# The Polyvalent **Discourse of Electronic Music**

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# MIGHT ELECTRONIC MUSIC—A MAJOR FORCE BEHIND CHANGES IN ACOUSTIC TECHNOLOGY, COPYRIGHT LAW, HUMAN-MACHINE INTER-

face, artistic production, marketing and consumption practices, and global connectivity-help us think about the dizzying proliferation of today's written forms and how we talk about them? It can certainly offer new models and a rich vocabulary for speaking about such things as labeling, canon, and the relationship between author and audience. As "text" continues to bloat, shrink, scatter, and blur, thanks in part to the same digital tools used by contemporary e-music, perhaps looking at how this sound swarm is dealing with its identity will be useful to those who read, write, and write about literature. The essay that follows invites literary scholars to "listen awry" to a wildly polyvalent, indeterminate musical complex that simultaneously lobbies for, rejects, and eludes categorization.<sup>1</sup>

Somewhere between a voice-over and an under-the-breath murmur resides the cloud that is electronic music. (Is it a wave, or is it a particle?) It is not merely that electronic music has defied a simple definition but that it has enjoyed many definitions. If you look for electronic music in a music store, in what section is it filed? Classical? Jazz? Dance? New Age? Rock? Experimental? Yes. Some of it sounds like a whirl of clicks, scratches, and synthetic drones and some like popping toasters or photocopy machines, some of it you want to move to, some you want to sleep to, some of it is so loud and abrasive you fear tinnitus, and some of it is so quiet you need to strain to hear it at all.

One definition of electronic music is any electronically amplified or recorded music. As such, it is everything but the most intimate of live, technologically unmediated performances. A more restrictive definition is sound that has been manipulated by analog or digital means. But that applies to anything that is recorded and played back. Few agree about what electronic music is-about what characterizes it as electronic and what makes it music.

Generally speaking, the e-music of the last decade is music created and performed by digital means (although some analog techniques are

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still used). These means include myriad instruments or tools as diverse as the computer, the synthesizer, field-recording devices, the laser koto of Miya Masaoka, and so on. E-music also encompasses electroacoustic music, which fuses digitally created sounds with ones made by acoustic instruments and the human voice. Yet even within these easily identifiable parameters, e-music evades genre and generalization. It hovers around the edges of things, distending and traversing boundaries, alighting nowhere. It could be considered a ballooning megagenre inflated by and exploded into subgenres, subsubgenres, metagenres, and juxtagenres not only by formally trained musicians but also by technicians, bedroom DJs, artists, writers, journalists, and the music industry alike.

Contemporary e-music is continually being born and dying, being labeled and relabeled, and shedding its skin. It is a rapidly morphing and proliferating scene. While it joins the ranks of the pioneering music revolutions of earlier decades (new classical, jazz, rock, punk, rap, etc.), it does so in an ethereal way, a "spectral" way,<sup>2</sup> without the cult of the hero-star, without identifying itself as part of a style or mode. And while it also continues the legacy of experimentation elaborated by early- and mid-twentieth-century academic electronic musicians (exploring sound's grammar, sound sources, the relations between sounds, spatial and directional perception of the listener, ritual and performance spaces, etc.), it has evolved, or perhaps devolved, into its own species, including innumerable popular-audience, for-profit outfits and work produced by artists without formal compositional training. Much of this music, even if commercial or reminiscent of earlier experimentalism, is fierce in its quest to be like nothing ever before-to be at times ever faster, at times ever smaller, and at times without an ever after. As we shall see, by virtue of e-music's omnipresence, velocity, and perpetual splintering, it is on its way to dissolving from a retronym into, simply, music.

#### **Ever Before**

When has a music ever been quite so paradoxical: global and isolationist, ardently seeking listener participation and aggressively challenging it, label coining and label rejecting, exalting the synthetic and claiming to produce the realest of real sounds?

Electronic music may have commenced in the United States with Thomas Edison's phonograph in 1877 or Thaddeus Cahill's teleharmonium in 1897. Or perhaps it started in 1914 in Italy with Luigi Russolo's intonarumori ("noise machines"), or in Russia with the theremin, or in France with Pierre Schaeffer's musique concrète. Or perhaps with Karlheinz Stockhausen's objective to create sounds that had yet to be imagined. By the fifties and sixties, there were institutes such as the Columbia-Princeton Computer Music Center, in New York, and Musica Elettronica Viva, in Rome; there were Iannis Xenakis's stochastic mathematical compositions and the pioneering synthesizer work of Robert Moog and Milton Babbitt. By the seventies, Brian Eno's ambient sound in England and Pauline Oliveros's Deep Listening label in California were born; and, with the invention of affordable equipment such as the MiniMoog and the Roland 808 drum machine, electronic sounds were beginning to be used in Jamaican dub, in German digital hardcore, and in discos around the world. By the eighties and early nineties, electronic music found its stride in such forms as Detroit techno, Chicago acid house, New York hiphop, Dutch gabba, London jungle, Norwegian minimalism, Japanese industrial noise, Miami freestyle, and American folktronica.<sup>3</sup> Groups such as the Electronic Music Foundation were established, and electronic music festivals like Sonar in Barcelona, Ars Electronica in Linz, Mutek in Montreal, and Liquid Architecture in Australia emerged; raves, online e-music zines, and e-mail discussion lists proliferated; graduate programs in digital arts were born throughout North America and Europe.

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In this global explosion is a remarkable kind of isolationism. On the coattails of the live-performance-shunning Glenn Gould, the e-musician often chooses not to give concerts. The e-musician can perform compositions in which hundreds of instruments are "played" simultaneously. No band necessary. No recording studio necessary. No leaving the house or interacting with audience necessary.

