A native of Seattle, Daniel Miller is a composer, programmer, instrument builder, and field recordist. His creative practice centers on perceiving and responding to the vitality latent in simple processes, materials, and technologies. Recent creative interests have included explorations of found objects, live animated interactive scores, and feedback cycles between performers and stochastic processes or acoustic automata. In 2013, he was a recipient of a Thomas J. Watson Fellowship, a grant that made possible twelve months of research on recording pure, natural sounds, and the influence of surrounding sounds on the highly cultivated ear of musicians. This article is the trail of all the sounds he covered in four continents.
The glass terrarium by my bedroll were covered, but not as securely as I would have liked considering that they contained a diverse collection of Australia’s venomous reptiles. My host was an affable professional snake catcher with a genuine admiration for scaly creatures of all kinds. He took in strays, both reptilian and human; his house, a suburban pad on the outskirts of Brisbane, was a menagerie. Besides the snakes, there were crayfish in a former swimming pool, bearded dragon lizards in a pen in the garden, and a rotating roster of human guests who seemed to stay anywhere from a few days to a year. Among this small community of geeks and students, itinerant circus artist and wandering buskers, my obsession with recording the sounds of Australian frogs doubtless seemed only slightly out of the ordinary.

At night my host took me out into the abandoned quarries near town, where he taught me how to spot the glint reflected by a spider’s faceted eye, catching the glare of a flashlight beam even from its hiding place in deep grass. It was here too that I first heard the bizarre chorus of “barking” frogs, attempting rather unsuccessfully to catch their distant jeering cry on my tiny Zoom H1n digital audio recorder. The year 2013–14 was one of the most transformative experiences of my life, both as a person and as a sound artist and composer. After graduating with degrees in music composition and philosophy from Lawrence University, a tiny college in the rural American Midwest, I had the astonishing honor and privilege to be granted a Watson Fellowship. Established by the heirs of the late IBM founder Thomas J. Watson, the grant funds a year’s full-directed research overseas for selected graduates of 40 of America’s small, liberal-arts colleges, irrespective of the graduates’ countries of origin or citizenship.

My thesis—which I ultimately pursued in seven countries on four continents—was that sound artists, musicians, and composers are particularly perceptive to the sounds of their immediate environment. Whether urban or rural, classically trained or self-taught, the practice of listening deeply to sound changes a composer’s perception of the act of auration itself. Inevitably the sounds of one’s surroundings influence one’s music, and this is particularly true of artists who work with microphones, the surrogate ears through which we attempt to copy, emulate, and even distort the object of perception. A condenser microphone is a fortress built to protect an almost indescribably delicate membrane. At the microphone’s heart is a minute drumhead, like a tin-man replica of the human inner ear, just half the thickness of cling wrap and stretched under fearsome tension. Through this delicate skin, perhaps covered in a fine lamina of gold, a fleeting electrical charge courses, fluctuating with the vibration of the air and passing on the barest vibration of current to circuits that will capture and amplify the signal. The field recordist is an artist with the almost foible task of pitting this feather-light stylus against all the vibration of sound in its natural habitat. We go to absurd lengths to protect the microphone as an instrument for recording, and listening through a microphone, becomes a kind of contemplative practice in itself.

Dorothea Lange—the iconic photographer of America’s Great Depression of the 1930s—is quoted in a biography by Milton Meltzer: to take her camera with her in the morning, she said, was like “putting on her shoes.” Tellingly, she goes on to emphasize the importance of the camera as a tool for learning to “see without the camera.” Similarly, field recordists commit themselves to using the microphone as an instrument for learning to listen, with or without its mechanical assistance.

But while a photographer has significant leeway in how they frame and cut what objects to include and which to cut from the frame—most microphones are less directional. What the field recordist can hear, the microphone can generally hear with even greater sensitivity. To listen through a microphone is not to ever hear “the” actual sound but rather a sound which is mechanically enhanced or attenuated. We cannot escape intervening in that record, but neither can we ever entirely control the outcome of a recording.

I found that these competing themes of control and intervention versus exploration and discovery resided in countless ways in the work of artists I met, collaborated with, and interviewed during my twelve months on the road. But to understand the context, both cultural and acoustic, of the musicians I met along the way, I first had to engage...
with the environments I traveled through on my own terms.

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Starting my journey in Perth, Western Australia, one of the most isolated cities on earth, I hiked part of the Bibbulmun Track, a 1000-kilometer-long trail that snakes down the coast through dense jarrah forests and is riddled by flocks of wild cockatiel birds. My soundtrack, for the first time in my life, was the creaking of my heavy pack’s straps, the bright red, iron-rich earth underfoot scarred in places by tumultuous subtropical rains. In a rite of passage for young field recordist, I clamped little copper contact microphones (a simple microphone that records vibrations in solid surfaces rather than in the air) to metal cattle fences along the trail, listening to the reverberant hum of metal vibrating in the wind. Laying the contact microphones face up on anthills, I listened to the sound of tiny desperate earthworms that have been driven underground by the insects investigated the intrusion of this alien copper disc. One night, in my tent, I heard, from very close by, the howling hiss of a grass tiger, a giant carnivorous monitor lizard that can grow to two meters long.

