

Playing into the Machine: Improvising across the Electronic Abyss

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The initial reason we play into machines is for the enhancement that basic sound effects offer. The first sound effect every acoustic player loves is reverb, which can make us sound as if we are playing inside any space imaginable. A single tone can be quickly played and then remain endlessly ringing on in artificial space. Only a few notes are needed, with plenty of silence between them, to make a melody fill the air. In reverb's earliest incarnation, sounds were piped into resonating chambers or blasted against springs and plates to create the effect, but now it can be expertly synthesized with digital precision, and actual acoustic spaces from all over the planet can be sampled with the technique known as convolution [1].

Here a conflict emerges: The regularity of delays adds order and rhythm to melodies that otherwise might be free. This rhythm brings a welcome beat that gives the audience something to hold onto. But it quickly becomes expected and listeners figure it out. We know how delays sound, and we're all used to it. So we seek out ways to randomize and make the echoes less predictable—shuffle delays, randomized delays, cascading delays. At the same time, these effects can start to sound disturbing, confusing, no longer creating a beat out of the single melody. How carefully should we lead the listeners along through our effects? Or is this completely the wrong way to approach sonic experimentation?

Although there are plenty of software plugins that offer uneven and randomized delay possibilities (GRM Tools Shuffle, NI Spektral Delay, MDSP Fire, KT Granulator, Soundhack Bubbler, Artificial Audio's Obelisk), the challenge is to use them in a way that is both musical and spontaneous. It is easiest to add these effects to a track after it is recorded; then the player can precisely control exactly what the effect adds to the music. But when playing live, improvising into the machine, it is easy to become so wrapped up in what the machine is doing that the player no longer knows what is musical and what is not.

These effects are often most successful when they are turned down to their absolute minimum, where there is just enough effect so that the player can hear what the effect is doing but not enough so that it is too easy for listeners to figure out what is happening. The effect should be familiar and ambiguous at the same time.

A clarinet is not an obvious instrument to play into an effects machine. Trumpet, being so much louder, fares better.

The electric guitar is the most perfect musical sound to be effected, because it is a pure, high-volume, clear tone, crying out for effects to shape it in myriad ways. Effects define the personality of guitar players, and it is probably with them in mind that the whole industry has developed. However, wind players learn their individuality through years of practice at personalizing a tone, so when we confront the machine, we have a whole different challenge. Our instrument and its tradition seem somehow opposed to mashing up the sound in odd electronic ways.

After delaying comes looping, an obvious way to play a fragment, make it repeat so it can have a piece of musical/rhythmic ground to stand on; then we can add ourselves to ourselves. Another way to increase the ego is to do everything alone. But is it another way to become additionally empowered or another way to make boring music? People used to think so; now we are so used to loops that we crave their exactness. Perfect repeating rhythms are preferred by some to real, varying, studied drummers. The repetitiveness is no longer bothersome to many, because we are so used to music as convenient by the machine.

We have come to enjoy what the machine is good at. Precise repetition, predictability, reliability (most of the time), consistency. All these elements have always been part of music. With technology, we bring them to the fore.

At the same time, the inexactness of digital technology adds its own uniqueness. Digital errors were once said to be less forgiving than analog ones, but they have given rise to their own aesthetic of "glitch"—noisy, uneven, but still somehow precise sounds that come easily to digital devices. Turn a clarinet into these kinds of sounds, and the immediate conflict between resonating air and strange machinations comes to the fore. The war begins! The primal human quandary between extending ourselves with technology and just getting the song out appears right there. Music comments on the great battle of our age.

We trace a trajectory here, following levels of sound effect that extend the singly played acoustic tone: reverb, echo, delay, looping, distortion, unevenness, confusion dissolve into a sonic intelligence of which we are barely in control. One thing left out of the story here is a much more intelligent kind of machine behavior, wherein computers are carefully

ABSTRACT

Two musicians who have focused on playing acoustic wind instruments into electronics for the purposes of enhancing their original sound reflect on how the use of such new technologies inherently pushes "old technologies" toward a new aesthetics of improvisation.

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programmed to respond to the sounds played into them and make many more decisions on their own than the direct sound effects we usually use. One reason the brilliant sonic programming language Max has not appealed to us is that much of what is composed using it sounds like the computer is making too many decisions, taking too much control. The classic sound effect is simple at its root, easier to connect to the sound that comes into it, so the hand and breath of the player is more clear than in more purely computer music, when a greater aesthetic of the machine shines through.

But is this anything more than personal prejudice, when computers can now be programmed to emulate almost anything, artificial or natural? Rothenberg has always believed in an aesthetic inspired by nature in his music, so if he chooses to play into the machine, it is only to make the sounds akin to some living, breathing instrument that might exist in a parallel universe if it is only something virtual in this one [2].

Over his years of experience as a composer and performer, Neill has often felt that the discourse of digital/electronic art has been too strongly focused on technical issues. While digital music will always be at least somewhat defined by the parameters of the systems being utilized, his attention has been more geared toward the aesthetics of digital art and in particular the relationship of aesthetics to technology. As new technological possibilities emerge, artists are influenced by those developments, while at the same time new aesthetic ideas influence the creation of new technologies. The ques-

tion for him has been: What are the most important aesthetic tendencies to emerge out of the recent landscape of digital music and media performance?

We all start with too much ennui—picking up the horns, already bored, having heard it all before, too many songs on our iPods, too much music all around, why add even a single sound? We play to forget our sense of being fed up with it all, the incessant ring of music in our head whether or not we turn on the machine. Too much music already done, all captured and ready to be consumed. Too many possibilities of what to do. We need to forget all of this to make the making of music into something fun again.

References

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2. David Rothenberg, *Hand's End: Technology and the Limits of Nature* (Berkeley: Univ. of California Press, 1993) pp. 216–219.

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Clarinetist David Rothenberg has performed and recorded with Jan Bang, Scanner, Glen Velez, Karl Berger, Peter Gabriel, Ray Phiri and the Karnataka College of Percussion. He has seven CDs out under his own name, including *On the Cliffs of the Heart*, named one of the top ten releases of 1995 by *Jazziz* magazine. His first CD on ECM Records, *One Dark Night I Left My Silent House*, a duet album with pianist Marilyn Crispell, appeared in 2010. He is the author of *Why Birds Sing*, a book and CD, published in seven languages and the subject of a BBC television documentary. His previous books include *Sudden Music: Improvisation, Sound, Nature*, and *The Book of Music and Nature*, co-edited with Marta Ulvaeus. His latest book is *Thousand Mile Song*, about making music with whales, and he is currently working on a film version. Rothenberg is professor of philosophy and music at the New Jersey Institute of Technology.

Ben Neill is a composer, performer, producer and inventor of the mutantrumpet, a hybrid electroacoustic instrument. Neill's music blurs the lines between DJ culture and acoustic instrument performance. He has recorded seven CDs on a variety of labels including Verve, Astrakwerks and Six Degrees. He has performed internationally in venues such as Etnafest Italy, Cite de la Musique Paris, Spoleto Festival Italy, Umbria Jazz, Bang on a Can, ICA London, Istanbul Jazz Festival, House of Blues, clubs throughout the U.S.A. and Canada and the Edinburgh Festival. Last year Neill created a new version of his instrument through a residency at the STEIM studios in Amsterdam. He has worked closely with numerous other musicians and artists including DJ Spooky, John Cale, La Monte Young, Page Hamilton and Rhys Chatham. Neill is assistant professor of music at Ramapo College.