There are contemporary e-musicians like Francisco López, who does not want to communicate directly with his listeners but instead has them experience the hyperreality of the sounds (rather than the sounds' sources or meanings); or Ryoji Ikeda, who uses frequencies so high and so low (over 20 kHz and under 20 Hz) as to be inaudible (or painful) to the human ear; or Elio Martusciello, who uses infra- and ultrasounds to experiment with "the machine's point of listening," not ours. There are some musicians whose recordings contain no liner notes and others for whom the liner notes are the music. Some, like Mitchell Akiyama, restructure live performances in a studio to effect a "moment of creation that never happened."4 Others, not unlike twentieth-century avant-garde artists, ask the listener to destroy their albums after listening to them (e.g., Merbow). Still others create music out of disintegrating tapes (e.g., Basinski). In a Staalplaat compilation entitled Yokomono 02: 55 Lock Grooves, for example, there are fifty-five tape loops of digital silence, which generate more and more sound as the tape being looped deteriorates.

And then there are groups like Arpanet whose members have never been interviewed or appeared live—in which the musicians' identities do not seem to matter. In some cases, musicians choose a negating name such as  $\emptyset$  (Mika Vainio) or a generic name such as aem ("another electronic musician") or try to become invisible performers (Keiko Uenishi of o.blaat); in others, musicians take on multiple identities simultaneously (see Uwe Schmidt, aka Señor Coconut, Atom Heart, Atom, Dots, Flextone, Midisport, Lassigue Bendthaus, DOS Tracks, Flanger, Datacide, Ongaku, Geeez 'N' Gosh, etc.). The formula "formerly known as X" is not in play here (pace Prince) although the paralipsis of "hidden wiring" may be (Young).

One could easily construe these disappearing acts as marketing strategies aimed at piquing curiosity. But commercialization and profit have little to do with the work of many of these artists. Do these maneuvers reveal a selfless artist shunning fame? Are they moves to granularize and digitize the self, transcending the limits of the flesh and becoming, as the music theorist Christoph Cox has noted, a Deleuzian body without organs, a posthuman human? Are they attempts to communicate in new ways-prosthetic ways that use technology to say more, often through saying less? Are we witnessing a pandemic of the disappearing author, what Marshall McLuhan might call the "performance of self-elimination"? Is there an ever-greater proliferation of simulacra and a growing dissolution of the romantic ideal of genius and originality? Or does this lack of a rock-star hero-and even of music that gets stuck in your head-ultimately bring listeners back to a sense of communal experience by allowing them to be equally lost and immersed in music that has no focal point (Cox)?

Or are these maneuvers meant to encourage more active participation by the listener? E-music, not unlike much avantgarde music of the past century (reminiscent of John Cage's theories and experiments), asks listeners to write their own narratives. The musician and theorist John Oswald, of *Plunderphonics* infamy, says that he is interested in having his audience be listeners who actually change things (Liner notes). While merely listening may not alter the course of sound waves (as viewing may affect electrons, according to quantum theory), the listener does, as the microsound theorist Curtis Roads explains, have the power to be a kind

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of coauthor or, rather, part of a research team. The music critic Kodwo Eshun points to this:

As soon as you have electronic music, by definition, you're operating to create new worlds of sound. These producers . . . don't want to create love songs. They don't want to sing about revolution. They don't want to get angry. They want to be scientists of sound. They want to explore new universes of sound.

(Modulations)

And they want us to explore these universes with them; so how solitary are they? The band Future Sounds of London, for one, says its music is meant to be a "re-evaluation of yourself in space, rather than escapism" (Toop, Ocean 53). Miguel Cabral of the Nevermet Ensemble created an album called Quarto Escuro by having nine musicians—complete strangers in Europe, Japan, and the United States send music files to him in Lisbon, which he then manipulated into a series of tracks. E-music's global-secluded paradox is one of the characteristics that make the music resist genre. It seems that many of these artists want it that way. Never before, apparently, has a "group" (for lack of a better word-many would not think of themselves as part of a group) of musicians entered into such a recursive game of hide-and-seek. As Diedrich Diederichsen writes, the e-musician on the one hand says, "I want you to understand that there is nothing to understand (you all don't understand me anyway)," and on the other hand "finds himself in a community of jointly incommunicable particularities and enjoys it" (35).

Given e-music's rejection/embrace of codification and commodification, what results at the most commercial level is subgenre abuse, or, as one critic put it, "crimes against lexicography."<sup>5</sup> An entertaining and profane faux tutorial called *Ishkur's Guide to Electronic Music*, for example, parodies this issue: the marketing and labeling of electronic dance music, electronic experimentalism, new-age music, and so on. The tutorial's detailed genealogy trees, subgenre descriptions, and sound cuts sort and systematize a family of music that Ishkur ultimately finds laughable and not worth sorting and systematizing at all. His value judgment aside, Ishkur is right to note e-music's dizzying proliferation of genre, subgenre, and subsubgenre titles. Perhaps to the point of absurdity, the ribs of the e-music umbrella are constantly multiplying and shifting, held together by a thin but powerful tube called electricity and the more powerful hand(le) of human creativity. The e-music megagenre is continually rejigging what it wants to be called and to be.

The process of trying to taxonomize e-music, thus, imposes values, norms, and artificial hierarchies—something e-musicians seem, again paradoxically, to celebrate and to reject. The musician and critic David Toop writes about the language and notions that have emerged around e-music, especially around some subgenre labels, such as ambient, which has turned into "one of those polysemous glue words, which stick wherever they land" (Ocean 52).

Perhaps e-music's ground is, in fact, selectively sticky, given how it seems, on the one hand, to say that it defies definition and, on the other, to embrace so many. Off the Sky's Prufrockian album title It Is Impossible to Say Just What I Mean and VS\_Price's "Like a Real Song" are cases in point. Similarly and not surprisingly, neologisms abound in discussions of this music. Even a mere "sampledelia" of these "teched-up" words, which attempt to convey everything from a "noisenik," "intricatronic" "disturbathon" to a "panegyrical idylltronica," would be enough to convey the idea.6 Much writing about electronic music is frustrating (for critic and reader) because of this linguistic anarchy. It is difficult to talk about new sounds-if we can call these sounds new at all. Many critics and composers, such as Elliott Schwartz, would argue that electronic musicians are discovering or creating not new sounds but rather new sound sources and are

attempting to eschew conventions about how such music is described and discussed.<sup>7</sup> In its avoidance of traditional taxonomic form. this music seems to want to elude human language. E-music is, in some ways, like a noise that one hears without knowing where it came from, what it is, or what caused it. Much electronic music aims to give its listeners an "acousmatic" experience, and the remixing of sounds yields a mise en abyme that, as Cox and Daniel Warner put it, "endlessly defers any originary instance" ("Music"). Roel Meelkop's album 5 (Ambiences) does just that, abstracting known sounds until the who, what, when, where, and how (and maybe even the why) become indecipherable.

