed to have been a monastery, but arguably a theatre. One day he was on site, cooped up in a corner in front of a bulky desktop computer that had been lugged along to the Udayagiri hills and was being powered by rerouted overhead mains. He had been making some tests with his headphones on when an officer of the Archaeological Survey of India came up to him and pried, "So, can you hear them?"

The question echoes throughout this project, which is primarily concerned with what it means to try and listen to the past, to that which will forever remain outside the range of our hearing. Hear whom, exactly? Or what? The people who built the place. The sounds once made. Implicit in the officer's inquiry was a strange conviction in a technological positivism that the past can be accessed, that it is for our taking. But an archaeology of sound is not about finding facts in the acoustic reflections of architectural surfaces so as to reconstruct a once-audible event in a space as accurately as possible. It is a fundamental confrontation with a sense that the past cannot be captured. Umashankar for one had already been certain that his measurements could prove nothing but themselves. What he came to know is that we can't just look for theatres in landscapes of the past—we must listen for them. An archaeology of sound is then about that which is lost but nevertheless always with us—the simultaneity of the past in the present, a collectivity across time beyond possession and accumulation.

To ask what it means to listen to the past draws awareness both to sound as a social event—music, theatre, and dance as forms of corporeal relations—and to its absence which remains.

This attention to absence disrupts the focus on material evidence that has, at least since the advent of archaeology in the 19th century, structurally conditioned the ways in which the past has come to be known. As a vector of modernity that evolved as a primarily visual study, the discipline of archaeology can be charged with colonizing the past by collecting it for display. But an archaeological site is not only about ruins and artefacts; it is also a record of everything that happened there. Measuring sound waves moving between the muted material archive of architecture shifts the archaeological gaze towards reflection. Echoes that bounce off of walls, floors, columns, chambers, and ceilings carry a trace of bygone events that have not entered history, like a latent memory of a collective experience that defies ownership.

Recognizing the potential for performance inherent in ancient and medieval sites of ritual, festival, and theatre, an archaeology of sound redraws the frontier that has posited orality against inscription, bodily movement against physical architecture. Listening for lost memories of social imaginaries challenges the dominant way of conceiving the premodern against the modern, and disrupts contemporary mythologies that ceaselessly partition the past into isolated languages, designating certain sovereignties as matters of history. Tuning in to the static of the past so as to reckon with the noise of the present is also an invocation to listen to the dramatic changes in our own acousmatic landscapes. Can we hear that which is unavailable to us, namely the historical transformation of our senses in modernity?

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# HKW