Flying to Brisbane a month later, I had the pleasure of meeting Lawrence English, the Johnny Cash of field recording, as dapper and distinguished in person as he is in promotional photos for Room40, his well-respected record label. English is a keen listener with a penchant for philosophical contemplation, and his recordings are as extraordinary for their clarity and complexity as they are for the creativity of their environs. A recording which I always return to is his 2011 recording of a toy store in Tokyo (Toy Store Ueno Japan. “And the Lived In.” Room40, 2012) – a rich tapestry of electronic warbles like a field of cicadas at dusk, a bizarre mimesis, the synthetic masquerading as the biological.

Another Australian field recordist who influenced me a great deal was Martin Kay. More abstract and interventionist in his aesthetic, Kay has largely focused on “prepared” field recording. A typical experiment for him is to place a microphone deep within a storm drain or culvert to record the distant crowd noise some kilometers away from a major sporting event.

In prepared field recording, “composition” becomes explicitly about composing the placement of microphones. Microphones may be placed inside enclosed or resonant vessels, the vessels partially submerged or subjected to wind, ice, or steam; or the microphone may be located in a generally inaccessible place, such as on the roof of a moving elevator (Japanese sound artist Toshiya Tsunoda once famously recorded birdsongs with a microphone placed in the tailpipe of his car).

In mid-October I flew north to the Indonesian island of Java through white-knuckle turbulence that rocked the Airbus A330 as we passed over the sultry beaches of Darwin. The former capital of the Mataram Sultanate, Yogyakarta, has long been a cultural hub for Javanese traditional arts and is now at the center of a new kind of artistic revival. Many of Yogyakarta’s young artists draw on classical Javanese arts as well as the contemporary concerns of their community to create work that is once fresh and culturally aware. Two artists who exemplify this trend are Rully Shabara and Wukir Suryadi, who together form the band Senyawa.

I first met Suryadi at his farmhouse at a distant edge of town. With little more than a GPS coordinate and a cell number, I walked through shaded lanes and lush farmland, past feral chickens and children who inevitably stepped to stare at the obviously quite lost American guy who would have had to stoop to fit through any normal-sized doorway. Suryadi’s house at that time was filled with traditional farming tools, all in various stages of being converted into electronically amplified musical instruments. In pride of place was an enormous wooden plow, which dominated his front entryway, strung with taut wires like the rigging of some shipwrecked vessel. A backroom contained dozens of objects in various stages of modification: bamboo rice winnowing baskets with attached contact microphones, crates made of boxes and spades, and a bamboo spear strung around its circumference with amplified wires.

Like Senyawa, the community arts collective LifePatch draws on environmental and agricultural concerns of the community, staging workshops on water quality and fermentation, and creating works of art that electronically sonify environmental processes. Its model is deeply interdisciplinary and idiosyncratic; its core members include artists and musicians, a biochemist, and a farmer. I spent many evenings in their cluttered but creative clubhouse, the smell of tobacco smoke and hot electrical circuitry richly accenting workshops on Pure Data. Not to be outdone by Senyawa’s heavy metal aesthetic, LifePatch members once placed flags with embedded electronic synthesizers and speakers near the summit of Mt. Marapi an active (and very lively) volcano. Each flag’s motion sounded the fiddle and ash laden winds on the summit. (Sadly, the installation was perhaps destroyed in an eruption shortly thereafter.)

In the months that followed, I wandered from country to country, savoring the changing soundscape in each new place, always in awe of the artists I met and the generosity of the musicians who let me sleep on their couches.

I moved on to Taiwan and Japan, hanging out evening after evening at SuperDeluxe – Tokyo’s legendary noise music dive famous for hosting the likes of JapaNoise idol and art-house heartthrob Masami Akita (aka Merzbow). Immersing myself in Tokyo’s vibrant underground noise music scene, I heard and met artists such as free improv collective Marginal Consort and, on one particularly memorable evening, “Zombie Music,” a recorder-playing pneumatics robot designed by eccentric Japanese composer Yasuno Taro. My reluctant departure from Japan in January was briefly delayed by a historic...
snowstorm that stranded me in Narita Airport for three nights, sleeping in the airport’s public observation deck and waking each morning to the unusual sight of deserted, peaceful runways. I spent the spring of 2013 in beautiful, perplexing Buenos Aires, jamming in the eclectic folk-instrument-strewn apartment of Alejo Duek, a member of the Argentine freak folk band La Suena de los Elefantes. His workshops (Experiencion Sonora) draw an eclectic crowd of porteños: cynical studio guitarists, New Age spiritualists, folk musicians, and painters. The results fall somewhere between avant-garde and freestyle meditation.

Weekends I would often spend at Che-lA, a former asbestos factory turned center for media art and technology, which hosted, among other things, a practice space for circus performers. Here I met the charismatic Luciano Azizotti who runs ConDIT, an experimental music project founded in 2011. Since its inception, ConDIT has staged more than 60 events, many with an international scope. ConDIT composers have drawn on a pre-Columbian tradition of cooperative labor and community service known as Minka, reinterpreting this tradition through a method of communal artistic creation, composing a musical work collaboratively over the course of a day.