For many electronic musicians, however, new means the really real-sound sources we could never have heard without the aid of technology. Some e-musicians even explore the aesthetics of "failure" in electronic software, hardware, and performance; they think of failure as the real guiding a kind of aleatory method.<sup>8</sup> What is better, then-the simulacrum or the original? Studio recordings and audio technology allow us to hear more than ever before; field recordings give us strange sounds from the bowels of the earth (as well as human bowels)9 and from out in the galaxy; found sounds offer what seem like new colors; scanners surf the radio waves of the planet for interesting sounds of real-life communication; a dancer's movements and a growing microscopic organism can be recorded through motion sensors. E-music can show us more life and be more alive than live music. We are, in many ways, connecting more closely than ever before with the world and with each other thanks to digital technology. Humans can jam with marine life, solar flares, and inanimate objects;10 and composers can produce music that challenges our sense of time, space, and language differences as never before. Exciting, fascinating, and frightening, to listen to e-music-to think about it, enjoy it, be inspired by it, and write the changing profession

about it—invites us to be as much scientists of sound and as aware of contradictory stances as are the musicians themselves.

#### **Ever Faster**

There is no doubt that the speed at which electronic music is evolving and at which it is being created, played, and accessed is an indication of current attention spans. If we can say that classical music is nourishing for babies and plants, then some forms of electronic music are the protein powders and energy drinks of the attention-deficitdisorder and attention-deficit/hyperactivitydisorder generations. As Paul D. Miller, aka DJ Spooky That Subliminal Kid, writes, the hyperaccelerated phenomena "are the principle metaphors for a culture that has shifted away from the physical objects of the twentieth century to the wireless imagination of the twenty-first" (Miller et al.). While musique concrète "dissolved the distinction between 'music,' 'sound,' and 'noise,'" as Cox noted, it was limited by the speed of the recording and playback devices of the time ("Wie wird Musik"). The digital realm offers few limits. Human hearing and the human ability to absorb information and comprehend it are, perhaps, the greatest limits at the moment.

The joys of adrenaline. Of particular importance to electronic music is the question, how fast can you go? Can human ears be trained to hear more than 210 beats per minute? How quickly and seamlessly can you transition between cuts? How fast can you get people to dance? How fast can you produce a track? How fast can others find and download your mp3s? How much faster can the computer execute your commands? Campbell Kneale's Pink Stalingrad is an album of music so fast that it has been described as "a heart-pounding sprint toward inner space/ outer space exploration. Any longer [than its thirty-three minutes] would cause a coronary" (Haynes). These "frenetic dayglo polyrhythms"

The joys of instant gratification. E-music can be composed quickly and cheaply; you don't need to hire a group of musicians to play with you, and so there are no musicians (besides you) who need to eat, sleep, breathe, take coffee breaks, or argue about how something should be done. You don't need to be a trained musician. You can use all kinds of quick techniques: samples, loops, patches, disintegrations, field recordings, drum machines, found sounds, and randomly generated sounds. Your compositions can be put on the Web quickly, and they can be downloaded nearly instantaneously. Minutes after a new sound file is posted, listeners can transfer it to an iPod and take it with them on a run. You can put it on a podcast, myspace.com, or a blog. The next day, it's a ring tone. E-music, as the microsound musician and theorist Kim Cascone wrote, is like an idea, able to "travel at the speed of light and . . . spawn entire musical genres in a relatively short period of time" (13).

E-music is a culture of more. Going digital, you can do more with more and even more with less: process more information more quickly; integrate more notes, tones, pitches, and rhythms; have more control over the product-performance; and gather more sound information than ever before. You can swarm, loop, circuit-bend, or just jam in a "laptopia" (Reddell) with countless other electronic musicians either live in person or live in peer-to-peer real time through programs like peerSynth and netpd. With a simple equation, you can even compose a piece that will be played continuously without repetitions for a thousand years, like Jem Finer and Artangel's Web project Longplayer.

E-music could be diagnosed with schizophrenetica (not just "schizophonia" [Schafer 88]). As an acoustic hypertext, e-music's pathways seem infinite. It is viral. It is rhizomic. Its nodes and edges are proliferating and even trading places. Perhaps names and genres mean little to something moving this fast, and yet how else are we supposed to relate to something we can barely keep up with? E-music is a hyperreal phenomenon, and traditional categorizations, labels, and nomenclatures have to be rejigged quickly and often. E-music has not been fully colonized, nor will it ever be easy to colonize. Its global reach and speed demand that we rethink the language we use to speak of it—and of any art—and the flexible, expandable models we must create to keep up the pace.

#### **Ever Smaller**

Size matters in electronic music—the smaller the better. It is not only the obvious evermore-compact-and-streamlined equipment that designates this so-called better but access to ever-smaller packets of acoustic information and the subsequent execution of evermore-subtle-and-nuanced manipulations. Enter the acoustic microsurgeon dissecting the elements of sound. Here is the nanotechnology of possible music. As Curtis Roads explains in his liner notes to *Point Line Cloud*:

Beneath the level of the note lies the realm of sound particles. Each particle is a pinpoint of sound. Recent advances let us probe and manipulate this microacoustical world. Sound particles dissolve the rigid bricks of musical composition—the notes and their intervals into more fluid and supple materials. The sensations of point, pulse (series of points), line (tone), and surface (texture) emerge as the density of particles increases. Sparse emissions produce rhythmic figures. . . . As the particles meander, they flow into liquidlike streams and rivulets. Dense agglomerations of particles form clouds of sound whose shapes evolve over time.

