

The Mysterious Power of the Infinitesimal

Eliane Radigue

INTRODUCTION BY JOEL CHADABE

In the 1960s, Eliane Radigue began to move away from her earlier work in musique concrète as Pierre Henry's assistant, with its focus on the juxtaposition of self-contained "musical objects," and towards an exploration of sound as an evolution with subtle transformations. By the 1970s, she was composing sounds by performing with a synthesizer onto a tape that was then played back in a concert. As she told me several years ago, "I could make sounds that change almost imperceptibly, and I learned to modify the sounds *tout doucement*, very lightly, almost like a caress. . . . I use tape because my pieces are made up of sounds that crossfade into other sounds, and at the moment of overlap there's an interaction between the two sounds, and it's crucial to get the timing right. . . ." In a concert, her music floated in the air, coming from everywhere as music without a source, just a natural part of our world, just there, and without effort.

In 2001, responding to a request from Kasper Toeplitz, she composed a work for double-bass. It was an entry into a new world for her, with rich and inspirational collaborations, with new ideas, and with the discovery of a new world of sound in traditional instruments. In December 2005, she created the first part of *Naldjorlak* for and with cellist Charles Curtis. The second part of *Naldjorlak*, composed with basset-horn players Carole Robinson and Bruno Martinez, was finished in September 2007. The third and last part was composed with the

three musicians. *Naldjorlak I, II and III* was first performed in January 2009. The evolving sounds, the mystery of the sounds, the depth and presence of the sounds, are all there with the instruments. But with these compositions, Eliane Radigue's focus has changed from an ambience to a person, from the impersonal world around us to the breath, pulsations, beating of life.

THE MYSTERIOUS POWER OF THE INFINITESIMAL

In the beginning, there was the air's powerful breath, violent intimidating tornados, deep dark waves emerging in long pulsations from cracks in the earth, joined with shooting fire in a flaming crackling. Surging water, waves streaming into shimmering droplets. . . .

Was it already sound when no ear was tuned to this particular register of the wave spectrum (Fig. 1) in this immense vibrating symphony of the universe? Was there any sound if no ear was there to hear it?

The wind then turns into a breeze, the base of the earth into resonance, the crackling fire into a peaceful source of heat, water, the surf against the bank, cooing like a stream.

Life is there.

Another level, another theme begins.

An organ adapts itself to transformation of a miniscule zone

Eliane Radigue (composer, artist), France. E-mail: <anne180@gmail.com>
Translated by Anne Fernandez and Jacqueline Rose.

Fig. 1. Eliane Radigue, spectrum of waves. (© Stéphane Roux)

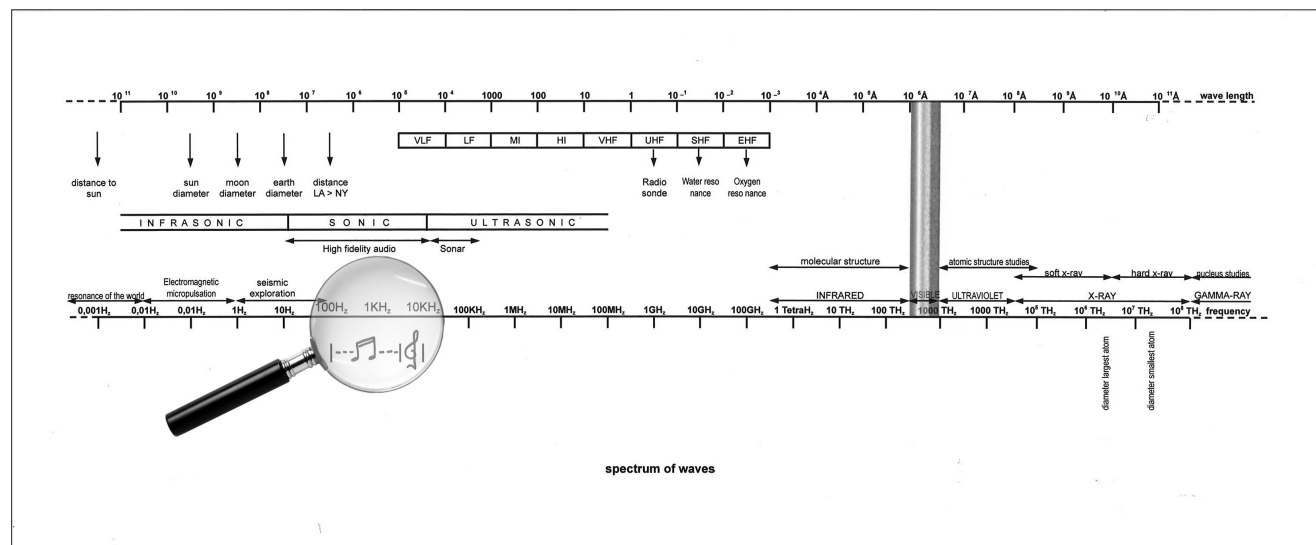




Fig. 2. Eliane Radigue, montage, from left to right: Eliane Radigue and Arp synthesizer in 1974, in the late 1980s, and more recently, 2004 or 2005. (Photo: Yves Arman. © Stéphane Roux)

from the immense vibrating spectrum decoded into sounds captured, refined, meaningful.