Sonic coincidences—fortuitous moments of overheard beauty—were everywhere, from my kitchen in Tokyo, to the cold mountains of the Atacama Desert. One day, standing on a ridge high above the town of Tupiza, in Bolivia’s and southwestern, I recorded a school band and a military parade echoing in simultaneous oblique counterpoint from different parts of the little town, fading in and out of background noise of the dry, dusty little town at the edge of the desert. Music is where you stop to listen.

Shortly before the end of my fellowship, my trusty hydrophone (underwater microphone) — which had served me well recording the cacophonous breaking of ice in the glacial lagoons along Iceland’s south coast – met its ultimate end in a boiling pool of geothermal water along Iceland’s Laugavegur trail. Yet for the brief time during which the hydrophone was able to record, I captured the most amazing soundscape, one which none of us will ever hear with our unaided ears: the thunderous growl of geothermal water boiling up from deep beneath a volcano, and at one point a long, loud wave of escaping gases, which scared me so much (listening in through headphones) that I scrambled back up the trail, leaving my recording equipment behind, expecting at any moment that the hot volcanic crust around me would give way to a freak geyser of boiling sulfurous effluent.

In my months of wandering, the only place I struggled to find any sound at all, was deep in the Salar de Uyuni, the salt flats that cover 11,000 square kilometers of Bolivian highlands. Here, on salt as hard and flat as ice stretching as far as the eye could see, not even insects relieved heavy silence. In the occasional pools of shimmering brine, no bubbles disturbed the soft hush of digital silence in my headphones.

American composer John Cage talked frequently of hearing his own blood rushing in his veins when he visited an anechoic chamber at Harvard University in 1951. It was an important moment for him, a realization that we are perhaps never without sound (save perhaps, as Lawrence English has suggested just before death). I can’t say that I heard my own blood pulsing in the Salar, but I can say that I felt very strongly the fragility of our environment and the great importance of sound for most people even in the most mundane moments of our lives.”

From a sociological viewpoint, musical traditions can be classified according to how one participates in the music making: participatory music, in which the community collectively acts as both the performers and the listeners; presentational styles, in which the music is presented by a group of expert performers before a static audience; and any one of these can be found within discarded consumer electronics, the best contact microphones are not free, and one must process the signal from a mic can be downloaded free from freeware repository GitHub.

Of course we must not overstate the accessibility of this music or the community that nourishes it. To participate in an international, decentralized community still requires some resources. While open-source software may be “free,” it still requires the resources of a computer to download it, and in many cases one must have some understanding of English (or at least of programming languages) in order to use it. Though DIY hardware hacking can produce electronic instruments of great beauty from cheap and commonly available components, one must have the time and knowledge to learn to solder and assemble them. Though contact microphones can be made or found within discarded consumer electronics, the best contact microphones are unaffordable for many. Experimental music, regardless of its providence, still remains most accessible to the middle class in most countries, and there remain important questions about “experimentation,” an ideal that has historically been valorized alongside colonialism.

Nevertheless, the internet and the cheap availability of digital recording equipment have somewhat democratized sound art. Whereas in the 20th century the heartland of electronic music experimentation was in the large government-supported sound studios of Europe and the mainframe computer labs of America’s Ivy League universities, today with the resurgent interest in small-scale analogue circuitry and “maker” culture, tinkerers has become the new standards for uncompromising creativity. Perhaps this trend will help to replace the troubling concept of a monolithic and static “authenticity” (so often implying latent exoticism or idealism) with a recognition that most artists draw on complex and evolving influences with a rapidly globalizing artistic community.

As Rana Ghoré—a New Delhi-based concert promoter and organizer of the Listening Room concert series, which presents noise music shows in several Indian cities—recently told The Hindustan Business Line reporter Bhavani Kappal, Indian artists have always been experimenting with DIY sound and noise “in the privacy of their own homes.” (Kappal, Bhavani. ‘Signal to noise’. The Hindustan Business Line, May 27, 2016). It is an encouraging sign that such music is increasingly receiving press attention in many parts of the world; shows, often organized by the artists themselves, are finding an audience outside of the small vanguard of audiophiles who themselves produce or perform the music.

If my experience is representative, chances are there are artists near you who are doing something unimaginably strange and exciting with sound. But if not, you could always do it yourself.

(Samples of Daniels field recordings can be found at http://www.lontanomusic.com/field-recordings/)

Daniel’s music has been performed in North America, Europe, and Asia. Past collaborators include Newell Ensemble Moderne, ensemble mise-en, the International Contemporary Ensemble, Ensemble le Vainqueur, Sound Energy Trio, the NOW Ensemble, Ensemble Musica Nova, and felix dahu & Wolfrat. Most recently he completed a master’s degree in the Digital Musics program of Dartmouth College. Daniel is currently a Fulbright-Nehru research fellow based in Mysore, India, where he is advised by Dr. Mayur Mani (University of Mysore).