The smaller we go, the more we know. David Toop in *Haunted Weather* concurs: "as the apparatus of music becomes less apparent, particularly in the digital domain, so sound becomes more completely itself, the purest manifestation of a disembodied, time based art" (14).

Much electronic music, and especially "microsound" (the term coined by the composer Iannis Xenakis in 1971), traps us. It does more than invite us to listen. It challenges us to have a relationship with sound and engage in the process of creating meaning or thinking in terms of an altered reality. In a way—although one difficult to imagine microsound technology has allowed sound to take on a kind of life. In the liner notes to Rafael Toral's *Aeriola Frequency*, Toop writes:

The ordering of sound into musical form is now open to every possibility in the world beyond sound.... Sound might now reflect the extra-musical systems of biology, machines, thought, chance, social relations, chemical effect, political models or body movement.... Although the sound seems to mirror patterns in the observable world, the sound is learning the order of things. The sound is learning to develop, to think, to live.

While minimalist electronic music and technology have been around since the early twentieth century, the incredible soundshrinking techniques that current digital technology (hardware and software) has unleashed are extraordinary. Under the e-music umbrella, one could hang from the rib "microsounds" such subsubgenres as microhouse, "miniaturist dance music" (Hollings, Rev. of Pop), the "small sounds" of Miki Yui, the "small music" of Rolf Julius, the "lowercase sounds" of Steven Roden and Akira Rabelais, clicks + cuts, glitch, and William Basinski's tape disintegration loops. Supporting the distribution of this music are compilation albums with titles like Small Melodies and Minimize to Maximize and labels like Line (American; a division of 12k), Fragment (Russian), and Small Voices (Italian). And who could miss albums with titles like Scape One's Submolec*ular Nanotechrhythmicprinciples*? Critics talk about microevents, microrhythms, microtonality, and microdisturbances. E-mail discussions, such as .microsound and microsuoni, are dedicated to this minigenre. Micromusic confirms the dictum of the architect Mies van der Rohe that "less is more," except, of course, when there is more and more of less. The airways are increasingly trafficked by the small.

Miki Yui describes her gentle small sounds as taken from her surroundings and "woven as the fragments of vague memories." Similarly, lowercase sound consists of quiet sounds and long, empty silences. Coined by the artist Steve Roden, the term aims on the one hand to amplify the details of everyday life that you normally don't pay attention to, such as an anthill or a cell phone running out of power, and on the other to create a music that has a gentle, handmade aesthetic. These minisounds are chopped, looped, stretched, repeated, and delayed. In Otaku Yakuza's sound installation "The Space of a Second," one thousand samples-each a millisecond in length-were strung together to make a single one-minute song.<sup>12</sup>

Although clearly still architects of sound, e-musicians—especially microsound composers—are, as the artist and critic Trevor Wishart notes, developing into chemists of sound:

We may imagine a new personality combing the beach of sonic possibilities, not someone who selects, rejects, classifies and measures the acceptable, but a chemist who can take any pebble, and, by numerical sorcery, separate its constituents, and merge the constituents from two quite different pebbles. (12)

Molecular music is being literalized.

Jacques Soddell and Fran Soddell, a husband-and-wife team from Australia, have recorded the sound of a fungus (Mucor M41) growing using a computer language called L-Systems. It is rendered to sound like a series of harp pluckings. Similarly, Michael Prime

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has gathered bioelectrical recordings of the "music" of three hallucinogenic plants. The streaming-audio project r a d i o q u a l i a, on the other hand, has turned our ears upward to the microsounds speckling the universe, such as solar flares and pulsars. And the Danish sound artist Jacob Kirkegaard, with accelerometers buried in the earth near Krisuvik, Geysir, and Myvatn, Iceland, has summoned up a revelation of sound never before imagined, much less heard: the nervous system of our planet. His geothermal recordings of the acoustic frequencies generated by geysers and volcanic activity rumble, hum, and chatter. They range from staticscapes to atria of voluptuous, vibrating bass.

While a great deal of fascinating experimental microsound music is being made today, there is no lack of minimalist electronic music that is formulaic and, for all intents and purposes, hack work. That said, it is worth noting that even on the more commercial pop and dance scenes there is pioneering vision. David Byrne and Yale Eveley, for example, have compiled an album entitled The Only Blip Hop Record You Will Ever Need, Vol. 1, which highlights the innovators in this subgenre and offers a theory about why blip hop is predominantly produced in northern Europe (the long, dark, cold winters are a major factor). The rhythms of this abstract, cerebral music do not relate to the body; they are, as the compilers put it, an "asexual sexualitypossibly closer to the dance of single-celled organisms." Blip hop is a meta-dance music, a dance music to sit and listen to, a "beautiful shell in which the organism that made it has disappeared."

The macro of the micro is that the ephemeral, the nonlinear, the lack of reference points in minimalist music allows for a new kind of acoustic experience, where listeners get to write their own narratives or decide whether a narrative is even necessary for the "perfume" of the sound to be inhaled and appreciated. Many things come in small packages these days.