Crackling, roaring, howling and growling, the noises of life—cacophony punctuating the deep ever-present rhythm of the breath, pulsations, beating...

A few more million years, the noisy emissions organize into coordinated sounds and with reflection, become a language.

But breath, pulsations, and beating remain.

How, why, the sound of the wind, of the rain, the movement of clouds across the sky as they appear and disappear against the blue of space, the crackling of fire, how, why, through what mysterious alchemy will all this turn into a chanted recitative for one of these beings, recently appeared; how, why does the experience of an impression become sound, music?

An ordering is underway. Breaths caught in hollow tubes become tamed sound sources, hollow percussive objects become sources of rhythm, strings stretched over yet other hollow objects, through the stroke of a bow, turn into sound waves.

Haunting recitative. The Voice, the Path is there.

Hollow tubes with holes, assembled in different lengths. Hollow objects with a skin stretched over cylinders of various dimensions. Strings stretched over resonating chambers with more sophisticated shapes, fitted with sound posts that transmit and hear, animated by “arcs” turned into “bows.”

And the Path, always more and more the mysterious “Path.” Supple and fluid, breath, earth, heat and water, everything at once. The subtle alchemy of sounds becomes, oh wonder, understood. One-half, one-quarter, one-third of a string’s length reveal their perfect harmony, as later confirmed by images on an oscilloscope. Except for...the tiny, infinitesimal difference—when left to their own devices, natural harmonics unfurl into space in their own language.

Temperament...

So many marvels came from it. It had to happen, it was worthwhile.

Then came the electronic Fairy; through the power of magnetic, analog and digital capture, breath, pulsations, beating, and murmurs can now be defined directly in their own spectrum, and thus reveal another dimension of sound—within sound.

The occasional accident, a disrupted relation between recorder—transmitter—recorder—playback, and there our medium assumes some independence.

How, then, does it behave?

Breath, pulsation, beating, sustained sound, depending on the mood.

So much richness in all this “feedback” and other chance or provoked “interference.”

Such a challenge to keep them under control while maintaining the correct distance, the tiny adjustment that makes them develop until a terrible “fit” causes them to self-destruct.

This is when other splicers of four

piece tubes and surveyors of variably sized strings over resonating chambers decided to take everything back to the primary elements.

The frequencies and everything that ensues. Varying modulations giving rise to new spectra. In short, all so called “electronic” music.

In the beginning, from the beginning, the first generators and all the possible treatments, modulating, filtering, mixing etc... (cf. Milton Babbitt’s studio at Columbia University, those from the time of dear Karlheinz and others). Irascible and unreliable mastodons that required patient taming.

On the other hand, by reducing all this paraphernalia, by “modulating” it...

Another story was beginning. A story where breath, pulsations, beating, murmurs and above all the natural production of these marvelous, delicate and subtle harmonics could be deployed in a differently organized manner.

No acceptable intervals to tolerate or obey. No harmonic progression. No re-

Fig. 3. From left to right: Bruno Martinez, Charles Curtis and Carol Robinson worked with Radigue on the third part of *Naldjorlak*. (© Delphine Miguères)



cursion or inverted series, no respect for rules of atonality tending toward “discordant.” Forget everything to learn again.

The freedom to be immersed in the ambivalence of continuous modulation with the uncertainty of being and/or not being in this or that mode or tonality. The freedom to let yourself be overwhelmed, submerged in a continuous sound flow where perceptual acuity is heightened through the discovery of a certain slight beating, there in the background, pulsations, breath.

The freedom of a development beyond temporality in which the instant is limitless. Passing through a present lacking dimension, or past, or future, or eternity. Immersion into a space restrained, or limited by nothing. Simply there, where the absolute beginning is found. Lending a new ear to a primitive and naïve way of listening.

Breath, pulsation, beating, murmur...continuum.

I dreamt of an unreal, impalpable music appearing and fading away like clouds in a blue summer sky. Frolicking in the high mountain valleys around the wind, and grey rocks and trees, like white run-aways. This particular music, that always eluded me. Each attempt ended in seeing it come closer and closer but remain unreachable, only increasing the desire to try again and yet again to go a bit further. It will always be better the next time....