#### **Ever After**

Sampling, grafting, collaging, plundering, appropriating, splicing, ripping, mixing, remixing, patching, looping, sequencing, mashing up, hybridizing-all are forms of what could be called audiocitation or electrocitation when done by analog or digital processes. This is certainly a literal (although not always legal) way of honoring earlier musicians and one's own autobiomusical history. Does it epitomize the postindustrial society that created it? Is it global-villagizing through a kind of creole? E-music, a music of inter- and hypertextuality, abounds with bits and pieces-at times recognizable, at times not; at times intentional, at times inadvertent-of music past and music present; and one could certainly see it as actively participating in music future. As Miller writes in Rhythm Science, "[S]ampling is like sending a fax to yourself from the sonic debris of a possible future; the cultural permutations of tomorrow, heard today, beyond the corporeal limits of the imagination" (77). Yet how far have we come from the simple cover of a song, or a reinterpretation, or the use of a familiar chord or riff? In DJ culture, as Cox and Warner have noted, "music and sound circulate as a network of recorded entities detached from the specificity of time, place, and authorship, and all become raw material for the DJ's art" ("DJ Culture" 329). The DJ's art is a kind of "performative listening" (During 49), at times a conscious and at times an unconscious study in origins and teleology. When done intentionally, e-music's electrocitations are acoustic florilegia, having metonymy, synecdoche, and palimpsest among their rhetorical tools. When done inadvertently, electrocitations could be construed as cultural amnesia.

Breaking sound barriers. John Oswald (who manipulated and remixed songs and compositions by numerous artists without their permission but gave his compositions away instead of selling them) said his work should have been called "flatterphonics," because he electroquoted known music and sculpted it in a way that left it recognizable (Liner notes 24). He claimed that this process did not parrot or plagiarize earlier music but rather used it as part of a new piece of music, acknowledging the original artist, like citations in printed literature and a visual artist's collage or a cut-up novel. "Any resemblance to existing recordings is unlikely to be coincidental," he writes on the cover of 69Plunderphonic96, and "[a]ll copying, lending, public performance and broadcast of this disc permitted. This disc is absolutely not for sale." Like Jeff Noon, whose conceptual novel Cobralingus was inspired by mix-and-sample culture, artists like Oswald are creating a world of what Michael Bracewell calls "sexually reproductive texts" that generate themselves (although perhaps perversely) through contact with earlier texts (6). Eerie and uncanny, perhaps, in the way cloning and genetic modification of organic material are.

Unlike Oswald are the pirate samplers, also called "sonic outlaws" (Baldwin), "appropriation artists" (Maslin), and "hot-rodders of the 90s" (*Modulations*), such as the Tapebeatles, Negativland, or ring-tone technicians, who sell their work. And then there is the curious breed of sound shifters or, rather, "droplifters," who, instead of stealing or "borrowing" a sample, plant CDs that have been tampered with in place of the originals, with the same cover and bar code. While they do not profit from their pranks, they seem to relish the idea of inflicting mutated versions of pop music on unwitting buyers.

Contrary to the sound stealer (copylifter, droplifter) and even the copyright polemicist is the sound sharer, the "copylefter." Oval (Markus Popp), for example, has released software in which other people can create Ovallike music (Oval himself being quite aware of "the politics of digital audio").<sup>13</sup> The group 8bitpeoples provides music on its site for others to use freely (under a Creative Commons fair-use policy), and some record labels (see the "term." section of 12k, for example) and distribution sites (magnatune.com) are creating places in which music can be legally accessed and downloaded gratis or for very little cost. Creative Commons has come a long way in its fight to give artists more rights to their work and listeners easier access to this work. Even open-source online radio stations, musicians' home pages, and "genome" music projects, such as pandora.com, which let you try before you buy and introduce you to similar artists in the fashion of Amazon.com, are helping musicians gain exposure. Electronic musicians have been, and continue to be, on the crest of this shareware wave.

And they are on the crest of many other waves, including, arguably, that of genre theory. E-music continues to struggle with categories and boundaries-temporal, spatial, mechanical, technological, physical, physiological, legal, linguistic. And e-music, as a digital art, is not a Negropontian revolution that is over; it is a genre frontier, still working out its identity and not yet fully colonized by artists, critics, or the music industry. Perhaps it is merely an instrument (electricity?), the way the piano is for piano music of all types. Or perhaps it is-more than a musical instrument-an instrument of language. It communicates through digital encoding, re- and deconstructing, mixing, sequencing, filtering, fusing, and citing. It speaks of emergence and possibility. Many of its words derive from and point to viral, memetic contagion. It offers new forms of sonic narration and systems and builds stronger relations between science and art. It is both anxious and unconcerned about influence. Its vocabulary is both egalitarian and elitist, globalist and isolationist. Although we have not ventured there in this essay, e-music also brings to the fore important questions of trans- (transitions, transitivity, transfer, transference, the transhuman, transnationality, transsexuality) and of the eros of the machine. E-music continues to reflect the swarming, accelerating, miniaturizing, paradoxical consciousness of the late

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twentieth and early twenty-first centuries. It may, in fact, be true that "the electricity in your house wants to sing" and that *we* are to be its instruments and translators.<sup>14</sup>

### NOTES

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1. See Drobnick's transposition of Žižek's "looking awry" (11). Drobnick also claims that the last decade has brought with it a "sonic turn" to replace the "pictorial turn" of W. J. T. Mitchell (9).

2. I am indebted to Simon Reynolds for the concept of the spectrality of recorded—and especially electronically based—music, which he used at a roundtable entitled Byrne/Eno: My Life in the Bush of Ghosts: II at the Twentieth Annual Conference of the Society for Literature, Science, and the Arts (New York, NY, 9–12 Nov. 2006).

3. Here is a handful of e-music subgenres, many of them part of the dance genre: acid jazz, aggrotech, ambient, basic channel, bitpop, blip hop, breakbeat, chill-out, clicks + cuts, cut-up, dark, digital hardcore, downtempo, drill 'n' bass, drone, drum 'n' bass, dub, electrolounge, electronica, electropop, experimental, field recordings, folktronica, found sounds, freestyle, funk, futurefunk, gabba, garage, goa, hardcore, hip-hop, house, IDM (intelligent dance music), illbient, industrial, jungle, lowercase, mentalism, microhouse, microsound, minimal, modern classical, musique concrète, new age, new wave, noise, NRG, old skool, pop ambient, postjazz, psybient, ragga beat, shoegazer, spoken word, synthpop, techno, trance, trip hop, turntablism, two step.

4. Catalog description of Akiyama's *Mort aux vaches* for Staalplaat's *Mort aux vaches* radio broadcast for VPRO (Apr. 2004).

5. Boomkat review of Rekid's Made in Menorca, critiquing "smack" as a label for a new form of house music.

- 6. Terms found in various *Boomkat* reviews.
- 7. Conversation with Elliott Schwartz, Sept. 2006.

8. See Cascone; Gabrys; and Evens. Oval's (Markus Popp's) album *94Diskont* consists of painted images on the underside of CDs, which make them skip.

9. In the e-mail discussion ".microsound," someone asked if anyone had recommendations for a particularly good-quality microphone that could be used to record his mother's intestines and heart. Jokingly, another participant suggested "a 3/8" drill and a Sony Lavalier mic" (Arnold). 10. See, for example, the album *Belly of the Whale*. Environmental art groups (www.interspecies.com and www.greenmuseum.org) invited well-known electronic musicians to create pieces using a selection of 350 recorded marine sounds.

11. Title of a track on Susumu Yokota's album Laputa.

12. "The Space of Second" can be found on the compilation album *lowercase sound 2002*.

13. The title of a track on Systemisch.

14. Title of an album by I Am Robot and Proud.

### SELECTED BIBLIOGRAPHY

- Adorno, Theodor. *Introduction to the Sociology of Music.* Trans. E. B. Ashton. New York: Seabury, 1976.
- Arnold, Robert. "Contact Mic > for Body Recording." Online posting. 11 Jan. 2007. .microsound. 5 July 2007 <http://www.propheticdesire.us/microsound/ html/2007/2007-01/msg00234.html>.
- Ashley, Robert. Music with Roots in the Aether: Interviews with and Essays about Seven American Composers. Köln: MusikTexte, 2000.
- Attali, Jacques. Noise: The Political Economy of Music. 1977. Trans. Brian Massumi. Minneapolis: U of Minnesota P, 1985.
- Baldwin, Craig, dir. Sonic Outlaws. Other Cinema, 1995.

Barthes, Roland. The Responsibility of Forms: Critical Essays on Music, Art, and Representation. Trans. Richard Howard. New York: Hill, 1985.

Bogdanov, Vladimir, et al., eds. All Music Guide to Electronica: The Definitive Guide to Electronic Music. San Francisco: Backbeat, 2001.

Boulanger, Richard, ed. The Csound Book: Perspectives in Software, Synthesis, Sound Design, Signal Processing, and Programming. Cambridge: MIT P, 2000.

- Bracewell, Michael. "The Metamorphiction of Jeff Noon." Foreword. *Cobralingus*. By Jeff Noon. Brighton: Codex, 2001. 5–7.
- Bull, Michael, and Les Back, eds. *The Auditory Culture Reader*. New York: Berg, 2003.
- Byrne, David, and Yale Evelev. Liner notes. *The Only Blip Hop Record You Will Ever Need, Vol. 1.* Comp. Byrne and Evelev. Luaka Bop, 2002.
- Cascone, Kim. "The Aesthetics of Failure: 'Post-digital' Tendencies in Contemporary Computer Music." *Computer Music Journal* 24.4 (2000): 12–18.
- Chadabe, Joel. Electric Sound: The Past and Promise of Electronic Music. Upper Saddle River: Prentice, 1997.
- Cox, Christoph. "Wie wird Musik zu einem organlosen Körper? Gilles Deleuze und experimentale Elektronika." Soundcultures: Über digitale und elektronische Musik. Ed. Marcus S. Kleiner and Achim Szepanski. Frankfurt: Suhrkamp, 2004. 162–93.

1623

- Cox, Christoph, and Brian Conley. "Past Forward." *Cabinet* 13 (2004): 75–76.
- Cox, Christoph, and Daniel Warner. "DJ Culture." Introduction. Audio Culture: Readings in Modern Music. Ed. Cox and Warner. New York: Continuum, 2004. 329–30.
- ——. "Music in the Age of Electronic (Re)Production." Introduction. Audio Culture: Readings in Modern Music. Ed. Cox and Warner. New York: Continuum, 2004. 113–14.
- Cutler, Chris "Plunderphonics." Sounding Off! Music as Subversion/Resistance/Revolution. Ed. Ron Sakolsky and Fred Wei-Han Ho. New York: Autonomedia, 1996.
- de la Motte, Helge, Bernhard Leitner, and Bernd Schulz, eds. *Resonances*. Heidelberg: Kehrer, 2003.
- Diederichsen, Diedrich. "Digital Electronic Music between Pop and Pure Mediality: Paradoxical Strategies for a Refusal of Semantics." Sonic Process. Ed. Christine van Assche. Barcelona: Actar, 2002. 31–38.
- Dodge, Charles, and Thomas A. Jerse. *Computer Music: Synthesis, Composition, and Performance*. New York: Schirmer, 1997.

Drobnick, Jim. Aural Cultures. Toronto: YYZ, 2004.

- Dunn, David. "A History of Electronic Music Pioneers." Eigenwelt der Apparatewelt: Pioneers of Electronic Art. Linz: Ars Electronica, 1992.
- During, Elie. "Appropriations. Deaths of the Author in Electronic Music." Sonic Process. Ed. Christine van Assche. Barcelona: Actar, 2002. 39–58.
- Eisenberg, Evan. *The Recording Angel*. New York: Mc-Graw, 1987.
- Emmerson, Simon, ed. Music, Electronic Media, and Culture. Aldershot: Ashgate, 2000.
- Eno, Brian. Foreword to liner notes. *OHM: The Early Gurus of Electronic Music, 1948–1980.* New York: Ellipsis Arts, 2000.
- Ernst, David. *The Evolution of Electronic Music*. New York: Schirmer, 1977.
- Eshun, Kodwo. More Brilliant Than the Sun: Adventures in Sonic Fiction. London: Quartet, 1998.
- Evens, Aden. Sound Ideas: Music, Machines, and Experience. Minneapolis: U of Minnesota P, 2005.
- Gabrys, Jennifer. "Machines Fall Apart: Failure in Art and Technology." *Leonardo Electronic Almanac* 13.4 (2005). Leonardo: The Intl. Soc. for the Arts, Sciences, and Technology. 2005. 3 July 2007 <http://leoalmanac .org/journal/vol\_13/lea\_v13\_n04.txt>.
- Haynes, Jim. Rev. of *Pink Stalingrad*, perf. Campbell Kneale. *Wire* 266 (2006): 77.
- Hecker, Tim. "Sound and 'The Victorious Realm of Electricity." Parachute 107 (2002): 61–67.
- Heifetz, Robin Julian. On the Wires of Our Nerves: The Art of Electroacoustic Music. Lewisburg: Bucknell UP, 1989.
- Hollings, Ken. Rev. of Lady Fantasy EP, perf. Jason Forrest. Wire 263 (2006): 73.