How can sounds or words transcribe

this imperceptibly slow transformation occurring during every instant and that only an extremely attentive and alert eye can sometimes perceive, the movement of a leaf, a stalk, a flower propelled by the life that makes it grow? How to know a little, just a very little, simply to try, to train oneself to look better in order to see, to listen better in order to hear and to know these transient moments of being there, only there? Like the butterfly emerging naked from its chrysalis, with only small white, blue or grey dots developing imperceptibly into the wings that will take flight.

I have known the enchantment of discovery by forgetting all I had learned, I have of course also encountered doubt, denial, and the feeling of absurdity during long years, alone with my ARP (Fig. 2) and all of the difficulties “we” had to go through, before perhaps understanding each other... a little.

Now, it is in the iridescence of these slowly flowing grains of sand, that some wonderful musicians have agreed to share what I call my “sound fantasies.” Carol Robinson, Charles Curtis, Bruno Martinez (Fig. 3) and I have just completed the third part of *Naldjortak*. With their instruments, cello and basset horns, they agreed to explore this subtle, delicate sound world fashioned from breath, pulsation, beating, murmurs and the richness of the natural harmonics that radiate from it. The instruments tuned almost into unison, with just a minuscule

interval of a few commas to give more freedom to the breaths, beatings, pulsations, murmurs, sustained sounds. . . .

And above all, the wonderful experience of sharing, with the most subtle affinity, complicity. The joy of hearing the music I dreamt of, and that these marvelous musicians make for me, giving all of their talent, their virtuosity, their souls. What a strange experience after so much wandering, to return to what was already there, the perfection of acoustic instruments, the rich and subtle interplay of their harmonics, sub-harmonics, partials, just intonation left to itself, elusive like the colors of a rainbow.

Simply returning to my first loves, those never forgotten. And yet it is clear that this long journey through uncertain lands also enabled me to simply recognize what was already there, buried, hidden.

May it lead to yet others. Further adventures, explorations of this infinite mystery of the transmutation of noise into sound, of sound into music and, as with all true questions, to receive in response only a few “hows,” never a “why,” thus leaving endless freedom to trace one’s path, to find one’s voice. Pulsations, breaths, beatings. . . .

Acknowledgments

P.S. Thanks to all my friends. Not being able to name everyone here, I will cite no one. Conscious that each of you know and understand my unfailing fidelity, a gratitude bound to all of the reciprocal respect and esteem that make up the ferment of Life.

Environment 2.0: Through Cracks in the Pavement

Guest Editor: Drew Hemment

The second call for papers of the Leonardo special project **Lovely Weather: Artists and Scientists on the Cultural Context of Climate Change** seeks new cross-disciplinary thinking on sustainability in urban environments, with a focus on creative intervention, social change and non-Western perspectives.

In urban environments we are separated from the consequences of our actions as surely as the tarmac of the road cuts us off from the earth beneath. This physical boundary encourages a phenomenological separation. It is also a symptom and a driver of a global reliance on the private car and fossil fuel. But between the cracks in the pavement, another world flourishes—local activism, recycling, environmental collectives, permaculture, urban gardening.

Artistic and social projects can widen the cracks in the pavements. Such creative innovations might be artworks, social entrepreneurship, scientific intervention or innovations that harness everyday creativity. They might seek to decode the complex relationships between people, nature and technology in urban settings. Or they might be conceived as interventions that can help contribute to profound social change, or suggest alternative possibilities for or critical perspectives on sustainability.

A new relationship is emerging as computing migrates into the environment. When the Earth is mapped, tagged and digitized, it ceases to be inert raw material and becomes instead navigable, computable and manipulable. How will this affect the way that industrial societies have viewed the environment as a resource to be exploited and tamed?

Leonardo is soliciting texts that document the works of artists, researchers, and scholars involved in the exploration of sustainability in urban environments. Themes and issues may include:

- Sustainability in urban environments
- Ubiquitous, pervasive, locative and mobile communication technology
- Growing community
- Sowing seeds of social change.

Linked activity includes an Urban Climate Camp forum at ISEA2008 in Singapore in August 2008, and an exhibition and workshop at Futuresonic 2009 in Manchester, U.K., during May 2009, <<http://www.futuresonic.com>>. Submissions are welcome in all linked strands of activity.

Authors are encouraged to submit manuscripts or proposals to <leonardomanuscripts@gmail.com>. Leonardo submission guidelines can be found at Leonardo On-Line: <www.leonardo.info>. Please indicate your proposal is for Environment 2.0.

For more information on Leonardo special project **Lovely Weather: Artists and Scientists on the Cultural Context of Climate Change**: <http://www.olats.org/fcm/artclimat/artclimat_eng.php>.