- Holmes, Thom. *Electronic and Experimental Music*. New York: Scribner's, 2002.
- Kahn, Douglas, and Gregory Whitehead. Wireless Imagination: Sound, Radio, and the Avant-Garde. Cambridge: MIT P, 1992.
- Kettlewell, Ben. Electronic Music Pioneers. Artistpro, 2001.
- Kittler, Friedrich A. *Gramophone, Film, Typewriter*. Stanford: Stanford UP, 1999.
- Kostelanetz, Richard, and Joseph Darby, eds. Classic Essays on Twentieth-Century Music. New York: Schirmer, 1996.
- Lander, Dan, and Micah Lexier, eds. Sound by Artists. Toronto: Art Metropole / Walter Phillips Gallery, 1990.
- Leppert, Richard, ed. *Essays on Music*. Berkeley: U of California P, 2002.
- Rev. of *Made in Menorca*, by Rekid. *Boomkat*. <http:// www.boomkat.com/item.cfm?id=21431>.
- Maslin, Janet. "The Free-for-All World of Appropriation Art." *NYTimes.com* 14 Feb. 1996. 3 July 2007 <a href="http://movies2.nytimes.com/mem/movies/review.html?res="https://www.html?res">https://www.html?res="https://www.html?res="https://www.html?res="https://www.html?res="https://www.html?res">https://www.html?res="https://wwww.html?res"</https://www.html?res="https://www.html?res">https://www.html?res</a>
- McLuhan, Marshall. The Global Village: Transformations in World Life and Media in the Twenty-First Century. Oxford: Oxford UP, 1989.
- Miller, Paul D. Rhythm Science. Cambridge: MIT P, 2004.
- Miller, Paul D., et al. Preface. *The Speed of Sound*. Barcelona: Sonar, 2005.
- Modulations: Cinema for the Ear. Dir. Iara Lee. Caipirinha, 1998.
- Moretti, Franco. Graphs, Maps, Trees: Abstract Models for a Literary Theory. London: Verso, 2005.
- Morris, Adalaide, ed. Sound States: Innovative Poetics and Acoustical Technologies. Chapel Hill: U of North Carolina P, 1997.
- Nicholls, David. American Experimental Music, 1890– 1940. Cambridge: Cambridge UP, 1990.

Noon, Jeff. Cobralingus. Brighton: Codex, 2001.

- Norman, Katharine. Sounding Art: Eight Literary Excursions through Electronic Music. Aldershot: Ashgate, 2004.
- Orlowski, Andrew. "On Creativity, Computers, and Copyright." *The Register.* 21 July 2005. 19 Apr. 2007 <a href="http://www.theregister.co.uk/2005/07/21/creativity/print.html">http://www.theregister.co.uk/2005/07/21/creativity/print.html</a>.
- Oswald, John. Cover. 69Plunderphonics96. Perf. Oswald. Seeland, 2001.
- Liner notes. 69Plunderphonics96. Perf. Oswald. Seeland, 2001.
- —. "Plunderphonics; or, Audio Piracy as a Compositional Prerogative." Wired Soc. Electro-acoustic Conf., Toronto 1985.
- Prendergast, Mark. *The Ambient Century: From Mahler* to Trance: The Evolution of Sound in the Electronic Age. New York: Bloomsbury, 2001.

- Reddell, Trace. "Laptopia: The Spatial Poetics of Networked Laptop Performance." Contemporary Music Review 22.4 (2003): 11–22.
- Reynolds, Simon. Generation Ecstasy: Into the World of Techno and Rave Culture. Boston: Little, 1998.
- Roads, Curtis. Liner notes. *Point Line Cloud*. Perf. Roads. Asphodel, 2004.

-----. Microsound. 2001. Cambridge: MIT P, 2004.

- Ross, Alex. "The Record Effect: How Technology Has Transformed the Sound of Music." New Yorker 6 June 2005. 3 July 2007 < http://www.newyorker.com/archive/ 2005/06/06/050606crat\_atlarge>.
- Rothenberg, David, and Marta Ulvaeus, eds. *The Book of Music and Nature: An Anthology of Sounds, Words, Thoughts.* Middletown: Wesleyan UP, 2001.
- Schafer, R. Murray. The Soundscape: Our Sonic Environment and the Tuning of the World. 1977. New York: Knopf, 1997.
- Schwartz, Elliott. *Electronic Music: A Listener's Guide*. New York: Praeger, 1973.
- Schwartz, Elliott, and Daniel Godfrey. Music since 1945: Issues, Materials, and Literature. New York: Schirmer, 1993.
- Shapiro, Peter, ed. Modulations: A History of Electronic Music: Throbbing Words on Sound. New York: Caipirinha, 2000.
- Sterne, Jonathan. The Audible Past: Cultural Origins of Sound Reproduction. Durham: Duke UP, 2003.
- Swan, Claudia, ed. Perceptible Processes: Minimalism and the Baroque. New York: Eos Music, 1997.
- Taylor, Timothy D. Strange Sounds: Music, Technology and Culture. London: Routledge, 2001.
- Théberge, Paul. Any Sound You Can Imagine: Making Music / Consuming Technology. Hanover: UP of New England, 1997.
- Thomson, Phil. "Atoms and Errors: Towards a History and Aesthetics of Microsound." Organised Sound 9 (2004): 207–18.
- Toop, David. Haunted Weather: Music, Silence, and Memory. London: Serpent's Tail, 2004.
- ——. Liner notes. *Aeriola Frequency*. By Rafael Toral. Perdition Plastics, 1998.
- Traux, Barry. "Electroacoustic Music and the Soundscape: The Inner and Outer World." *Companion to Contemporary Musical Thought*. Vol. 2. Ed. J. Paynter et al. London: Routledge, 1992. 374–98.
- Wishart, Trevor. Audible Design: A Plain and Easy Introduction to Practical Sound Composition. York: Orpheus the Pantomime, 1994.
- Young, Rob, ed. Undercurrents: The Hidden Wiring of Modern Music. New York: Continuum, 2003.
- Yui, Miki. "Small Sounds." *Miki Yui*. 2006. 2 July 2007 <http://www.mikiyui.com/smallsounds.html>.

Zorn, John, ed. Arcana: Musicians on Music. New York: Granary, 2000.

### SELECTED DISCOGRAPHY

- Ø [Mika Vainio]. Onko. Touch, 1998.
- Akiyama, Mitchell. Mort aux vaches. Staalplaat, 2005.
- Arpanet. Wireless Internet. Emi, 2002.
- Basinski, William. Disintegration Loops. Musex, 2001.
- Bastien, Pierre. Pop. Rephlex, 2005.
- Belly of the Whale. Important, 2006.
- Byrne, David, and Yale Evelev, comps. *The Only Blip Hop Record You Will Ever Need, Vol. 1.* Luaka Bop, 2002.
- Cabral, Miguel [Nevermet Ensemble]. *Quarto Escuro*. Rudimentol, 2005.
- Clicks\_+\_Cuts 4. Mille Plateaux, 2004.
- DJ Spooky That Subliminal Kid. *Rhythm Science*. Sub Rosa, 2004.
- Deupree, Taylor. .N. Efa, 2000.
- Eno, Brian. Ambient 1: Music for Airports. Virgin, 1978.
- Fennesz. Endless Summer. Mego, 2001.
- Forrest, Jason. Lady Fantasy EP. Sonig, 2005.
- Future Sounds of London. Lifeforms. Astralwerks, 1994.
- Günter, Bernhard. *Un peu de neige salie*. Table of Elements, 1993.
- I Am Robot and Proud. *The Electricity in Your House Wants to Sing.* Darla, 2005.
- Ikeda, Ryoji. +/-. Touch, 1997.
- Julius, Rolf. (*Halb*) Schwarz. Edition RZ, 2001. Vol. 1 of Small Music.
- Kirkegaard, Jacob. Eldfjall. Touch, 2005.
- Kneale, Campbell. *Pink Stalingrad*. Celebrate PSI Phenomenon, 2006.
- López, Francisco. Untitled #89. Or UK, 2000.
- lowercase sound 2002. Bremsstrahlung, 2002.
- Martusciello, Elio. *Aesthetics of the Machine*. Bowindo, 2003.
- Masaoka, Miya, Alex Cline, and Kaoru. *Cloud Plate*. Cryptogramaphone, 2005.
- Meelkop, Roel. 5 (Ambiences). Intransitive, 2006.
- Microstoria. \_snd. Thrill Jockey, 1996.
- Minimize to Maximize. M-nus, 2005.
- Mondii, comp. Small Melodies. Spekk, 2005.
- Negativland. Negativland. Seeland, 1980.
- o.blaat. Two Novels: Gaze / In the Cochlea. Crónica, 2004.
- Off the Sky. It Is Impossible to Say Just What I Mean. Stilll, 2005.
- Oliveros, Pauline. No Mo. Pogus, 2001.
- Oswald, John. 69Plunderphonics96. Seeland, 2001.
- Oval. 94Diskont. Mille Plateaux, 1995.
- ------. Systemisch. Mille Plateaux, 1994.
- Prime, Michael. L-Fields. Sonoris, 2000.

#### 122.5

the changing profession

Rabelais, Akira. Spellewauerynsherde. Samadhi Sound, 2005.
Rekid. Made in Menorca. Soul Jazz, 2006.
Roads, Curtis. Point Line Cloud. Asphodel, 2004.
Roden, Steve. Crop Circles. Trente Oiseaux, 2001.
Scape One. Submolecular Nanotechrhythmicprinciples. SCSI-AV, 2002.
The Tape-beatles. Music with Sound. Plagiarism®, 1990.
Toral, Rafael. Aeriola Frequency. Perdition Plastics, 1998.
VS\_Price. Birthday 026. Expanding, 2005.
Yokomono 02: 55 Lock Grooves. Staalplaat, 2005.
Yokota, Susumu. Laputa. Leaf, 2003.
Yui, Miki. Lupe Luep Peul Epul. Line, 2001.

## SELECTED WEB SITES

Analogik (analogik.com) Boomkat (www.boomkat.com) *8bitpeople* (www.8bitpeoples.com) The Electronic Music Foundation (www.emf.org) *Forced Exposure* (www.forcedexposure.com) Foundation for the Electronic and Performing Arts (fep-arts.org) Igloo (www.igloomag.com) Ishkur's Guide to Electronic Music (www.di.fm/edmguide/ edmguide.html) Jacques and Fran Soddell (www.artspace.org.au/2000/ autonomousaudio/soddell.html) Longplayer (longplayer.org) Magnatune (www.magnatune.com) .microsound (www.microsound.org) Microsuoni (www.microsuoni.com) Mixmag (www.mixmag.net) Other Music (www.othermusic.com) Pandora (www.pandora.com) Radioqualia's Radio Astronomy (www.radioqualia.net) Sonic State (www.sonicstate.com) Synthtopia (www.synthtopia.com) Term. (www.12k.com/index2.html)

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